



**Australian Government**

# **AHC10 Agriculture, Horticulture and Conservation and Land Management**

**Release: 6.0**

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AHCPLY305A Beak trim chickens.....	4395
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AHCPMG404A Coordinate the local pest management strategy .....	4461
AHCPMG405A Implement pest management action plans .....	4467
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AHCPRK301A Pregnancy test pigs .....	4557
AHCPRK302A Treat rectal prolapse in pigs .....	4562
AHCPRK303A Artificially inseminate pigs .....	4567
AHCPRK304A Mate pigs and monitor dry sow performance .....	4572
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<b>TLIL5019A</b>	<b>Implement and monitor transport logistics.....</b>	<b>7129</b>
<b>TLILIC2001A</b>	<b>Licence to operate a forklift truck.....</b>	<b>7138</b>
<b>TLILIC2005A</b>	<b>Licence to operate a boom-type elevating work platform (boom length 11 metres or more) .....</b>	<b>7147</b>
<b>TLIR4002A</b>	<b>Source goods/services and evaluate contractors.....</b>	<b>7158</b>
<b>TLIR4003A</b>	<b>Negotiate a contract.....</b>	<b>7164</b>



## Modification History

### Version Modification History

Version	Release Date	Comments
6	17 June 2013	<p>Addition of fourteen new units of competency:</p> <ul style="list-style-type: none"> <li>• AHCCFI501A Provide technical advice on the Carbon Farming Initiative</li> <li>• AHCCFI502A Assess the feasibility of a Carbon Farming Initiative project</li> <li>• AHCCFI503A Advise on Carbon Farming Initiative project planning and implementation</li> <li>• AHCCFI504A Monitor and report on a Carbon Farming Initiative project</li> <li>• AHCCFI505A Aggregate Carbon Farming Initiative projects</li> <li>• AHCCFI506A Plan a Carbon Farming Initiative livestock project</li> <li>• AHCCFI507A Plan a Carbon Farming Initiative waste or manure management project</li> <li>• AHCCFI508A Plan a Carbon Farming Initiative project to sequester carbon in soil or biochar</li> <li>• AHCCFI509A Plan a Carbon Farming Initiative savannah burning, feral animal or rangelands project</li> <li>• AHCCFI510A Plan a Carbon Farming Initiative vegetation project</li> <li>• AHCCFI511A Plan a Carbon Farming Initiative project to avoid emissions from soil and crops</li> <li>• AHCHBR308A Maintain horses in a healthy state and safe environment</li> <li>• AHCHBR309A Determine nutritional requirements for horses</li> <li>• AHCLSK335A Conduct dropped ovary technique procedures for spaying cattle</li> </ul> <p>Addition of one imported unit of competency:</p> <ul style="list-style-type: none"> <li>• FNSFMK512 Apply knowledge of emissions markets</li> </ul> <p><u>ISC Upgrades</u></p> <p>Addition of nine new Skill Sets:</p>

Version	Release Date	Comments
		<ul style="list-style-type: none"> <li>• AHCSS00015 Carbon Farming Initiative Advisor Skill Set</li> <li>• AHCSS00016 Carbon Farming Initiative Business Skill Set</li> <li>• AHCSS00017 Carbon Farming Initiative Livestock Project Implementer Skill Set</li> <li>• AHCSS00018 Carbon Farming Initiative Waste and Manure Management Project Implementer Skill Set</li> <li>• AHCSS00019 Carbon Farming Initiative Soil or Biochar Project Implementer Skill Set</li> <li>• AHCSS00020 Carbon Farming Initiative Savannah Burning, Feral Animal, Rangelands Project Implementer Skill Set</li> <li>• AHCSS00021 Carbon Farming Initiative Vegetation Project Implementer Skill Set</li> <li>• AHCSS00022 Carbon Farming Initiative Emissions Avoidance from Soil and Crops Project Implementer Skill Set</li> <li>• AHCSS00023 Basic Introduction to Beekeeping Skill Set</li> </ul> <p>Addition of elective units to the following qualifications:</p> <ul style="list-style-type: none"> <li>• AHC30110 Certificate III in Agriculture</li> <li>• AHC50110 Diploma of Agriculture</li> <li>• AHC51110 Diploma of Conservation and Land Management</li> <li>• AHC51210 Diploma of Community Coordination and Facilitation</li> <li>• AHC51410 Diploma of Agribusiness</li> </ul>
5	1 March 2013	<p>Addition of two new qualifications:</p> <ul style="list-style-type: none"> <li>• AHC32513 Certificate III in Aboriginal-sites Work</li> <li>• AHC51513 Diploma of Viticulture</li> </ul> <p>Addition of 13 new units in Aboriginal-sites work</p> <p>Addition of four new units in Indigenous land management</p> <p>Addition of five new unit in Production horticulture</p> <p>Addition of one new unit in Plants</p>

Version	Release Date	Comments
		<p>Addition of 11 imported units of competency</p> <p><u>ISC Upgrades</u></p> <p>Addition of three new Skill Sets:</p> <ul style="list-style-type: none"> <li>• Advanced Chemical Spray Application</li> <li>• Recognise Aboriginal Cultural Sites</li> <li>• Report on Aboriginal Cultural Sites</li> </ul> <p>Update of superseded ILM units in the following qualifications:</p> <ul style="list-style-type: none"> <li>• AHC31410 Certificate III in Conservation and Land Management</li> <li>• AHC31510 Certificate III in Indigenous Land Management</li> <li>• AHC31610 Certificate III in Lands, Parks and Wildlife</li> <li>• AHC51110 Diploma of Conservation and Land Management</li> </ul> <p>Addition of elective units to the following qualifications:</p> <ul style="list-style-type: none"> <li>• AHC20310 Certificate II in Production Horticulture</li> <li>• AHC30210 Certificate III in Agriculture (Dairy Production)</li> <li>• AHC30610 Certificate III in Production Horticulture</li> <li>• AHC30710 Certificate III in Horticulture</li> <li>• AHC40310 Certificate IV in Production Horticulture</li> <li>• AHC50110 Diploma of Agriculture</li> <li>• AHC50310 Diploma of Production Horticulture</li> <li>• AHC50410 Diploma of Horticulture</li> <li>• AHC51110 Diploma of Conservation and Land Management</li> <li>• AHC51410 Diploma of Agribusiness Management</li> </ul> <p>Inclusion of more appropriate welding elective units in AHC30110 Certificate III in Agriculture</p> <p>Replacement of elective unit <i>TLID2010A Operate a forklift</i> with <i>TLILIC2001A Licence to operate a forklift truck</i> in the following qualifications in</p>

Version	Release Date	Comments
		<p>response to changes in national licencing regulations:</p> <ul style="list-style-type: none"> <li>• AHC20110 Certificate II in Agriculture</li> <li>• AHC20210 Certificate II in Poultry Production Operations</li> <li>• AHC20310 Certificate II in Production Horticulture</li> <li>• AHC21010 Certificate II in Conservation and Land Management</li> <li>• AHC21510 Certificate II in Floriculture</li> <li>• AHC32010 Certificate III in Beekeeping</li> <li>• AHC32111 Certificate III in Commercial Seed Processing</li> <li>• AHC32710 Certificate III in Rural Merchandising</li> </ul> <p>Removal of elective unit <i>TLID2010A Operate a forklift</i> from AHC30110 Certificate III in Agriculture in response to changes in national licencing regulations</p> <p>Correction of minor typographical error to AHCNSY203A</p> <p>Modification to AHCLSK307A to broaden the application of the unit</p> <p>Updated superseded equivalent imported units of competency</p>
4	15 October 2012	<p>Addition of six new qualifications:</p> <ul style="list-style-type: none"> <li>• AHC33412 Certificate III in Seed Production</li> <li>• AHC33512 Certificate III in Seed Testing</li> <li>• AHC41412 Certificate IV in Seed Production</li> <li>• AHC41512 Certificate IV in Seed Testing</li> <li>• AHC41612 Certificate IV in Organic Farming</li> <li>• AHC51812 Diploma of Organic Farming</li> </ul> <p>Addition of seven new units in Organic production</p> <p>Addition of 27 new units in seed testing and seed production</p> <p>Addition of 10 imported units of competency</p> <p><u>ISC Upgrades:</u></p> <p>New Skill Set for Seed Crop Field Inspectors</p>

Version	Release Date	Comments
		<p>Updated superseded equivalent imported units of competency</p> <p>Minor typographical corrections</p>
3	22 June 2012	<p>Five revised qualifications:</p> <ul style="list-style-type: none"> <li>• AHC21112 Certificate II in Irrigation</li> <li>• AHC32412 Certificate III in Irrigation</li> <li>• AHC40812 Certificate IV in Sports Turf Management</li> <li>• AHC41112 Certificate IV in Irrigation</li> <li>• AHC51010 Diploma of Sports Turf Management (ISC upgrade to include additional electives)</li> </ul> <p>Addition of 47 new units of competency in irrigation and three new units of competency in sports turf management.</p> <p>One revised irrigation unit of competency.</p> <p>Two irrigation units of competency removed.</p> <p>Addition of 19 imported units of competency.</p> <p><u>ISC Upgrades</u></p> <p>Edit for clarity in AHCMOM203A Range Statement.</p> <p>Elective groupings in AHC20310 Certificate II in Production Horticulture, AHC30610 Certificate III in Production Horticulture and AHC40310 Certificate IV in Production Horticulture have been reorganised to allow greater flexibility.</p> <p>Mapping information for AHCPCM402A corrected.</p>
2.1	20 October 2011	<p>Elective groupings in AHC20110 Certificate II in Agriculture and AHC30110 Certificate III in Agriculture have been reorganised to allow greater flexibility.</p> <p>Minor typographical errors have been fixed in AHC33311 Certificate III in Feedlot Operations and AHC20710 Certificate II in Production Nursery.</p>
2	10 June 2011	<p>AHC33310 Certificate III in Feedlot Feeding and Milling, AHC33410 Certificate III in Feedlot</p>

Version	Release Date	Comments
		Maintenance, and AHC33510 Certificate III in Feedlot Pen Riding replaced and superseded by AHC33311 Certificate III in Feedlot Operations AHC32110 Certificate III in Commercial Seed Processing updated to comply with NQC flexibility in packaging rules policy
1	10 June 2011	Primary release

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## Preliminary Information

### Important Note to Users

Training Packages are not static documents; they are amended periodically to reflect the latest industry practices and are version controlled. It is essential that the latest version is always used.

### Check the version number before commencing training or assessment

This Training Package is Version 6 - check whether this is the latest version by going to the National Training Information Service ([www.ntis.gov.au](http://www.ntis.gov.au)) and locating information about the Training Package. Alternatively, contact AgriFood Skills Australia at <http://www.agrifoodskills.net.au> to confirm the latest version number.

### Explanation of version number conventions

The primary release Training Package is Version 1. When changes are made to a Training Package, sometimes the version number is changed and sometimes it is not, depending on the extent of the change. When a Training Package is reviewed it is considered to be a new Training Package for the purposes of version control, and is Version 1. Do not confuse the version number with the Training Packages national code (which remains the same during its period of endorsement).

## History

The AHC10 Agriculture, Horticulture and Conservation and Land Management Training Package is the result of merging three training packages and orphaned common units:

- RTD02 Conservation and Land Management
- RTE03 Rural Production
- RTF03 Amenity Horticulture
- ZZZ00 RTC common units

During 2006 AgriFood Skills Australia conducted a feasibility study to investigate the potential of merging the three Training Packages into one. The subsequent outcome of the study was the AgriFood Board's approval to merge the Training Packages.

From the beginning of the project the concerns of the wide and varied stakeholder groups were considered to be the major focus of achieving the merged Training Package. In regard to the stakeholder needs it was clear that the qualification framework in particular, the packaging rules would need to cater for the diverse sectors.

Significant design work was undertaken to confirm a model for the qualifications that were identified for the merged package.

At the same time as the initial project work began to merge the packages the Training Package Review Phase 1 reports were completed for the three packages.

Another complication for the merged package was the requirement to respond to a number of national project findings relating to improving the understanding and application of the products and developed under the banner of Training Packages.

AgriFood considered a number options and adopted the decision to 'go bold' with a strategy to

- improve the clarity of competency standards
- increase the flexibility and job related outcomes with qualifications
- develop a model to support Training Packages implementation.

As a consequence the project initiatives shifted the focus from the endorsed components of the Training Package to include implementation products and systems as a means to improve the outcomes of industry training requirements.

The AHC10 Training Package is the result of this intensive focus to consolidate this package to represent a "fit for purpose" package that is well positioned to accommodate appropriate continuous improvement into the future.

The endorsement of the AHC10 Training Package that incorporates contemporary design is just one of the key outcomes of this project. The most significant achievement is the shift in thinking by many stakeholders to include a wider range of issues when they are considering the needs of industry relating to Training Packages.

## Full List of AQF Qualifications in AHC10v6 Training Package

Code	Title
AHC10110	Certificate I in Conservation and Land Management
AHC10210	Certificate I in AgriFood Operations
AHC20110	Certificate II in Agriculture
AHC20210	Certificate II in Poultry Production Operations



AHC20310	Certificate II in Production Horticulture
AHC20410	Certificate II in Horticulture
AHC20510	Certificate II in Arboriculture
AHC20610	Certificate II in Parks and Gardens
AHC20710	Certificate II in Production Nursery
AHC20810	Certificate II in Retail Nursery
AHC20910	Certificate II in Sports Turf Management
AHC21010	Certificate II in Conservation and Land Management
AHC21112	Certificate II in Irrigation
AHC21210	Certificate II in Rural Operations
AHC21310	Certificate II in Shearing
AHC21410	Certificate II in Wool Handling
AHC21510	Certificate II in Floriculture
AHC21610	Certificate II in Landscaping
AHC30110	Certificate III in Agriculture
AHC30210	Certificate III in Agriculture (Dairy Production)
AHC30310	Certificate III in Horse Breeding
AHC30410	Certificate III in Pork Production
AHC30510	Certificate III in Poultry Production
AHC30610	Certificate III in Production Horticulture
AHC30710	Certificate III in Horticulture
AHC30810	Certificate III in Arboriculture
AHC30910	Certificate III in Landscape Construction
AHC31010	Certificate III in Parks and Gardens
AHC31110	Certificate III in Production Nursery

AHC31210	Certificate III in Retail Nursery
AHC31310	Certificate III in Sports Turf Management
AHC31410	Certificate III in Conservation and Land Management
AHC31510	Certificate III in Indigenous Land Management
AHC31610	Certificate III in Lands, Parks and Wildlife
AHC31710	Certificate III in Natural Area Restoration
AHC31810	Certificate III in Vertebrate Pest Management
AHC31910	Certificate III in Weed Management
AHC32010	Certificate III in Beekeeping
AHC32110	Certificate III in Commercial Seed Processing
AHC32210	Certificate III in Commercial Composting
AHC32310	Certificate III in Conservation Earthworks
AHC32412	Certificate III in Irrigation
AHC32513	Certificate III in Aboriginal-sites Work
AHC32610	Certificate III in Rural Machinery Operations
AHC32710	Certificate III in Rural Merchandising
AHC32810	Certificate III in Rural Operations
AHC32910	Certificate III in Shearing
AHC33010	Certificate III in Wool Clip Preparation
AHC33110	Certificate III in Advanced Wool Handling
AHC33210	Certificate III in Floriculture
AHC33311	Certificate III in Feedlot Operations
AHC33412	Certificate III in Seed Production
AHC33512	Certificate III in Seed Testing
AHC40110	Certificate IV in Agriculture

AHC40210	Certificate IV in Poultry Production
AHC40310	Certificate IV in Production Horticulture
AHC40410	Certificate IV in Horticulture
AHC40510	Certificate IV in Parks and Gardens
AHC40610	Certificate IV in Production Nursery
AHC40710	Certificate IV in Retail Nursery
AHC40812	Certificate IV in Sports Turf Management
AHC40910	Certificate IV in Conservation and Land Management
AHC41010	Certificate IV in Agribusiness
AHC41112	Certificate IV in Irrigation
AHC41210	Certificate IV in Shearing
AHC41310	Certificate IV in Wool Classing
AHC41412	Certificate IV in Seed Production
AHC41512	Certificate IV in Seed Testing
AHC41612	Certificate IV in Organic Farming
AHC50110	Diploma of Agriculture
AHC50210	Diploma of Pork Production
AHC50310	Diploma of Production Horticulture
AHC50410	Diploma of Horticulture
AHC50510	Diploma of Arboriculture
AHC50610	Diploma of Landscape Design
AHC50710	Diploma of Parks and Gardens Management
AHC50810	Diploma of Production Nursery Management
AHC50910	Diploma of Retail Nursery Management
AHC51010	Diploma of Sports Turf Management

AHC51110	Diploma of Conservation and Land Management
AHC51210	Diploma of Community Coordination and Facilitation
AHC51310	Diploma of Pest Management
AHC51410	Diploma of Agribusiness Management
AHC51513	Diploma of Viticulture
AHC51610	Diploma of Irrigation Management
AHC51710	Diploma of Rural Machinery Management
AHC51812	Diploma of Organic Farming
AHC60110	Advanced Diploma of Agriculture
AHC60210	Advanced Diploma of Horticulture
AHC60310	Advanced Diploma of Agribusiness Management
AHC60410	Advanced Diploma of Conservation and Land Management

## Full List of Units of Competency including Imported Units

### AHC10v6 Units of Competency and their Pre-Requisite Requirements

Code	Title	Pre-Requisite
AHCAGB301A	Keep records for a primary production business	
AHCAGB401A	Implement and monitor a property improvement plan	
AHCAGB402A	Analyse and interpret production data	
AHCAGB501A	Develop climate risk management strategies	
AHCAGB502A	Plan and manage infrastructure requirements	
AHCAGB503A	Plan and monitor production processes	
AHCAGB504A	Plan production for the whole land/farm based business	
AHCAGB505A	Develop a whole farm plan	

AHCAGB601A	Develop export markets for produce	
AHCAGB602A	Manage estate planning	
AHCAGB603A	Manage the production system	
AHCAGB604A	Analyse business performance	
AHCAGB605A	Manage business capital	
AHCAGB606A	Manage price risk through trading strategy	
AHCAIS201A	Assist with artificial insemination procedures	
AHCAIS301A	Collect semen	
AHCAIS302A	Process and store semen	
AHCAIS303A	Artificially inseminate livestock	
AHCAIS401A	Supervise artificial breeding and/or embryo transfer programs	
AHCARB201A	Apply a range of treatments to trees	
AHCARB202A	Fell small trees	
AHCARB203A	Perform above ground pruning	
AHCARB204A	Undertake standard climbing techniques	
AHCARB205A	Operate and maintain chainsaws	
AHCARB206A	Undertake stump removal	
AHCARB207A	Perform ground based rigging	
AHCARB301A	Implement a tree maintenance program	
AHCARB302A	Conduct tree inspections	
AHCARB303A	Implement a tree pruning program	
AHCARB304A	Fell trees with advanced techniques	
AHCARB305A	Remove trees in confined spaces	
AHCARB306A	Undertake aerial rescue	

AHCARB307A	Undertake complex tree climbing	
AHCARB308A	Install cable and bracing	
AHCARB309A	Implement a tree protection program	
AHCARB310A	Perform aerial rigging	
AHCARB501A	Assess trees	
AHCARB502A	Identify, select and specify trees	
AHCARB503A	Diagnose tree diseases	
AHCARB504A	Develop a tree protection program	
AHCARB505A	Document and audit tree work	
AHCASW301A	Protect places of Aboriginal cultural significance	AHCILM306A
AHCASW302A	Relate Aboriginal culture to sites work	AHCILM306A
AHCASW303A	Identify and record Aboriginal-sites, objects and cultural landscapes	AHCILM306A
AHCASW304A	Identify Indigenous culturally significant plants	AHCILM306A
AHCASW305A	Work with Aboriginal ceremonial secret sacred materials	AHCILM306A
AHCASW306A	Use technology in Aboriginal-sites work	AHCILM306A
AHCASW307A	Map Aboriginal cultural landscapes	AHCILM306A
AHCASW308A	Apply cultural significance to Aboriginal-sites and landscapes	AHCASW302A AHCILM306A
AHCASW309A	Interpret Aboriginal cultural landscape	AHCASW302A AHCILM306A
AHCASW310A	Move and store Aboriginal cultural material	AHCILM306A
AHCASW311A	Apply relevant legislation in Aboriginal-sites work	
AHCASW312A	Maintain an Aboriginal cultural site	AHCILM306A
AHCASW501A	Survey and report on Aboriginal cultural sites	AHCILM306A
AHCBAC101A	Support agricultural crop work	

AHCBAC201A	Assist agricultural crop establishment	
AHCBAC202A	Assist agricultural crop maintenance	
AHCBAC203A	Assist agricultural crop harvesting	
AHCBAC204A	Prepare grain storages	
AHCBAC205A	Operate cane haulage vehicle	
AHCBAC301A	Conserve forage	
AHCBAC302A	Establish pastures and crops for livestock production	
AHCBAC303A	Prepare to receive grains/seeds	
AHCBAC304A	Test grains/seeds on receipt	
AHCBAC305A	Undertake preparation of land for agricultural crop production	
AHCBAC306A	Establish agricultural crops	
AHCBAC307A	Maintain agricultural crops	
AHCBAC308A	Undertake agricultural crop harvesting activities	
AHCBAC401A	Manage pastures for livestock production	
AHCBAC402A	Plan a pasture establishment program	
AHCBAC403A	Supervise agricultural crop establishment	
AHCBAC404A	Plan and implement agricultural crop maintenance	
AHCBAC405A	Supervise agricultural crop harvesting	
AHCBAC406A	Maintain grain quality in storage	
AHCBAC407A	Save, prepare and store agricultural seed	
AHCBAC501A	Manage agricultural crop production	
AHCBAC502A	Manage forage conservation	
AHCBAC503A	Manage integrated crop and pasture production	
AHCBAC504A	Plan and manage a stored grain program	

AHCBAC505A	Plan and manage long-term weed, pest and/or disease control in crops	
AHCBAC506A	Manage the harvest of crops	
AHCBAC507A	Develop production plans for crops	
AHCBEK201A	Support beekeeping work	
AHCBEK202A	Use a bee smoker	
AHCBEK203A	Open and reassemble a beehive	
AHCBEK204A	Construct and repair beehives	
AHCBEK301A	Manage honey bee swarms	
AHCBEK302A	Manipulate honey bee brood	
AHCBEK303A	Re-queen a honey bee colony	
AHCBEK304A	Remove a honey crop from a hive	
AHCBEK305A	Extract honey	
AHCBEK306A	Manage pests and disease within a honey bee colony	
AHCBEK401A	Collect and store propolis	
AHCBEK402A	Perform queen bee artificial insemination	
AHCBEK403A	Produce and harvest royal jelly	
AHCBEK404A	Provide bee pollination services	
AHCBEK405A	Select and establish an apiary site	
AHCBEK406A	Trap and store pollen	
AHCBEK407A	Rear queen bees	
AHCBIO201A	Inspect and clean machinery for plant, animal and soil material	
AHCBIO202A	Follow site quarantine procedures	
AHCBIO301A	Work effectively in an emergency disease or plant pest response	



AHCBIO302A	Identify and report unusual disease or plant pest signs	
AHCBIO303A	Carry out emergency disease or plant pest control procedures at infected premises	
AHCBIO304A	Carry out movement and security procedures	
AHCBIO305A	Monitor and review biosecurity measures	
AHCBIO401A	Supervise activities on infected premises	
AHCBIO402A	Carry out field surveillance for a specific emergency disease or plant pest	
AHCBIO403A	Plan and implement a biosecurity program	
AHCBIO501A	Manage active operational emergency disease or plant pest sites	
AHCBIO502A	Manage the implementation of an emergency disease or plant pest control program	
AHCBIO601A	Plan and oversee an emergency disease or plant pest control program	
AHCBUS301A	Use hand held e-business tools	
AHCBUS401A	Administer finance, insurance and legal requirements	
AHCBUS402A	Cost a project	
AHCBUS403A	Support and review business structures and relationships	
AHCBUS404A	Operate within a budget framework	
AHCBUS405A	Participate in an e-business supply chain	
AHCBUS501A	Manage staff	
AHCBUS502A	Market products and services	
AHCBUS503A	Negotiate and monitor contracts	
AHCBUS504A	Prepare estimates, quotes and tenders	
AHCBUS505A	Develop a marketing plan	
AHCBUS506A	Develop and review a business plan	

AHCBUS507A	Monitor and review business performance	
AHCBUS508A	Prepare and monitor budgets and financial reports	
AHCBUS601A	Manage capital works	
AHCBUS602A	Review land management plans and strategies	
AHCBUS603A	Develop and review a strategic plan	
AHCBUS604A	Design and manage the enterprise quality management system	
AHCBUS605A	Manage human resources	
AHCBUS606A	Develop a monitoring, evaluation and reporting program	
AHCBUS607A	Implement a monitoring, evaluation and reporting program	
AHCBUS608A	Manage risk	
AHCCCF401A	Prepare project acquittal	
AHCCCF402A	Report on project	
AHCCCF403A	Obtain and manage sponsorship	
AHCCCF404A	Contribute to association governance	
AHCCCF405A	Develop community networks	
AHCCCF406A	Facilitate ongoing group development	
AHCCCF407A	Obtain resources from community and groups	
AHCCCF408A	Promote community programs	
AHCCCF409A	Participate in assessments of project submissions	
AHCCCF410A	Support individuals in resource management change processes	
AHCCCF411A	Develop approaches to include cultural and human diversity	
AHCCCF412A	Coordinate board/committee elections	
AHCCCF413A	Service committees	

AHCCCF414A	Coordinate fund-raising activities	
AHCCCF415A	Coordinate social events to support group purposes	
AHCCCF416A	Present proposed courses of action to meeting	
AHCCCF501A	Evaluate project submissions	
AHCCCF502A	Facilitate development of group goals and projects	
AHCCCF503A	Promote group formation and development	
AHCCCF504A	Support group and community changes in resource management	
AHCCCF505A	Contribute to regional planning process	
AHCCCF506A	Manage the incorporation of a group	
AHCCCF601A	Map regional issues and stakeholders	
AHCCFI501	Provide technical advice on the Carbon Farming Initiative	
AHCCFI502	Assess the feasibility of a Carbon Farming Initiative project	
AHCCFI503	Advise on Carbon Farming Initiative project planning and implementation	
AHCCFI504	Monitor and report on a Carbon Farming Initiative project	
AHCCFI505	Aggregate Carbon Farming Initiative projects	
AHCCFI506	Plan a Carbon Farming Initiative livestock project	
AHCCFI507	Plan a Carbon Farming Initiative waste or manure management project	
AHCCFI508	Plan a Carbon Farming Initiative project to sequester carbon in soil or biochar	
AHCCFI509	Plan a Carbon Farming Initiative savannah burning, feral animal or rangelands project	
AHCCFI510	Plan a Carbon Farming Initiative vegetation project	
AHCCFI511	Plan a Carbon Farming Initiative project to avoid emissions from soil or crops	

AHCCHM101A	Follow basic chemical safety rules	
AHCCHM201A	Apply chemicals under supervision	
AHCCHM301A	Conduct fumigation in enclosed spaces	
AHCCHM302A	Fumigate soil using chemicals	
AHCCHM303A	Prepare and apply chemicals	
AHCCHM304A	Transport, handle and store chemicals	
AHCCHM305A	Conduct manual fumigation of vertebrate and invertebrate pests	
AHCCHM401A	Minimise risks in the use of chemicals	
AHCCHM402A	Plan and implement a chemical use program	
AHCCHM403A	Prepare safe operating procedures for calibration of equipment	
AHCCHM501A	Develop and manage a chemical use strategy	
AHCCOM201A	Assess and receive raw materials for composting	
AHCCOM202A	Recognise and respond to fire emergencies on a composting site	
AHCCOM203A	Recognise raw materials, production processes and products on a composting site	
AHCCOM301A	Operate compost processing plant, machinery and equipment	
AHCCOM302A	Dispatch materials and composted product	
AHCCOM303A	Operate a compost bagging process	
AHCCOM401A	Develop a composting recipe	
AHCCOM402A	Plan and schedule compost production	
AHCCOM501A	Identify and secure raw materials supply for compost production	
AHCDER401A	Handle, store and grade deer velvet	
AHCDER501A	Comply with deer industry national velvet accreditation	

	requirements	
AHCDER502A	Harvest deer velvet	
AHCDES501A	Design sustainable landscapes	
AHCDES502A	Prepare a landscape project design	
AHCDES503A	Assess landscape sites	
AHCDES504A	Design for construction of landscape features	
AHCDRG201A	Maintain drainage systems	
AHCDRG301A	Install drainage systems	
AHCDRG302A	Measure drainage system performance	
AHCDRG303A	Troubleshoot drainage systems	
AHCDRG501A	Design drainage systems	
AHCDRY201A	Milk livestock	
AHCDRY301A	Coordinate milking operations	
AHCDRY302A	Operate a dairy recycling system	
AHCDRY401A	Manage milking shed routines	
AHCEXP301A	Handle and store explosives	
AHCEXP302A	Identify and select explosive products	
AHCEXP303A	Prepare and use explosives	
AHCFAU201A	Recognise fauna	
AHCFAU301A	Respond to wildlife emergencies	
AHCFAU501A	Manage fauna populations	
AHCFIR201A	Assist with prescribed burning	
AHCFIR501A	Manage wildfire hazard reduction programs	
AHCHBR101A	Support horse work	
AHCHBR201A	Monitor horse health and welfare	

AHCHBR202A	Handle young horses	
AHCHBR203A	Provide daily care for horses	
AHCHBR204A	Assist with mating procedures and parturition of horses	
AHCHBR302A	Carry out basic hoof care procedures	
AHCHBR303A	Carry out mare mating or artificial insemination procedures	
AHCHBR304A	Educate, ride and care for horses and equipment	
AHCHBR305A	Handle and care for stallions	
AHCHBR306A	Prevent and treat equine injury and disease	
AHCHBR307A	Assess suitability of horses for stock work	
AHCHBR308A	Maintain horses in a healthy state and safe environment	
AHCHBR309A	Determine nutritional requirements for horses	
AHCHBR401A	Carry out stud stable management duties	
AHCHBR402A	Supervise raising young horses	
AHCHYD301A	Implement a maintenance program for hydroponic systems	
AHCHYD302A	Install hydroponic systems	
AHCHYD501A	Develop a plan for a hydroponic system	
AHCILM201A	Maintain cultural places	
AHCILM202A	Observe and report plants and/or animals	
AHCILM203A	Record information about country	
AHCILM301A	Propose appropriate uses of traditional customs	
AHCILM302A	Provide appropriate information on cultural knowledge	
AHCILM305A	Work with an Aboriginal community or organisation	AHCILM306A
AHCILM306A	Follow Aboriginal cultural protocols	
AHCILM307A	Implement Aboriginal cultural burning practices	AHCILM306A

AHCILM401A	Protect places of cultural significance	
AHCILM402A	Report on place of potential cultural significance	
AHCILM403A	Contribute to the proposal for a negotiated outcome for a given area of country	
AHCILM404A	Record and document community history	
AHCILM405A	Develop work practices to accommodate cultural identity	
AHCILM501A	Conduct field research into natural and cultural resources	
AHCILM502A	Develop conservation strategies for cultural resources	
AHCILM503A	Manage restoration of cultural places	
AHCILM504A	Develop strategies for Indigenous land or sea management	
AHCILM505A	Map relationship of business enterprise to culture and country	
AHCILM506A	Operate within community cultures and goals	
AHCILM508A	Propose a negotiated outcome for a given area of country	
AHCILM509A	Plan burning activities for natural and cultural resource management	
AHCILM510A	Plan for successful cultural practice at work	AHCILM306A
AHCILM601A	Manage cultural processes in an Indigenous organisation	
AHCINF201A	Carry out basic electric fencing operations	
AHCINF202A	Install, maintain and repair fencing	
AHCINF203A	Maintain properties and structures	
AHCINF204A	Fabricate and repair metal or plastic structures	
AHCINF301A	Implement property improvement, construction and repair	
AHCINF302A	Plan and construct an electric fence	
AHCINF303A	Plan and construct conventional fencing	
AHCIRG101A	Support irrigation work	

AHCIRG201A	Assist with the operation of gravity fed irrigation	
AHCIRG202A	Assist with the operation of pressurised irrigation	
AHCIRG203A	Install micro-irrigation systems	
AHCIRG204A	Lay irrigation and/or drainage pipes	
AHCIRG205A	Maintain gravity-fed irrigation systems	
AHCIRG206A	Maintain pressurised irrigation systems	
AHCIRG207A	Carry out irrigation site preparation tasks	
AHCIRG208A	Assist with the installation and maintenance of pumps and flow-control devices for irrigation	
AHCIRG209A	Carry out installation tasks for low volume irrigation	
AHCIRG210A	Carry out installation tasks for sprinkler irrigation	
AHCIRG211A	Assist with low volume irrigation operations and maintenance	
AHCIRG212A	Assist with sprinkler irrigation operations and maintenance	
AHCIRG213A	Assist with surface irrigation operations and maintenance	
AHCIRG214A	Install micro-irrigation systems for landscaping	
AHCIRG301A	Implement a maintenance program for an irrigation system	
AHCIRG302A	Install irrigation systems	
AHCIRG303A	Measure irrigation delivery system performance	
AHCIRG304A	Operate gravity fed irrigation systems	
AHCIRG305A	Operate pressurised irrigation systems	
AHCIRG306A	Troubleshoot irrigation systems	
AHCIRG307A	Recommend irrigation products and services	
AHCIRG308A	Monitor soils under irrigation	
AHCIRG309A	Interpret and apply instructions to install pumps	



AHCIRG310A	Operate and maintain irrigation pumping systems	
AHCIRG311A	Install low volume irrigation components	
AHCIRG312A	Install sprinkler irrigation components	
AHCIRG313A	Install moving sprinkler irrigation components	
AHCIRG314A	Install surface irrigation structures and equipment	
AHCIRG315A	Interpret irrigation plans and drawings	
AHCIRG316A	Implement a low volume irrigation maintenance program	
AHCIRG317A	Implement a sprinkler irrigation maintenance program	
AHCIRG318A	Implement a moving sprinkler irrigation maintenance program	
AHCIRG319A	Implement a surface irrigation maintenance program	
AHCIRG320A	Maintain and repair irrigation drainage systems	
AHCIRG321A	Operate low volume irrigation systems	
AHCIRG322A	Operate sprinkler irrigation systems	
AHCIRG323A	Operate moving sprinkler irrigation systems	
AHCIRG324A	Operate surface irrigation systems	
AHCIRG325A	Operate irrigation technology	
AHCIRG326A	Operate irrigation injection equipment	
AHCIRG327A	Implement an irrigation schedule	
AHCIRG401A	Acquire resources for irrigation installation and construction	
AHCIRG402A	Determine hydraulic parameters for an irrigation system	
AHCIRG404A	Implement an irrigation-related environmental protection program	
AHCIRG405A	Plan and coordinate gravity-fed irrigation systems	
AHCIRG406A	Plan on-site irrigation system installation and construction work	

AHCIRG407A	Supervise on-site irrigation installation and construction work	
AHCIRG408A	Schedule irrigations	
AHCIRG410A	Select and manage pumping systems for irrigation	
AHCIRG411A	Construct and install a low volume irrigation system	
AHCIRG412A	Construct and install a sprinkler irrigation system	
AHCIRG413A	Construct and install a moving sprinkler irrigation system	
AHCIRG414A	Construct and install a surface irrigation system	
AHCIRG415A	Interpret and apply irrigation designs	
AHCIRG416A	Supervise low volume irrigation maintenance	
AHCIRG417A	Supervise sprinkler irrigation maintenance	
AHCIRG418A	Supervise moving sprinkler irrigation maintenance	
AHCIRG419A	Supervise surface irrigation maintenance	
AHCIRG420A	Manage a low volume irrigation system	
AHCIRG421A	Manage a sprinkler irrigation system	
AHCIRG422A	Manage a moving sprinkler irrigation system	
AHCIRG423A	Manage a surface irrigation system	
AHCIRG424A	Construct and install an irrigation drainage system	
AHCIRG425A	Monitor and control irrigation drainage systems	
AHCIRG426A	Evaluate water supply for irrigation	
AHCIRG427A	Plan and supervise on-site irrigation system installation and construction work	
AHCIRG428A	Provide irrigation sales and service	
AHCIRG501A	Audit irrigation systems	
AHCIRG502A	Design irrigation system maintenance and monitoring programs	

AHCIRG503A	Design irrigation, drainage and water treatment systems	
AHCIRG504A	Develop an irrigation and drainage management plan	
AHCIRG505A	Establish and maintain an irrigation-related environmental protection program	
AHCLPW301A	Supervise park visitor activities	
AHCLPW303A	Construct access tracks	
AHCLPW304A	Carry out inspection of designated area	
AHCLPW305A	Perform diving for scientific purposes	
AHCLPW306A	Undertake sampling and testing of water	
AHCLPW401A	Process applications for changes in land use	
AHCLPW402A	Implement land and sea management practices	
AHCLPW403A	Inspect and monitor cultural places	
AHCLPW404A	Produce maps for land management purposes	
AHCLPW405A	Monitor biodiversity	
AHCLPW501A	Develop a management plan for a designated area	
AHCLPW503A	Assess applications for legislative compliance	
AHCLPW504A	Review assessments for legislative compliance	
AHCLPW505A	Implement natural and cultural resource management plans	
AHCLPW506A	Investigate suspected breaches of Natural Resource	
	Management (NRM) legislation	
AHCLPW601A	Coordinate the preparation of a regional resource management plan	
AHCLSC101A	Support landscape work	
AHCLSC201A	Assist with landscape construction work	
AHCLSC202A	Construct low-profile timber or modular retaining walls	

AHCLSC203A	Install aggregate paths	
AHCLSC204A	Lay paving	
AHCLSC205A	Install tree protection devices	
AHCLSC301A	Set out site for construction works	
AHCLSC302A	Construct landscape features using concrete	
AHCLSC303A	Construct brick and/or block structures and features	
AHCLSC304A	Erect timber structures and features	
AHCLSC305A	Construct stone structures and features	
AHCLSC306A	Implement a paving project	
AHCLSC307A	Implement a retaining wall project	
AHCLSC308A	Install metal structures and features	
AHCLSC309A	Install water features	
AHCLSC310A	Implement a tree transplanting program	
AHCLSC401A	Supervise landscape project works	
AHCLSC501A	Survey and establish site levels	
AHCLSC502A	Manage landscape projects	
AHCLSC503A	Manage a tree transplanting program	
AHCLSK101A	Support extensive livestock work	
AHCLSK102A	Support intensive livestock work	
AHCLSK201A	Assist with feeding in a production system	
AHCLSK202A	Care for health and welfare of livestock	
AHCLSK203A	Carry out birthing duties	
AHCLSK204A	Carry out regular livestock observation	
AHCLSK205A	Handle livestock using basic techniques	
AHCLSK206A	Identify and mark livestock	

AHCLSK207A	Load and unload livestock	
AHCLSK208A	Monitor livestock to parturition	
AHCLSK209A	Monitor water supplies	
AHCLSK210A	Muster and move livestock	
AHCLSK211A	Provide feed for livestock	
AHCLSK212A	Ride horses to carry out stock work	
AHCLSK213A	Clean out production sheds	
AHCLSK214A	Maintain production growing environments	
AHCLSK215A	Carry out alpaca handling and husbandry operations	
AHCLSK301A	Administer medication to livestock	
AHCLSK302A	Mate and monitor reproduction of alpacas	
AHCLSK303A	Carry out feedlot operations	
AHCLSK304A	Carry out post-mortem examination of livestock	
AHCLSK305A	Maintain livestock water supplies	
AHCLSK306A	Coordinate and monitor production performance	
AHCLSK307A	Euthanase livestock	
AHCLSK308A	Identify and draft livestock	
AHCLSK309A	Implement animal health control programs	
AHCLSK310A	Implement feeding plans for intensive production	
AHCLSK311A	Implement feeding plans for livestock	
AHCLSK312A	Coordinate artificial insemination and fertility management of livestock	
AHCLSK313A	Monitor livestock production growing environments	
AHCLSK314A	Prepare animals for parturition	
AHCLSK315A	Prepare for and implement natural mating of livestock	

AHCLSK316A	Prepare livestock for competition	
AHCLSK317A	Plan to exhibit livestock	
AHCLSK318A	Rear newborn and young livestock	
AHCLSK319A	Slaughter livestock	
AHCLSK320A	Coordinate and monitor livestock transport	
AHCLSK321A	Service and repair bores and windmills	
AHCLSK322A	Transport farm produce or bulk materials	
AHCLSK323A	Maintain and monitor feed stocks	
AHCLSK324A	Care for and train working dogs	
AHCLSK325A	Castrate livestock	
AHCLSK326A	Mix and mill standard stockfeed	
AHCLSK327A	Collect, store and administer colostrum	
AHCLSK328A	Remove and facilitate reuse of effluent and manure from an intensive production system	
AHCLSK329A	Implement procedures for calving	
AHCLSK330A	Implement procedures for foaling down mares	
AHCLSK331A	Comply with industry animal welfare requirements	
AHCLSK332A	Monitor animals in intensive production systems	
AHCLSK333A	Monitor pen condition and ration suitability	
AHCLSK335A	Conduct dropped ovary technique procedures for spaying cattle	
AHCLSK401A	Develop feeding plans for a production system	
AHCLSK402A	Develop livestock feeding plans	
AHCLSK403A	Escort livestock during export	
AHCLSK404A	Implement and monitor animal welfare programs	
AHCLSK405A	Implement intensive production systems	

AHCLSK406A	Oversee animal marking operations	
AHCLSK407A	Plan and monitor intensive production systems	
AHCLSK408A	Pregnancy test animals	
AHCLSK409A	Supervise animal health programs	
AHCLSK410A	Supervise feedlot operations	
AHCLSK411A	Supervise natural mating of livestock	
AHCLSK412A	Arrange livestock purchases	
AHCLSK413A	Design livestock handling facilities	
AHCLSK414A	Arrange transport for farm produce or livestock	
AHCLSK415A	Oversee alpaca farm activities	
AHCLSK416A	Identify and select animals for breeding	
AHCLSK417A	Manage horses for stock work	
AHCLSK501A	Manage livestock production	
AHCLSK502A	Arrange marketing of livestock	
AHCLSK503A	Develop and implement a breeding strategy	
AHCLSK504A	Develop livestock health and welfare strategies	
AHCLSK505A	Develop production plans for livestock	
AHCLSK506A	Design livestock effluent systems	
AHCMER301A	Process customer complaints	
AHCMER302A	Provide advice on hardware products	
AHCMER303A	Sell products and services	
AHCMER401A	Coordinate customer service and networking activities	
AHCMER402A	Provide advice and sell machinery	
AHCMER403A	Provide advice and sell farm chemicals	
AHCMER404A	Provide advice on agronomic products	

AHCMER405A	Provide advice on livestock products	
AHCMER406A	Provide information on fertilisers and soil ameliorants	
AHCMER501A	Develop a sales strategy for rural products	
AHCMKH301A	Carry out minor service of milking equipment	
AHCMKH303A	Service and repair milking equipment	
AHCMKH304A	Monitor and provide advice on cleaning milking machines	
AHCMKH305A	Mechanically test milking machines	
AHCMKH401A	Carry out cleaning-time tests of milking machines	
AHCMKH402A	Design and fabricate milking equipment installations	
AHCMKH403A	Design and install on-farm milk cooling and storage	
AHCMKH404A	Install milking equipment	
AHCMKH405A	Performance test milking machines	
AHCMOM101A	Assist with routine maintenance of machinery and equipment	
AHCMOM201A	Operate two wheel motorbikes	
AHCMOM202A	Operate tractors	
AHCMOM203A	Operate basic machinery and equipment	
AHCMOM204A	Undertake operational maintenance of machinery	
AHCMOM205A	Operate vehicles	
AHCMOM206A	Conduct grader operations	
AHCMOM207A	Conduct front-end loader operations	
AHCMOM208A	Conduct excavator operations	
AHCMOM209A	Conduct dozer operations	
AHCMOM210A	Conduct scraper operations	
AHCMOM211A	Operate side by side utility vehicles	



AHCMOM212A	Operate quad bikes	
AHCMOM301A	Coordinate machinery and equipment maintenance and repair	
AHCMOM302A	Perform machinery maintenance	
AHCMOM304A	Operate machinery and equipment	
AHCMOM305A	Operate specialised machinery and equipment	
AHCMOM306A	Ground spread fertiliser and soil ameliorant	
AHCMOM307A	Operate a cane harvester	
AHCMOM308A	Operate broadacre and row crop harvest machinery and equipment	
AHCMOM309A	Operate broadacre sowing machinery and equipment	
AHCMOM310A	Operate land-forming machinery and equipment	
AHCMOM311A	Operate precision control technology	
AHCMOM312A	Operate row crop planting and seeding machinery and equipment	
AHCMOM313A	Operate mobile irrigation machinery and equipment	
AHCMOM314A	Transport machinery	
AHCMOM315A	Operate chemical application machinery and equipment	
AHCMOM401A	Conduct major repair and overhaul of machinery and equipment	
AHCMOM402A	Supervise maintenance of property machinery and equipment	
AHCMOM501A	Manage machinery and equipment	
AHCMOM502A	Implement a machinery management system	
AHCMOM601A	Analyse machinery options	
AHCNAR101A	Support natural area conservation	
AHCNAR102A	Support native seed collection	

AHCNAR201A	Carry out natural area restoration works	
AHCNAR202A	Maintain wildlife habitat refuges	
AHCNAR301A	Maintain natural areas	
AHCNAR302A	Collect and preserve biological samples	
AHCNAR303A	Implement revegetation works	
AHCNAR304A	Undertake direct seeding	
AHCNAR401A	Supervise natural area restoration works	
AHCNAR402A	Plan the implementation of revegetation works	
AHCNAR501A	Manage natural areas on a rural property	
AHCNAR502A	Conduct biological surveys	
AHCNAR503A	Design a natural area restoration project	
AHCNAR504A	Manage natural area restoration programs	
AHCNAR505A	Plan river restoration works	
AHCNAR506A	Develop and implement sustainable land use strategies	
AHCNRM501A	Develop a coastal rehabilitation strategy	
AHCNRM502A	Develop a water quality monitoring program	
AHCNRM503A	Support the implementation of waterways strategies	
AHCNRM504A	Interpret and report on catchment hydrology	
AHCNRM505A	Provide technical advice on sustainable catchment management	
AHCNRM506A	Plan and monitor works projects in catchments and waterways	
AHCNRM507A	Manipulate and analyse data within geographic information systems	
AHCNSY101A	Support nursery work	
AHCNSY201A	Pot up plants	

AHCNSY202A	Tend nursery plants	
AHCNSY203A	Undertake propagation activities	
AHCNSY204A	Maintain indoor plants	
AHCNSY301A	Maintain nursery plants	
AHCNSY302A	Receive and dispatch nursery products	
AHCNSY303A	Install and maintain plant displays	
AHCNSY304A	Deliver and promote sales of plants	
AHCNSY305A	Prepare specialised plants	
AHCNSY306A	Implement a propagation plan	
AHCNSY307A	Operate fertigation equipment	
AHCNSY401A	Plan a growing-on program	
AHCNSY402A	Plan a propagation program	
AHCOHS101A	Work safely	
AHCOHS201A	Participate in OHS processes	
AHCOHS301A	Contribute to OHS processes	
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes	
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes	
AHCORG101A	Support organic production	
AHCORG401A	Manage biodynamic production	
AHCORG402A	Manage organic livestock production	
AHCORG403A	Manage organic soil improvement	
AHCORG404A	Arrange selling through community based marketing	
AHCORG405A	Implement sustainable practices in the organic farm based business	
AHCORG406A	Oversee compliance with an organic certification scheme	

AHCORG501A	Develop an organic management plan	
AHCORG502A	Prepare the enterprise for organic certification	
AHCORG503A	Design and document an organic farm landscape	
AHCORG504A	Develop and manage a community based marketing supply chain	
AHCORG505A	Develop and monitor a sustainable production plan	
AHCORG506A	Manage an agro-ecology production system	
AHCPCM201A	Recognise plants	
AHCPCM202A	Collect, prepare and preserve plant specimens	
AHCPCM301A	Implement a plant nutrition program	
AHCPCM302A	Provide information on plants and their culture	
AHCPCM303A	Identify plant specimens	
AHCPCM401A	Recommend plants and cultural practices	
AHCPCM402A	Develop a soil health and plant nutrition program	
AHCPCM501A	Diagnose plant health problems	
AHCPCM502A	Collect and classify plants	
AHCPCM503A	Specify plants for landscapes	
AHCPCM504A	Design and maintain a specialised landscape	
AHCPCM505A	Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs	
AHCPCM601A	Develop and implement a plant health management strategy	
AHCPGD101A	Support gardening work	
AHCPGD201A	Plant trees and shrubs	
AHCPGD202A	Prepare and maintain plant displays	
AHCPGD203A	Prune shrubs and small trees	

AHCPGD204A	Transplant small trees	
AHCPGD205A	Prepare a grave site	
AHCPGD206A	Conduct visual inspection of park facilities	
AHCPGD301A	Implement a plant establishment program	
AHCPGD302A	Plan and maintain plant displays	
AHCPGD303A	Perform specialist amenity pruning	
AHCPGD304A	Implement a landscape maintenance program	
AHCPGD305A	Conduct operational inspection of park facilities	
AHCPGD306A	Implement a maintenance program for an aquatic environment	
AHCPGD401A	Design plant displays	
AHCPGD402A	Plan a plant establishment program	
AHCPGD501A	Manage plant cultural practices	
AHCPGD502A	Plan the restoration of parks and gardens	
AHCPGD503A	Manage parks and reserves	
AHCPGD504A	Develop and implement a streetscape management plan	
AHCPGD505A	Conduct comprehensive inspection of park facilities	
AHCPHT101A	Support horticultural production	
AHCPHT201A	Plant horticultural crops	
AHCPHT202A	Carry out canopy maintenance	
AHCPHT203A	Support horticultural crop harvesting	
AHCPHT204A	Undertake field budding and grafting	
AHCPHT205A	Carry out postharvest operations	
AHCPHT206A	Handle and move mushroom boxes	
AHCPHT207A	Perform mushroom substrate process tasks	

AHCPHT208A	Water mushroom crops	
AHCPHT209A	Produce trellis dried grapes	
AHCPHT301A	Carry out a crop regulation program	
AHCPHT302A	Coordinate horticultural crop harvesting	
AHCPHT303A	Implement a post-harvest program	
AHCPHT304A	Harvest horticultural crops mechanically	
AHCPHT305A	Regulate crops	
AHCPHT306A	Establish horticultural crops	
AHCPHT307A	Prepare raw materials and compost the feedstocks	
AHCPHT308A	Prepare value added compost-based products	
AHCPHT309A	Supervise mushroom substrate preparation	
AHCPHT401A	Assess olive oil for style and quality	
AHCPHT402A	Develop a crop regulation program	
AHCPHT403A	Develop harvesting and processing specifications to produce an olive oil	
AHCPHT404A	Implement and monitor a horticultural crop harvesting program	
AHCPHT405A	Manage mushroom substrate preparation	
AHCPHT406A	Control Phase II mushroom substrate process	
AHCPHT407A	Manage mushroom crop development	
AHCPHT408A	Oversee vineyard practices	
AHCPHT502A	Develop a horticultural production plan	
AHCPHT503A	Manage a controlled growing environment	
AHCPHT504A	Develop a grape production plan	
AHCPHT505A	Evaluate wine	
AHCPHT506A	Manage a wine making process	

AHCPLY201A	Collect store and handle eggs from breeder flocks	
AHCPLY202A	Maintain health and welfare of poultry	
AHCPLY203A	Set up shed for placement of day-old chickens	
AHCPLY204A	Collect and pack eggs for human consumption	
AHCPLY301A	Artificially inseminate birds	
AHCPLY302A	Brood poultry	
AHCPLY303A	Identify and sex birds	
AHCPLY304A	Incubate eggs	
AHCPLY305A	Beak trim chickens	
AHCPLY306A	Clean and fumigate intensive production sheds	
AHCPLY401A	Supervise free-range poultry operations	
AHCPMG201A	Treat weeds	
AHCPMG202A	Treat plant pests, diseases and disorders	
AHCPMG301A	Control weeds	
AHCPMG302A	Control plant pests, diseases and disorders	
AHCPMG303A	Maintain biological cultures	
AHCPMG304A	Release biological agents	
AHCPMG401A	Define the pest problem in a local area	
AHCPMG402A	Develop a pest management action plan within a local area	
AHCPMG403A	Develop monitoring procedures for the local pest management strategy	
AHCPMG404A	Coordinate the local pest management strategy	
AHCPMG405A	Implement pest management action plans	
AHCPMG406A	Investigate a reported pest treatment failure	
AHCPMG407A	Monitor and evaluate the local pest management action	

	plan	
AHCPMG408A	Assess and monitor weed, pest and/or disease control programs	
AHCPMG501A	Coordinate the pest management strategy in a regional or broader context	
AHCPMG502A	Define the pest problem in a regional or broader context	
AHCPMG503A	Develop a strategy for the management of target pests	
AHCPMG504A	Develop a system for monitoring the pest management strategy	
AHCPMG505A	Evaluate the pest management strategy	
AHCPMG506A	Manage the implementation of legislation	
AHCPMG601A	Develop a plant pest survey strategy	
AHCPMG602A	Develop a plant pest destruction strategy	
AHCPRK201A	Care for health and welfare of pigs	
AHCPRK202A	Care for weaner and grower pigs	
AHCPRK203A	Move and handle pigs	
AHCPRK301A	Pregnancy test pigs	
AHCPRK302A	Treat rectal prolapse in pigs	
AHCPRK303A	Artificially inseminate pigs	
AHCPRK304A	Mate pigs and monitor dry sow performance	
AHCPRK401A	Implement a feeding strategy for pig production	
AHCSAW201A	Conduct erosion and sediment control activities	
AHCSAW301A	Construct conservation earthworks	
AHCSAW302A	Implement erosion and sediment control measures	
AHCSAW401A	Set out conservation earthworks	
AHCSAW402A	Supervise on-site implementation of conservation earthworks	



AHCSAW501A	Design control measures and structures	
AHCSAW502A	Plan erosion and sediment control measures	
AHCSAW503A	Plan conservation earthworks	
AHCSDP301A	Undertake preparation of land for seed crops	
AHCSDP302A	Establish seed crops	
AHCSDP303A	Maintain seed crops	
AHCSDP304A	Harvest seed crops	
AHCSDP401A	Plan a seed crop establishment program	
AHCSDP402A	Supervise seed crop establishment	
AHCSDP403A	Plan and implement seed crop maintenance	
AHCSDP404A	Supervise seed crop harvesting	
AHCSDP405A	Inspect a seed crop for quality assurance purposes	
AHCSDT301A	Prepare a working sample	
AHCSDT302A	Identify seeds	
AHCSDT303A	Perform a fluorescence test on seeds	
AHCSDT304A	Perform a seed purity analysis	
AHCSDT305A	Perform a seed moisture test	
AHCSDT306A	Perform a seed germination test	
AHCSDT307A	Perform a 'Determination of Other Seeds by Number' test	
AHCSDT401A	Maintain a quarantine approved laboratory	
AHCSDT402A	Prepare and maintain a seed reference collection	
AHCSDT403A	Perform an Anguina test on annual ryegrass seed	
AHCSDT404A	Develop and implement laboratory policy and procedures	
AHCSDT405A	Handle & store quarantinable materials	
AHCSDT406A	Undertake internal audits in a seed laboratory	

AHCSDT407A	Perform an endophytic seed test	
AHCSDT408A	Perform an electrophoresis test on a seed sample	
AHCSDT409A	Perform a tetrazolium seed viability test	
AHCSDT410A	Perform a seed vigour test	
AHCSDT411A	Perform a 1000 seed weight test	
AHCSHG101A	Undertake basic shearing and crutching	
AHCSHG201A	Crutch sheep	
AHCSHG202A	Assist in preparing for shearing and crutching	
AHCSHG203A	Shear sheep to novice level	
AHCSHG204A	Shear sheep to improver level	
AHCSHG205A	Grind combs and cutters for machine shearing	
AHCSHG206A	Prepare handpiece and downtube for machine shearing	
AHCSHG207A	Shear goats	
AHCSHG208A	Shear alpacas	
AHCSHG209A	Support alpaca shearing operations	
AHCSHG301A	Prepare livestock for shearing	
AHCSHG302A	Prepare combs and cutters for machine shearing	
AHCSHG303A	Maintain and service shearing handpieces	
AHCSHG304A	Shear sheep to professional level	
AHCSHG305A	Maintain consistent shearing performance	
AHCSHG306A	Carry out post-shearing procedures	
AHCSHG307A	Plan and prepare for alpaca shearing	
AHCSHG401A	Apply advanced shearing techniques	
AHCSHG402A	Conduct equipment experting for machine shearing	
AHCSHG403A	Account for shearing shed supplies	

AHCSHG404A	Manage shearing and crutching operations	
AHCSHG405A	Arrange employment for shearing operations	
AHCSHG406A	Prepare shearing team wages	
AHCSHG407A	Oversee and instruct shed staff	
AHCSOL201A	Determine basic properties of soil and/or growing media	
AHCSOL301A	Prepare growing media	
AHCSOL302A	Construct a soil profile	
AHCSOL401A	Sample soils and interpret results	
AHCSOL402A	Develop a soil use map for a property	
AHCSOL403A	Prepare acid sulphate soil management plans	
AHCSOL404A	Supervise acid sulphate soil remediation and management projects	
AHCSOL501A	Monitor and manage soils for production	
AHCSPO301A	Operate a screen cleaner for seed processing	
AHCSPO302A	Operate an indent cylinder	
AHCSPO303A	Operate a gravity table	
AHCSPO304A	Operate seed modification machinery	
AHCSPO305A	Operate seed treatment machinery	
AHCSPO306A	Operate specialised seed processing machinery	
AHCSPO307A	Handle, package and store commercial quantities of seed	
AHCSPO308A	Sample seed before and after processing	
AHCTEQ301A	Install and terminate extra low voltage wiring systems	
AHCTRF101A	Support turf work	
AHCTRF201A	Assist with turf construction	
AHCTRF202A	Prepare turf surfaces for play	

AHCTRF203A	Renovate grassed areas	
AHCTRF204A	Support turf establishment	
AHCTRF301A	Construct turf playing surfaces	
AHCTRF302A	Establish turf	
AHCTRF303A	Implement a grassed area maintenance program	
AHCTRF304A	Monitor turf health	
AHCTRF305A	Renovate sports turf	
AHCTRF401A	Develop a sports turf maintenance program	
AHCTRF402A	Plan and implement sports turf renovation	
AHCTRF501A	Plan the establishment of sports turf playing surfaces	
AHCTRF502A	Manage sports turf renovation programs	AHCTRF305A
AHCTRF503A	Develop sports turf management programs	
AHCTRF504A	Manage sport turf facilities	
AHCVPT201A	Clear features that harbour pest animals	
AHCVPT202A	Muster pest animals	
AHCVPT203A	Use firearms to humanely destroy animals	
AHCVPT302A	Implement vertebrate pest control program	
AHCVPT303A	Survey pest animals	
AHCVPT304A	Conduct vertebrate pest activities from aircraft	
AHCVPT305A	Tag and locate Judas animals	
AHCVPT306A	Apply animal trapping techniques	
AHCWAT201A	Set up, operate and maintain water delivery systems for compost	
AHCWAT301A	Monitor and operate water treatment processes	
AHCWAT501A	Design water treatment systems	

AHCWAT502A	Manage water systems	
AHCWOL101A	Support woolshed activities	
AHCWOL201A	Pen sheep	
AHCWOL202A	Perform board duties	
AHCWOL203A	Carry out wool pressing	
AHCWOL204A	Undertake basic skirting of alpaca fleece	
AHCWOL301A	Appraise wool using industry descriptions	
AHCWOL303A	Prepare wool based on its characteristics	
AHCWOL304A	Prepare fleece wool for classing	
AHCWOL305A	Prepare skirtings and oddments	
AHCWOL306A	Supervise clip preparation	
AHCWOL307A	Document a wool clip	
AHCWOL308A	Prepare facilities for shearing and crutching	
AHCWOL310A	Press wool for a clip	
AHCWOL311A	Perform shed duties	
AHCWOL312A	Class goat fibre	
AHCWOL313A	Class alpaca fleece	
AHCWOL401A	Determine wool classing strategies	
AHCWOL402A	Use individual fleece measurements to prepare wool for sale	
AHCWOL403A	Prepare for, implement and review wool harvesting, clip preparation and classing	
AHCWOL404A	Establish work routines and manage wool harvesting and preparation staff	
AHCWOL405A	Class fleece wool	
AHCWRK101A	Maintain the workplace	

AHCWRK201A	Observe and report on weather	
AHCWRK202A	Observe environmental work practices	
AHCWRK203A	Operate in isolated and remote situations	
AHCWRK204A	Work effectively in the industry	
AHCWRK205A	Participate in workplace communications	
AHCWRK206A	Observe enterprise quality assurance procedures	
AHCWRK207A	Collect and record production data	
AHCWRK208A	Provide information on products and services	
AHCWRK209A	Participate in environmentally sustainable work practices	
AHCWRK301A	Collect samples for a rural production or horticulture monitoring program	
AHCWRK302A	Monitor weather conditions	
AHCWRK303A	Respond to emergencies	
AHCWRK304A	Respond to rescue incidents	
AHCWRK305A	Coordinate work site activities	
AHCWRK306A	Comply with industry quality assurance requirements	
AHCWRK307A	Develop and apply fertiliser and soil ameliorant product knowledge	
AHCWRK308A	Handle bulk materials in storage area	
AHCWRK310A	Provide on-job training support	
AHCWRK311A	Conduct site inspections	
AHCWRK313A	Implement and monitor environmentally sustainable work practices	
AHCWRK401A	Implement and monitor quality assurance procedures	
AHCWRK402A	Provide information on issues and policies	
AHCWRK403A	Supervise work routines and staff performance	

AHCWRK404A	Ensure compliance with pest legislation	
AHCWRK501A	Plan, implement and review a quality assurance program	
AHCWRK502A	Collect and manage data	
AHCWRK503A	Prepare reports	
AHCWRK504A	Assess new industry developments	
AHCWRK505A	Manage trial and/or research material	
AHCWRK507A	Implement professional practice	
AHCWRK508A	Interpret legislation	
AHCWRK509A	Provide specialist advice to clients	
AHCWRK510A	Audit site operations	
AHCWRK511A	Develop workplace policy and procedures for sustainability	
AHCWRK601A	Monitor projects in a program	
AHCWRK602A	Lead and manage community or industry organisations	
AHCWRK603A	Design and conduct a field-based research trial	

### Imported Units of Competency in AHC10v3 Training Package

Code	Title	Origin
BSBADM504B	Plan or review administrative systems	BSB07
BSBCMM401A	Make a presentation	BSB07
BSBCUS301B	Deliver and monitor a service to customers	BSB07
BSBCUS501C	Manage quality customer service	BSB07
BSBDES403A	Develop and extend design skills and practice	BSB07
BSBDES501A	Implement design solutions	BSB07
BSBDES502A	Establish, negotiate and refine a design brief	BSB07

BSBFIA301A	Maintain financial records	BSB07
BSBFIA402A	Report on financial activity	BSB07
BSBFIM501A	Manage budgets and financial plans	BSB07
BSBHRM402A	Recruit, select and induct staff	BSB07
BSBHRM506A	Manage recruitment selection and induction processes	BSB07
BSBHRM604A	Manage employee relations	BSB07
BSBINM201A	Process and maintain workplace information	BSB07
BSBINM401A	Implement workplace information system	BSB07
BSBITU203A	Communicate electronically	BSB07
BSBITU305A	Conduct online transactions	BSB07
BSBITU306A	Design and produce business documents	BSB07
BSBITU404A	Produce complex desktop published documents	BSB07
BSBMGT402A	Implement operational plan	BSB07
BSBMGT617A	Develop and implement a business plan	BSB07
BSBPRO301A	Recommend products and services	BSB07
BSBRELA02A	Build client relationships and business networks	BSB07
BSBRES401A	Analyse and present research information	BSB07
BSBRSK401A	Identify risk and apply risk management processes	BSB07
BSBRSK501B	Manage risk	BSB07
BSBSLS402A	Identify sales prospects	BSB07
BSBSMB403A	Market the small business	BSB07
BSBSMB405B	Monitor and manage small business operations	BSB07
BSBSMB406A	Manage small business finances	BSB07
BSBSUS301A	Implement and monitor environmentally sustainable work practices	BSB07



BSBWHS302A	Apply knowledge of WHS legislation in the workplace	BSB07
BSBWHS503A	Contribute to the systematic management of WHS risk	BSB07
BSBWHS506A	Manage WHS hazards associated with plant	BSB07
BSBWOR204A	Use business technology	BSB07
BSBWOR402A	Promote team effectiveness	BSB07
BSBWOR404A	Develop work priorities	BSB07
BSBWOR501B	Manage personal work priorities and professional development	BSB07
CHCCD404E	Develop and implement community programs	CHC08
CPCCCM2010B	Work safely at heights	CPC08
CPCCCM3001C	Operate elevated work platforms	CPC08
CPCCCM3003A	Work safely around power sources, services and assets	CPC08
CPCCDO3001A	Perform dogging	CPC08
CPCCOHS1001A	Work safely in the construction industry	CPC08
CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry	CPC08
CPCPCM2007A	Carry out levelling	CPC08
CPCPCM2014A	Carry out simple concreting and rendering	CPC08
CPCPIG2011A	Design domestic urban irrigation systems	CPC08
CPCPWT3007A	Connect irrigation systems from drinking water supply	CPC08
CPPFES2005A	Demonstrate first attack firefighting equipment	CPP07
CPPSIS4005A	Collect basic GPS data	CPP07
CPPWMT5043A	Develop and implement an environmental management strategy	CPP07
CPPWMT5045A	Develop site safety plans	CPP07
CULATS501A	Work with Aboriginal and Torres Strait Islander cultural material	CUL04
CULCNM303A	Move and store collection material	CUL04

CULCNM503A	Manage the development of collections	CUL04
CULCNM602A	Develop and monitor procedures for the movement and storage of collection material	CUL04
CULMS002B	Research and evaluate Aboriginal or Torres Strait Islander cultural material	CUL04
CULMS010B	Contribute to the preservation of cultural material	CUL04
CUVACD302A	Produce computer-aided drawings	CUV11
CUVACD303A	Produce technical drawings	CUV11
FDFFS2001A	Implement the food safety program and procedures	FDF10
FDFFS3001A	Monitor the implementation of quality and food safety programs	FDF10
FDFGPS2011A	Operate a creamed honey manufacture process	FDF10
FDFOP2003A	Clean equipment in place	FDF10
FDFOP2004A	Clean and sanitize equipment	FDF10
FDFOP2012A	Maintain food safety when loading, unloading and transporting food	FDF10
FDFOP2013A	Implement sampling procedures	FDF10
FDFOP2016A	Work in a food handling area for non-food handlers	FDF10
FDFOP2023A	Operate a packaging process	FDF10
FDFOP2038A	Operate a grinding process	FDF10
FDFTEC3001A	Participate in a HACCP team	FDF10
FDFWGG2001A	Bench graft vines	FDF10
FDFWGG2002A	Carry out potting operations	FDF10
FDFWGG2003A	Hand prune vines	FDF10
FDFWGG2005A	Maintain callusing environment	FDF10
FDFWGG2006A	Obtain and process rootlings	FDF10
FDFWGG2008A	Train vines	FDF10

FDFWGG2009A	Operate specialised canopy management equipment	FDF10
FDFWGG2010A	Field graft vines	FDF10
FDFWGG2013A	Deliver injection requirements	FDF10
FDFWGG2015A	Support mechanical harvesting operations	FDF10
FDFWGG2016A	Install and maintain vine trellis	FDF10
FDFWGG2018A	Operate vineyard equipment	FDF10
FDFWGG2020A	Carry out hot water treatment	FDF10
FDFWGG2021A	Operate nursery cold storage facilities	FDF10
FDFWGG2022A	Take and process vine cuttings	FDF10
FDFWGG3002A	Coordinate canopy management activities	FDF10
FDFWGG3004A	Coordinate nursery activities	FDF10
FDFWGG3005A	Perform field nursery activities	FDF10
FDFWGG3006A	Coordinate hand pruning activities	FDF10
FDFWGG3009A	Monitor and maintain nursery plants	FDF10
FDFWGG3010A	Implement a soil management program	FDF10
FDFWGG3011A	Perform shed nursery activities	FDF10
FNSFMK512A	Apply knowledge of emissions markets	FNS10
FPICOT2221B	Trim and cross cut felled trees	FPI05
FPICOT2234B	Operate 4x4 vehicle	FPI05
FPICOT3202B	Navigate in remote or trackless areas	FPI05
FPIFGM2201B	Collect seed	FPI05
FPIFGM2208A	Fall trees manually (basic)	FPI05
FPIFGM3201B	Manage seed collection	FPI05
FPIFGM3202B	Extract seed	FPI05
FPIFGM3204A	Fall trees manually (intermediate)	FPI05

FPIFGM3205A	Fall trees manually (advanced)	FPI05
FPIHAR2206B	Operate a mobile chipper/mulcher	FPI05
HLTFA201A	Provide basic emergency life support	HLT07
HLTFA301C	Apply first aid	HLT07
HLTFA302C	Provide first aid in remote situation	HLT07
LGACOM502B	Devise and conduct community consultations	LGA04
LGALAND504A	Undertake effective consultation with Indigenous people on matters of cultural heritage	LGA04
LGAPLEM508A	Manipulate and analyse data within geographic information systems	LGA04
LGAREGS305A	Undertake animal or reptile control duties	LGA04
MEM05004C	Perform routine oxy acetylene welding	MEM05
MEM05007C	Perform manual heating and thermal cutting	MEM05
MEM05012C	Perform routine manual metal arc welding	MEM05
MEM05015D	Weld using manual metal arc welding process	MEM05
MEM05017D	Weld using gas metal arc welding process	MEM05
MEM05019D	Weld using gas tungsten arc welding process	MEM05
MEM05049B	Perform routine gas tungsten arc welding	MEM05
MEM05050B	Perform routine gas metal arc welding	MEM05
MEM05051A	Select welding processes	MEM05
MEM05052A	Apply safe welding practices	MEM05
MEM12023A	Perform engineering measurements	MEM05
MEM18001C	Use hand tools	MEM05
MEM18002B	Use power tools/hand held operations	MEM05
MSL904001A	Perform standard calibrations	MSL09
MSL913002A	Plan and conduct laboratory/field work	MSL09

MSL922001A	Record and present data	MSL09
MSL924001A	Process and interpret data	MSL09
MSL924002A	Use laboratory application software	MSL09
MSL933001A	Maintain the laboratory/field workplace fit for purpose	MSL09
MSL933004A	Perform calibration checks on equipment and assist with its maintenance	MSL09
MSL934002A	Apply quality system and continuous improvement processes	MSL09
MSL934003A	Maintain and control stocks	MSL09
MSL973007A	Perform microscopic examination	MSL09
NWP203B	Plan and organise personal work activities	NWP07
NWP209B	Use maps, plans, drawings and specifications	NWP07
NWP210B	Perform basic water quality tests	NWP07
NWP215B	Install and replace basic volumetric metering equipment	NWP07
NWP222A	Operate basic flow control and regulating devices in irrigation systems	NWP07
NWP226B	Prepare and restore work site	NWP07
NWP251B	Construct open earthen channels or drains	NWP07
NWP252B	Construct and install irrigation delivery and stormwater drainage assets	NWP07
NWP302A	Install meters for non-potable, non-urban water supplies	NWP07
NWP304A	Maintain meters for non-potable, non-urban water supplies	NWP07
NWP305B	Monitor and conduct minor maintenance of complex flow-control and metering devices	NWP07
NWP316B	Monitor and schedule water deliveries	NWP07
NWP362B	Monitor, operate and control reclaimed water irrigation	NWP07
NWP401B	Coordinate and monitor the application of environmental plans and procedures	NWP07

NWP410C	Coordinate and monitor asset construction and maintenance	NWP07
NWP425B	Coordinate and monitor the operation of irrigation delivery systems	NWP07
NWP512B	Implement and manage catchment management plan	NWP07
NWP513B	Develop and review catchment management plan	NWP07
NWP516B	Implement and manage surface water management plan	NWP07
NWP517B	Develop and review surface water management plan	NWP07
NWP518B	Prepare and report on data related to flood mitigation	NWP07
NWP519B	Develop and report flood mitigation	NWP07
PSPPM402B	Manage simple projects	PSP04
PSPPM502B	Manage complex projects	PSP04
PSPPM503B	Close complex projects	PSP04
PSPPOL404A	Support policy implementation	PSP04
PSPPOL603A	Manage policy implementation	PSP04
PUACOM012B	Liaise with media at a local level	PUA00
PUAEMR026	Treat operational risk	PUA12
PUAEMR027	Assess operational risk	PUA12
PUAFIR201B	Prevent injury	PUA00
PUAFIR204B	Respond to wildfire	PUA00
PUAFIR303A	Suppress wildfire	PUA00
PUAFIR303B	Suppress wildfire	PUA00
PUAFIR406B	Develop prescribed burning plans	PUA00
PUAFIR407A	Conduct prescribed burning	PUA00
PUAFIR601B	Develop and administer agency policy, procedures and practices	PUA00
PUALAW001B	Protect and preserve incident scene	PUA00

PUAOPE004A	Conduct briefings/debriefings	PUA00
PUAOPE005A	Manage a multi team response	PUA00
RGRPSH409A	Determine nutritional requirements for racing horses	RGR08
RIIMPO304B	Conduct wheel loader operations	RII09
RIIMPO318B	Conduct civil construction skid steer loader operations	RII09
RIIMPO319A	Conduct backhoe/loader operations	RII09
RIIMPO324A	Conduct civil construction grader operations	RII09
RIIOHS202A	Enter and work in confined spaces	RII09
RIIOHS205A	Control traffic with stop-slow bat	RII09
SIRXADM001A	Apply retail office procedures	SIR07
SIRXADM002A	Coordinate retail office	SIR07
SIRXCCS201	Apply point-of-sale handling procedures	SIR07
SIRXCCS202	Interact with customers	SIR07
SIRXCLM001A	Organise and maintain work areas	SIR07
SIRXCLM402	Manage store facilities	SIR07
SIRXFIN201	Balance and secure point-of-sale terminal	SIR07
SIRXFIN002A	Perform retail finance duties	SIR07
SIRXICT001A	Operate retail technology	SIR07
SIRXINV002A	Maintain and order stock	SIR07
SIRXINV004A	Buy merchandise	SIR07
SIRXINV005A	Control inventory	SIR07
SIRXMER004A	Manage merchandise and store presentation	SIR07
SIRXMER201	Merchandise products	SIR07
SIRXMER202	Plan, create and maintain displays	SIR07
SIRXMER303	Coordinate merchandise presentation	SIR07

SIRXMER406	Monitor in-store visual merchandising display	SIR07
SIRXMPR001A	Profile a retail market	SIR07
SIRXPRO007A	Improve supply and distribution chains	SIR07
SIRXRSK002A	Maintain store security	SIR07
SIRXRSK404	Control store security	SIR07
SIRXSLS201	Sell products and services	SIR07
SIRXSLS002A	Advise on products and services	SIR07
SIRXSLS303	Build relationships with customers	SIR07
SIRXSLS406	Manage sales and service delivery	SIR07
SISXRES506A	Undertake open-space planning	SIS10
SITTGDE101	Interpret aspects of local Australian Indigenous culture	SIT12
SITTGDE301	Work as a guide	SIT12
SITTGDE306	Research and share general information on Australian Indigenous cultures	SIT12
SITTGDE307	Prepare specialised interpretive content on flora, fauna and landscape	SIT12
SITTGDE309	Prepare specialised interpretive content on cultural and heritage environments	SIT12
SITTPPD402	Develop interpretive activities	SIT12
SITTPPD602	Develop environmentally sustainable tourism operations	SIT12
SITXCCS201	Provide visitor information	SIT12
SITXCOM301	Address protocol requirements	SIT12
SRXGOV001B	Participate as a member of an effective board of an organisation	SRS03
SRXGOV004B	Work effectively with the board of an organisation	SRS03
SRXGRO002A	Deal with conflict	SRS03
TAEDEL301A	Provide work skill instruction	TAE10



TLID1001A	Shift materials safely using manual handling methods	TLI10
TLID2022A	Conduct weighbridge operations	TLI10
TLIL5019A	Implement and monitor transport logistics	TLI10
TLILIC2001A	Licence to operate a forklift truck	TLI10
TLILIC2005A	Licence to operate a boom-type elevating work platform (boom length 11 meters or more)	TLI10
TLIR4002A	Source goods/services and evaluate contractors	TLI10
TLIR4003C	Negotiate a contract	TLI10

## Qualification Mapping of AHC10 - all Versions

### Qualification Mapping – AHC10v4 to AHC10v5

AHC10v4 Qualification Code and Title	AHC10v5 Qualification Code and Title	Mapping	Comment
	AHC32513 Certificate III in Aboriginal-sites Work		New qualification
	AHC51513 Diploma of Viticulture		New qualification

### Qualification Mapping – AHC10v3 to AHC10v4

AHC10v3 Qualification Code and Title	AHC10v4 Qualification Code and Title	Mapping	Comment
	AHC33412 Certificate III in Seed Production		New qualification
	AHC33512 Certificate III in Seed Testing		New qualification
	AHC41412 Certificate IV in Seed Production		New qualification
	AHC41512 Certificate IV in Seed Testing		New qualification

	AHC41612 Certificate IV in Organic Farming		New qualification
	AHC51812 Diploma of Organic Farming		New qualification

### Qualification Mapping – AHC10v2 to AHC10v3

AHC10v2 Qualification Code and Title	AHC10v3 Qualification Code and Title	Mapping	Comment
AHC21110 Certificate II in Irrigation	AHC21112 Certificate II in Irrigation	N	This qualification supersedes but is not equivalent to AHC21110
AHC32410 Certificate III in Irrigation	AHC32412 Certificate III in Irrigation	N	This qualification supersedes but is not equivalent to AHC32410
AHC40810 Certificate IV in Sports Turf Management	AHC40812 Certificate IV in Sports Turf Management	E	This qualification supersedes and is equivalent to AHC40810
AHC41110 Certificate IV in Irrigation	AHC41112 Certificate IV in Irrigation	N	This qualification supersedes but is not equivalent to AHC41110

### Qualification Mapping – AHC10v1 to AHC10v2

AHC10 Qualification Code and Title	AHC10v2 Qualification Code and Title	Mapping	Comment
AHC33310 Certificate III in Feedlot Feeding and Milling AHC33410 Certificate III in Feedlot Maintenance AHC33510 Certificate III in Feedlot Pen Riding	AHC33311 Certificate III in Feedlot Operations	E	
AHC32110 Certificate III in Commercial Seed Processing	AHC32111 Certificate III in Commercial Seed Processing	E	

**Qualification Mapping – RTD02 to AHC10v1**

<b>RTD02 Qualification Code and Title</b>	<b>AHC10 Qualification Code and Title</b>	<b>Mapping</b>	<b>Comment</b>
RTD10102 Certificate I in Conservation and Land Management	AHC10110 Certificate I in Conservation and Land Management	E	
RTD20102 Certificate II in Conservation and Land Management	AHC21010 Certificate II in Conservation and Land Management	E	
RTD30102 Certificate III in Conservation and Land Management	AHC31410 Certificate III in Conservation and Land Management	E	
RTD30102 Certificate III in Conservation and Land Management (specialising in Indigenous Land Management)	AHC31510 Certificate III in Indigenous Land Management	E	
RTD30102 Certificate III in Conservation and Land Management (specialising in Lands, Parks and Wildlife)	AHC31610 Certificate III in Lands, Parks and Wildlife	E	
RTD30102 Certificate III in Conservation and Land Management (specialising in Natural Area Restoration)	AHC31710 Certificate III in Natural Area Restoration	E	
RTD30102 Certificate III in Conservation and Land Management (specialising in Vertebrate Pest Management)	AHC31810 Certificate III in Vertebrate Pest Management	E	
RTD30102 Certificate III in Conservation and Land Management (specialising in Weed Management)	AHC31910 Certificate III in Weed Management	E	
RTD30102 Certificate III in Conservation and Land Management (specialising in Conservation Earthworks)	AHC32310 Certificate III in Conservation Earthworks	E	
RTD40102 Certificate IV in Conservation and Land Management	AHC40910 Certificate IV in Conservation and Land Management	E	

<b>RTD02 Qualification Code and Title</b>	<b>AHC10 Qualification Code and Title</b>	<b>Mapping</b>	<b>Comment</b>
RTD50102 Diploma of Conservation and Land Management	AHC51110 Diploma of Conservation and Land Management	E	
RTD50102 Diploma of Conservation and Land Management (specialising in Community Coordination and Facilitation)	AHC51210 Diploma of Community Coordination and Facilitation	E	
RTD50102 Diploma of Conservation and Land Management (specialising in Vertebrate Pest Management )	AHC51310 Diploma of Pest Management	E	
RTD50102 Diploma of Conservation and Land Management (specialising in Weed Management )	AHC51310 Diploma of Pest Management	E	
RTD60102 Advanced Diploma of Conservation and Land Management	AHC60410 Advanced Diploma of Conservation and Land Management	E	

#### Qualification Mapping – RTE03 to AHC10v1

<b>RTE03 Qualification Code and Title</b>	<b>AHC10 Qualification Code and Title</b>	<b>Mapping</b>	<b>Comment</b>
RTE10103 Certificate I in Rural Operations	AHC10210 Certificate I in AgriFood Operations	E	
RTE20103 Certificate II in Agriculture	AHC20110 Certificate II in Agriculture	E	
RTE20103 Certificate II in Agriculture – poultry production pathway	AHC20210 Certificate II in Poultry Production Operations	E	
RTE20603 Certificate II in Production Horticulture	AHC20310 Certificate II in Production Horticulture	E	
RTE20203 Certificate II in Irrigation	AHC21110 Certificate II in Irrigation	E	
RTE20703 Certificate II in Rural Operations	AHC21210 Certificate II in Rural Operations	E	

RTE20403 Certificate II in Shearing	AHC21310 Certificate II in Shearing	E	
RTE20303 Certificate II in Wool Handling	AHC21410 Certificate II in Wool Handling	E	
RTE30103 Certificate III in Agriculture	AHC30110 Certificate III in Agriculture	E	
RTE30203 Certificate III in Agriculture (Beef Production)	AHC30110 Certificate III in Agriculture	E	
RTE30303 Certificate III in Agriculture (Cotton Production)	AHC30110 Certificate III in Agriculture	E	
RTE30503 Certificate III in Agriculture (Goat Production)	AHC30110 Certificate III in Agriculture	E	
RTE30603 Certificate III in Agriculture (Grain Production)	AHC30110 Certificate III in Agriculture	E	
RTE31103 Certificate III in Agriculture (Sheep and Wool Production)	AHC30110 Certificate III in Agriculture	E	
RTE31203 Certificate III in Agriculture (Sugar Production)	AHC30110 Certificate III in Agriculture	E	
RTE30403 Certificate III in Agriculture (Dairy Production)	AHC30210 Certificate III in Agriculture (Dairy Production)	E	
RTE30703 Certificate III in Agriculture (Horse Breeding)	AHC30310 Certificate III in Horse Breeding	E	
RTE30903 Certificate III in Agriculture (Pig Production)	AHC30410 Certificate III in Pork Production	E	
RTE31003 Certificate III in Agriculture (Poultry Production)	AHC30510 Certificate III in Poultry Production	E	
RTE31603 Certificate III in Production Horticulture	AHC30610 Certificate III in Production Horticulture	E	
RTE30103 Certificate III in Agriculture	AHC32010 Certificate III in Beekeeping	E	
RTE32107 Certificate III in	AHC32210 Certificate III in	E	

Commercial Composting	Commercial Composting		
RTE31303 Certificate III in Irrigation	AHC32410 Certificate III in Irrigation	E	
RTE31803 Certificate III in Rural Merchandising	AHC32710 Certificate III in Rural Merchandising	E	
RTE31903 Certificate III in Rural Operations	AHC32810 Certificate III in Rural Operations	E	
RTE31503 Certificate III in Shearing	AHC32910 Certificate III in Shearing	E	
RTE31403 Certificate III in Wool Clip Preparation	AHC33010 Certificate III in Wool Clip Preparation	E	
RTE32003 Certificate III in Advanced Wool Handling	AHC33110 Certificate III in Advanced Wool Handling	E	
RTE40103 Certificate IV in Agriculture	AHC40110 Certificate IV in Agriculture	E	
RTE40103 Certificate IV in Agriculture – poultry production pathway	AHC40210 Certificate IV in Poultry Production	E	
RTE40503 Certificate IV in Production Horticulture	AHC40310 Certificate IV in Production Horticulture	E	
RTE40603 Certificate IV in Rural Business	AHC41010 Certificate IV in Agribusiness	E	
RTE40203 Certificate IV in Irrigation	AHC41110 Certificate IV in Irrigation	E	
RTE40403 Certificate IV in Shearing	AHC41210 Certificate IV in Shearing	E	
RTE40303 Certificate IV in Wool Classing	AHC41310 Certificate IV in Wool Classing	E	
RTE50103 Diploma of Agriculture	AHC50110 Diploma of Agriculture	E	
RTE50103 Diploma of Agriculture – pork production pathway	AHC50210 Diploma of Pork Production	E	

RTE50303 Diploma of Production Horticulture	AHC50310 Diploma of Production Horticulture	E	
RTE50403 Diploma of Rural Business Management	AHC51410 Diploma of Agribusiness Management	E	
RTE50203 Diploma of Irrigation	AHC51610 Diploma of Irrigation Management	E	
RTE60103 Advanced Diploma of Agriculture	AHC60110 Advanced Diploma of Agriculture	E	
RTE60203 Advanced Diploma of Rural Business Management	AHC60310 Advanced Diploma of Agribusiness Management	E	
	AHC32110 Certificate III in Commercial Seed Processing		New qualification
	AHC32610 Certificate III in Rural Machinery Operations		New qualification
	ACH33310 Certificate III in Feedlot Feeding and Milling		
	ACH33410 Certificate III in Feedlot Maintenance		New qualification
	ACH33510 Certificate III in Feedlot Pen Riding		New qualification
	AHC51710 Diploma of Rural Machinery Management		New qualification
RTE20503 Certificate II in Crutching			Qualification removed
RTE20807 Certificate II in Commercial Composting			Qualification removed
RTE30803 Certificate III in Agriculture (Milk Harvesting)			Qualification removed
RTE31703 Certificate III in Rural Business			Qualification removed
RTE40707 Certificate IV in Commercial Composting			Qualification removed

RTE50507 Diploma of Commercial Composting			Qualification removed
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### Qualification Mapping – RTF03 to AHC10v1

RTF03 Qualification Code and Title	AHC10 Qualification Code and Title	Mapping	Comment
RTF10103 Certificate I in Horticulture	AHC10210 Certificate I in AgriFood Operations	E	Packaging rules changed. New units added to cover RTE10103 Certificate I in Agriculture and RTD10102 Certificate I in Conservation and Land Management
RTF20103 Certificate II in Horticulture	AHC20410 Certificate II in Horticulture	E	
RTF20203 Certificate II in Horticulture (Arboriculture)	AHC20510 Certificate II in Arboriculture	E	
RTF20303 Certificate II in Horticulture (Floriculture)	AHC21510 Certificate II in Floriculture	E	
RTF20403 Certificate II in Horticulture (Landscape)	AHC21610 Certificate II in Landscaping	E	
RTF20503 Certificate II in Horticulture (Retail Nursery)	AHC20810 Certificate II in Retail Nursery	N	Packaging rules changed
RTF20603 Certificate II in Horticulture (Wholesale Nursery)	AHC20710 Certificate II in Production Nursery	N	Packaging rules changed
RTF20703 Certificate II in Horticulture (Parks and Gardens)	AHC20610 Certificate II in Parks and Gardens	N	Packaging rules changed
RTF20803 Certificate II in Horticulture (Turf)	AHC20910 Certificate II in Sports Turf	N	Packaging rules changed



	Management		
RTF30103 Certificate III in Horticulture	AHC30710 Certificate III in Horticulture	E	
RTF30203 Certificate III in Horticulture (Arboriculture)	AHC30810 Certificate III in Arboriculture	N	New units written. Packaging rules changed
RTF30303 Certificate III in Horticulture (Floriculture)	AHC33210 Certificate III in Floriculture	E	
RTF30403 Certificate III in Horticulture (Landscape)	AHC30910 Certificate III in Landscape Construction	N	Packaging rules changed
RTF30503 Certificate III in Horticulture (Retail Nursery)	AHC31210 Certificate III in Retail Nursery	N	Packaging rules changed
RTF30603 Certificate III in Horticulture (Wholesale Nursery)	AHC31110 Certificate III in Production Nursery	N	Packaging rules changed
RTF30703 Certificate III in Horticulture (Parks and Gardens)	AHC31010 Certificate III in Parks and Gardens	N	Packaging rules changed
RTF30803 Certificate III in Horticulture (Turf)	AHC31310 Certificate III in Sports Turf Management	N	Packaging rules changed
RTF40103 Certificate IV in Horticulture	AHC40410 Certificate IV in Horticulture	E	
RTF40503 Certificate IV in Horticulture (Retail Nursery)	AHC40710 Certificate IV in Retail Nursery	N	Packaging rules changed
RTF40603 Certificate IV in Horticulture (Wholesale Nursery)	AHC40610 Certificate IV in Production Nursery	N	Packaging rules changed
RTF40703 Certificate	AHC40510	N	Packaging rules changed

IV in Horticulture (Parks and Gardens)	Certificate IV in Parks and Gardens		
RTF40803 Certificate IV in Horticulture (Turf)	AHC40810 Certificate IV in Sports Turf Management	N	Packaging rules changed
RTF50103 Diploma of Horticulture	AHC50410 Diploma of Horticulture	E	
RTF50203 Diploma of Horticulture (Arboriculture)	AHC50510 Diploma of Arboriculture	N	New units written. Packaging rules changed
RTF50503 Diploma of Horticulture (Retail Nursery)	AHC50910 Diploma of Retail Nursery Management	N	Packaging rules changed
RTF50603 Diploma of Horticulture (Wholesale Nursery)	AHC50810 Diploma of Production Nursery Management	N	Packaging rules changed
RTF50703 Diploma of Horticulture (Parks and Gardens)	AHC50710 Diploma of Parks and Gardens Management	N	Packaging rules changed
RTF50803 Diploma of Horticulture (Turf)	AHC51010 Diploma of Sports Turf Management	N	Packaging rules changed
RTF60103 Advanced Diploma of Horticulture	AHC60210 Advanced Diploma of Horticulture	E	
	AHC50610 Diploma of Landscape Design		New qualification
RTF40203 Certificate IV in Horticulture (Arboriculture)			Qualification removed
RTF40303 Certificate IV in Horticulture (Floriculture)			Qualification removed

RTF40403 Certificate IV in Horticulture (Landscape)			Qualification removed
RTF50303 Diploma of Horticulture (Floriculture)			Qualification removed
RTF50403 Diploma of Horticulture (Landscape)			Qualification removed
RTE50507 Diploma of Commercial Composting			Qualification removed

## Unit Mapping AHC10v5 to AHC10v6

### Units of Competency Mapping – AHC10v4 to AHC10v5

AHC10v5 Unit Code	AHC10v5 Unit Title	AHC10v6 Unit Code	AHC10v6 Unit Title	Mapping	Comments
		AHCCFI501A	Provide technical advice on the Carbon Farming Initiative		New unit
		AHCCFI502A	Assess the feasibility of a Carbon Farming Initiative project		New unit
		AHCCFI503A	Advise on Carbon Farming Initiative project planning and implementation		New unit
		AHCCFI504A	Monitor and report on a Carbon Farming Initiative project		New unit
		AHCCFI505A	Aggregate Carbon Farming Initiative projects		New unit
		AHCCFI506A	Plan a Carbon Farming Initiative livestock project		New unit

		AHCCFI507A	Plan a Carbon Farming Initiative waste or manure management project		New unit
		AHCCFI508A	Plan a Carbon Farming Initiative project to sequester carbon in soil or biochar		New unit
		AHCCFI509A	Plan a Carbon Farming Initiative savannah burning, feral animal or rangelands project		New unit
		AHCCFI510A	Plan a Carbon Farming Initiative vegetation project		New unit
		AHCCFI511A	Plan a Carbon Farming Initiative project to avoid emissions from soil or crops		New unit
		AHCHBR308A	Maintain horses in a healthy state and safe environment		New unit
		AHCHBR309A	Determine nutritional requirements for horses		New unit
		AHCLSK335A	Conduct dropped ovary technique procedures for spaying cattle		New unit

## Unit Mapping AHC10v4 to AHC10v5

### Units of Competency Mapping – AHC10v4 to AHC10v5

AHC10v4 Unit Code	AHC10v4 Unit Title	AHC10v5 Unit Code	AHC10v5 Unit Title	Mapping	Comments
		AHCASW301A	Protect places of Aboriginal cultural significance		New unit

		AHCASW302A	Relate Aboriginal culture to sites work		New unit
		AHCASW303A	Identify and record Aboriginal-sites, objects and cultural landscapes		New unit
		AHCASW304A	Identify Indigenous culturally significant plants		New unit
		AHCASW305A	Work with Aboriginal ceremonial secret sacred materials		New unit
		AHCASW306A	Use technology in Aboriginal-sites work		New unit
		AHCASW307A	Map Aboriginal cultural landscapes		New unit
		AHCASW308A	Apply cultural significance to Aboriginal-sites and landscapes		New unit
		AHCASW309A	Interpret Aboriginal cultural landscape		New unit
		AHCASW310A	Move and store Aboriginal cultural material		New unit
		AHCASW311A	Apply relevant legislation in Aboriginal-sites		New unit

			work		
		AHCASW312A	Maintain an Aboriginal cultural site		New unit
		AHCASW501A	Survey and report on Aboriginal cultural sites		New unit
AHCILM303A	Work in an Indigenous community or organisation	AHCILM305A	Work with an Aboriginal Community or organisation	N	Supersedes and is not equivalent to AHCILM303A
AHCILM304A	Follow cultural protocols	AHCILM306A	Follow Aboriginal cultural protocols	N	Supersedes and is not equivalent to AHCILM304A
		AHCILM307A	Implement Aboriginal cultural burning practices		New unit
AHCILM507A	Plan for successful cultural practice at work	AHCILM510A	Plan for successful cultural practice at work	N	Supersedes and is not equivalent to AHCILM507A
		AHPCPM505A	Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs		New unit
		AHCPHT209A	Produce trellis dried grapes		New unit
		AHCPHT408A	Oversee vineyard practices		New unit
		AHCPHT504A	Develop a grape production plan		New unit

		AHCPHT505A	Evaluate wine		New unit
		AHCPHT506A	Manage a wine making process		New unit

## Unit Mapping AHC10v3 to AHC10v4

### Units of Competency Mapping – AHC10v3 to AHC10v4

AHC10v3 Unit Code	AHC10v3 Unit Title	AHC10v4 Unit Code	AHC10v4 Unit Title	Mapping	Comments
		AHCORG404A	Arrange selling through community based marketing		New unit
		AHCORG405A	Implement sustainable practices in the organic farm based business		New unit
		AHCORG406A	Oversee compliance with an organic certification scheme		New unit
		AHCORG503A	Design and document an organic farm landscape		New unit
		AHCORG504A	Develop and manage a community based marketing supply chain		New unit
		AHCORG505A	Develop and monitor a sustainable production plan		New unit
		AHCORG506A	Manage an agro-ecology production system		New unit
		AHCSDP301A	Undertake preparation of land for seed crops		New unit
		AHCSDP302A	Establish seed crops		New unit
		AHCSDP303A	Maintain seed crops		New unit

		AHCSDP304A	Harvest seed crops		New unit
		AHCSDP401A	Plan a seed crop establishment program		New unit
		AHCSDP402A	Supervise seed crop establishment		New unit
		AHCSDP403A	Plan and implement seed crop maintenance		New unit
		AHCSDP404A	Supervise seed crop harvesting		New unit
		AHCSDP405A	Inspect a seed crop for quality assurance purposes		New unit
		AHCSDT301A	Prepare a working sample		New unit
		AHCSDT302A	Identify seeds		New unit
		AHCSDT303A	Perform a fluorescence test on seeds		New unit
		AHCSDT304A	Perform a seed purity analysis		New unit
		AHCSDT305A	Perform a seed moisture test		New unit
		AHCSDT306A	Perform a seed germination test		New unit
		AHCSDT307A	Perform a 'Determination of Other Seeds by Number' test		New unit
		AHCSDT401A	Maintain a quarantine approved laboratory		New unit
		AHCSDT402A	Prepare and maintain a seed reference collection		New unit
		AHCSDT403A	Perform an Anguina test on annual ryegrass seed		New unit
		AHCSDT404A	Develop and implement laboratory policy and		New unit



			procedures		
		AHCSDT405A	Handle & store quarantinable materials		New unit
		AHCSDT406A	Undertake internal audits in a seed laboratory		New unit
		AHCSDT407A	Perform an endophytic seed test		New unit
		AHCSDT408A	Perform an electrophoresis test on a seed sample		New unit
		AHCSDT409A	Perform a tetrazolium seed viability test		New unit
		AHCSDT410A	Perform a seed vigour test		New unit
		AHCSDT411A	Perform a 1000 seed weight test		New unit

## Unit Mapping AHC10v2 to AHC10v3

### Units of Competency Mapping – AHC10v2 to AHC10v3

AHC10v2 Unit Code	AHC10v2 Unit Title	AHC10v3 Unit Code	AHC10v3 Unit Title	Mapping	Comments
		AHCIRG207A	Carry out irrigation site preparation tasks		New unit
		AHCIRG208A	Assist with the installation and maintenance of pumps and flow-control devices for irrigation		New unit
		AHCIRG209A	Carry out installation tasks for low volume		New unit

			irrigation		
		AHCIRG210A	Carry out installation tasks for sprinkler irrigation		New unit
		AHCIRG211A	Assist with low volume irrigation operations		New unit. This unit has been developed based on AHCIRG202A to reflect the identified need to recognise specific systems.
		AHCIRG212A	Assist with sprinkler irrigation operations		New unit. This unit has been developed based on AHCIRG202A to reflect the identified need to recognise specific systems.
		AHCIRG213A	Assist with surface irrigation operations		New unit. This unit has been developed based on AHCIRG201A to reflect the identified need to recognise specific systems.
AHCIRG203A	Install micro-irrigation systems	AHCIRG214A	Install micro-irrigation systems for landscaping	E	Unit replaces earlier version.
		AHCIRG308A	Monitor soils		New unit

			under irrigation		
		AHCIRG309A	Interpret and apply irrigation to install pumps		New unit
		AHCIRG310A	Operate and maintain irrigation pumping systems		New unit
		AHCIRG311A	Install low volume irrigation components		New unit. This unit has been developed based on AHCIRG302A to reflect the identified need to recognise specific systems.
		AHCIRG312A	Install sprinkler irrigation components		New unit. This unit has been developed based on AHCIRG302A to reflect the identified need to recognise specific systems.
		AHCIRG313A	Install moving sprinkler irrigation components		New unit. This unit has been developed based on AHCIRG302A to reflect the identified need to recognise specific systems.
		AHCIRG314A	Install surface irrigation structures and		New unit. This unit has been developed based on

			components		AHCIRG302A to reflect the identified need to recognise specific systems.
		AHCIRG315A	Interpret irrigation plans and drawings		New unit
		AHCIRG316A	Implement a low volume irrigation maintenance program		New unit. This unit has been developed based on AHCIRG301A to reflect the identified need to recognise specific systems.
		AHCIRG317A	Implement a sprinkler irrigation maintenance program		New unit. This unit has been developed based on AHCIRG301A to reflect the identified need to recognise specific systems.
		AHCIRG318A	Implement a moving sprinkler irrigation maintenance program		New unit. This unit has been developed based on AHCIRG301A to reflect the identified need to recognise specific systems.
		AHCIRG319A	Implement a surface irrigation maintenance		New unit. This unit has been developed based on

			program		AHCIRG301A to reflect the identified need to recognise specific systems.
		AHCIRG320A	Maintain and repair drainage irrigation systems		New unit
		AHCIRG321A	Operate low volume irrigation systems		New unit. This unit has been developed based on AHCIRG305A to reflect the identified need to recognise specific systems.
		AHCIRG322A	Operate sprinkler irrigation systems		New unit. This unit has been developed based on AHCIRG305A to reflect the identified need to recognise specific systems.
		AHCIRG323A	Operate moving sprinkler irrigation systems		New unit
		AHCIRG324A	Operate surface irrigation systems		New unit. This unit has been developed based on AHCIRG304A to reflect the identified need to recognise

					specific systems.
		AHCIRG325A	Operate irrigation technology		New unit
		AHCIRG326A	Operate irrigation injection equipment		New unit
		AHCIRG327A	Implement an irrigation schedule		New unit
AHCIRG403A	Determine seasonal irrigation scheduling tasks				Removed unit. The job function described by this unit is covered by AHCIRG408A Schedule irrigations
AHCIRG409A	Implement, monitor and adjust irrigation schedules				Removed unit. The job function described by this unit is covered by AHCIRG408A Schedule irrigations
		AHCIRG410A	Select and manage pumping systems for irrigation		New unit
		AHCIRG411A	Construct and install a low volume irrigation		New unit. This unit has been developed based on AHCIRG401A

			system		to reflect the identified need to recognise specific systems.
		AHCIRG412A	Construct and install a sprinkler irrigation system		New unit. This unit has been developed based on AHCIRG401A to reflect the identified need to recognise specific systems.
		AHCIRG413A	Construct and install a moving sprinkler irrigation system		New unit. This unit has been developed based on AHCIRG401A to reflect the identified need to recognise specific systems.
		AHCIRG414A	Construct and install a surface irrigation system		New unit. This unit has been developed based on AHCIRG401A to reflect the identified need to recognise specific systems.
		AHCIRG415A	Interpret and apply irrigation designs		New unit
		AHCIRG416A	Supervise low volume irrigation maintenance		New unit

		AHCIRG417A	Supervise sprinkler irrigation maintenance		New unit
		AHCIRG418A	Supervise moving sprinkler irrigation maintenance		New unit
		AHCIRG419A	Supervise surface irrigation maintenance		New unit
		AHCIRG420A	Manage a low volume irrigation system		New unit. This unit has been developed based on AHCIRG303A to reflect the identified need to recognise specific systems.
		AHCIRG421A	Manage a sprinkler irrigation system		New unit. This unit has been developed based on AHCIRG303A to reflect the identified need to recognise specific systems.
		AHCIRG422A	Manage a moving sprinkler irrigation system		New unit. This unit has been developed based on AHCIRG303A to reflect the identified need to recognise specific systems.



		AHCIRG423A	Manage a surface irrigation system		New unit. This unit has been developed based on AHCIRG405A to reflect the identified need to recognise specific systems.
		AHCIRG424A	Construct and install an irrigation drainage system		New unit
		AHCIRG425A	Monitor and control irrigation drainage systems		New unit
		AHCIRG426A	Evaluate water supply for irrigation		New unit
		AHCIRG427A	Plan and supervise on-site irrigation installation and construction work.		New unit based on AHCIRG406A Plan on-site irrigation system installation and construction work and AHCIRG407A Supervise on-site irrigation system installation and construction work.
		AHCIRG428A	Provide irrigation sales and service		New unit

		AHCTRF502A	Manage sports turf renovation programs		New unit
		AHCTRF503A	Develop sports turf management programs		New unit
		AHCTRF504A	Manage sports turf facilities		New unit

## Unit Mapping RTD02, RTE03 and RTF03 to AHC10

### Unit Mapping RTD02, RTE03 and RTF03 to AHC10

Old Code	Old Title	AHC10 Code	AHC10 Title	Mapping	Comment
RTE3904 A	Keep records for a primary production business	AHCAGB301 A	Keep records for a primary production business	E	
RTE4203 A	Implement and monitor a property improvement plan	AHCAGB401 A	Implement and monitor a property improvement plan	E	
RTE4913 A	Analyse and interpret production data	AHCAGB402 A	Analyse and interpret production data	E	
RTE5523 A	Develop climate risk management strategies	AHCAGB501 A	Develop climate risk management strategies	E	
RTE5205 A	Plan and manage infrastructure requirements	AHCAGB502 A	Plan and manage infrastructure requirements	E	
RTE5912	Plan and monitor	AHCAGB503	Plan and	E	

A	production processes	A	monitor production processes		
RTE5922 A	Plan production for the whole land/farm based business	AHCAGB504 A	Plan production for the whole land/farm based business	E	
RTE5516 A	Develop a whole farm plan	AHCAGB505 A	Develop a whole farm plan	E	
RTE6906 A	Develop export markets for produce	AHCAGB601 A	Develop export markets for produce	E	
RTE6909 A	Manage estate planning	AHCAGB602 A	Manage estate planning	E	
RTE6501 A	Manage the production system	AHCAGB603 A	Manage the production system	E	
RTE6901 A	Analyse business performance	AHCAGB604 A	Analyse business performance	E	
RTE6904 A	Manage business capital	AHCAGB605 A	Manage business capital	E	
RTE6905 A	Manage price risk through trading strategy	AHCAGB606 A	Manage price risk through trading strategy	E	
RTE2132 A	Assist with artificial insemination procedures	AHCAIS201A	Assist with artificial insemination procedures	E	
RTE2123 A	Collect semen	AHCAIS301A	Collect semen	E	
RTE3146 A	Process and store semen	AHCAIS302A	Process and store semen	E	

RTE3101 A	Artificially inseminate livestock	AHCAIS303A	Artificially inseminate livestock	E	
RTE4107 A	Supervise artificial breeding and/or embryo transfer programs	AHCAIS401A	Supervise artificial breeding and/or embryo transfer programs	E	
RTF2001 A	Apply a range of treatments to trees	AHCARB201 A	Apply a range of treatments to trees	E	
RTC2005 A	Fell small trees	AHCARB202 A	Fell small trees	E	
RTF2009 A	Perform above ground pruning	AHCARB203 A	Perform above ground pruning	E	
RTF2027 A	Undertake standard climbing techniques	AHCARB204 A	Undertake standard climbing techniques	E	
RTC2304 A	Operate and maintain chainsaws	AHCARB205 A	Operate and maintain chainsaws	E	
RTF2311 A	Undertake stump removal	AHCARB206 A	Undertake stump removal	E	
		AHCARB207 A	Perform ground based rigging		New unit
RTF3015 A	Implement a tree maintenance program	AHCARB301 A	Implement a tree maintenance program	E	
		AHCARB302 A	Conduct tree inspections		New unit
RTF3017 A	Implement a tree pruning program	AHCARB303 A	Implement a tree pruning	E	

			program		
RTF3007 A	Fell large trees	AHCARB304 A	Fell trees with advanced techniques	N	
RTF3019 A	Remove trees in confined spaces	AHCARB305 A	Remove trees in confined spaces	E	
RTF3702 A	Undertake aerial rescue	AHCARB306 A	Undertake aerial rescue	E	
RTF3031 A	Undertake complex tree climbing	AHCARB307 A	Undertake complex tree climbing	N	
RTF3032 A	Install cable and bracing	AHCARB308 A	Install cable and bracing	E	
RTF3035 A	Implement a tree protection program	AHCARB309 A	Implement a tree protection program	E	
		AHCARB310 A	Perform aerial rigging		New unit
RTF5018 A	Assess trees	AHCARB501 A	Assess trees	N	
		AHCARB502 A	Identify, select and specify trees		New unit
		AHCARB503 A	Diagnose tree diseases		New unit
RTF4016 A	Plan a tree protection program	AHCARB504 A	Develop a tree protection program	N	
		AHCARB505 A	Document and audit tree work		New unit
RTE1001 A	Support agricultural crop work	AHCBAC101 A	Support agricultural crop work	E	
RTE2011	Assist agricultural	AHCBAC201	Assist	E	

A	crop establishment	A	agricultural crop establishment		
RTE2029 A	Assist agricultural crop maintenance	AHCBAC202 A	Assist agricultural crop maintenance	E	
RTE2030 A	Assist agricultural crop harvesting	AHCBAC203 A	Assist agricultural crop harvesting	E	
RTE2212 A	Prepare grain storages	AHCBAC204 A	Prepare grain storages	E	
RTE2303 A	Operate cane haulage vehicle	AHCBAC205 A	Operate cane haulage vehicle	E	
		AHCBAC301 A	Conserve forage		New unit
RTE3006 A	Establish pastures and crops for livestock production	AHCBAC302 A	Establish pastures and crops for livestock production	E	
		AHCBAC303 A	Prepare to receive grains/seeds		New unit
		AHCBAC304 A	Test grains/seeds on receipt		New unit
RTE3024 A	Undertake preparation of land for agricultural crop production	AHCBAC305 A	Undertake preparation of land for agricultural crop production	E	
RTE3029 A	Establish agricultural crops	AHCBAC306 A	Establish agricultural crops	E	

RTE3022 A	Undertake agricultural crop maintenance activities	AHCBAC307 A	Maintain agricultural crops	E	
RTE3009 A	Undertake agricultural crop harvesting activities	AHCBAC308 A	Undertake agricultural crop harvesting activities	E	
RTE4011 A	Manage pastures for livestock production	AHCBAC401 A	Manage pastures for livestock production	E	
RTE4009 A	Plan a pasture establishment program	AHCBAC402 A	Plan a pasture establishment program	E	
RTE4018 A	Supervise agricultural crop establishment	AHCBAC403 A	Supervise agricultural crop establishment	E	
RTE4010 A	Supervise agricultural crop maintenance	AHCBAC404 A	Plan and implement agricultural crop maintenance	E	
RTE4026 A	Supervise agricultural crop harvesting	AHCBAC405 A	Supervise agricultural crop harvesting	E	
RTE4008 A	Maintain grain quality in storage	AHCBAC406 A	Maintain grain quality in storage	E	
RTE3037 A	Save, prepare and store agricultural seed	AHCBAC407 A	Save, prepare and store agricultural seed	E	
RTE5014 A	Manage agricultural crop production	AHCBAC501 A	Manage agricultural crop production	E	

		AHCBAC502 A	Manage forage conservation		New unit
RTE5002 A	Manage integrated crop and pasture production	AHCBAC503 A	Manage integrated crop and pasture production	E	
RTE5007 A	Plan and manage a stored grain program	AHCBAC504 A	Plan and manage a stored grain program	E	
RTE5006 A	Plan and manage long-term weed, pest and/or disease control in crops	AHCBAC505 A	Plan and manage long-term weed, pest and/or disease control in crops	E	
RTE5015 A	Manage the harvest of agricultural and horticultural crops	AHCBAC506 A	Manage the harvest of crops	E	
RTE5016 A	Develop production plans for crops	AHCBAC507 A	Develop production plans for crops	E	
RTE2156 A	Support beekeeping work	AHCBEK201 A	Assist beekeeping work	E	
RTE2305 A	Use a bee smoker	AHCBEK202 A	Use a bee smoker	E	
RTE2157 A	Open and reassemble a beehive	AHCBEK203 A	Open and reassemble a beehive	E	
RTE2217 A	Construct and repair beehives	AHCBEK204 A	Construct and repair beehives	E	
RTE3153 A	Manage honey bee swarms	AHCBEK301 A	Manage honey bee swarms	E	
RTE3155 A	Manipulate honey bee brood	AHCBEK302 A	Manipulate honey bee	E	



			brood		
RTE3154 A	Requeen a honey bee colony	AHCBEK303 A	Re-queen a honey bee colony	E	
RTE3320 A	Remove a honey crop from a hive	AHCBEK304 A	Remove a honey crop from a hive	E	
RTE3321 A	Extract honey	AHCBEK305 A	Extract honey	E	
RTE3415 A	Manage pests and disease within a honey bee colony	AHCBEK306 A	Manage pests and disease within a honey bee colony	E	
RTE4131 A	Collect and store propolis	AHCBEK401 A	Collect and store propolis	E	
RTE4132 A	Perform queen bee artificial insemination	AHCBEK402 A	Perform queen bee artificial insemination	E	
RTE4122 A	Produce and harvest royal jelly	AHCBEK403 A	Produce and harvest royal jelly	E	
RTE4128 A	Provide bee pollination services	AHCBEK404 A	Provide bee pollination services	E	
RTE4121 A	Select and establish an apiary site	AHCBEK405 A	Select and establish an apiary site	E	
RTE4130 A	Trap and store pollen	AHCBEK406 A	Trap and store pollen	E	
RTE3156 A	Rear queen bees	AHCBEK407 A	Rear queen bees	E	Unit recoded
RTD2312 A	Inspect machinery for plant, animal and soil material	AHCBIO201A	Inspect and clean machinery for plant, animal and soil material	E	

RTE2707 B	Follow site quarantine procedures	AHC BIO202A	Follow site quarantine procedures	E	
RTE3410 A	Work effectively in an emergency disease or plant pest response	AHC BIO301A	Work effectively in an emergency disease or plant pest response	E	
RTE3407 A	Identify and report unusual disease or plant pest signs	AHC BIO302A	Identify and report unusual disease or plant pest signs	E	
RTE3408 A	Carry out emergency disease or plant pest control procedures at infected premises	AHC BIO303A	Carry out emergency disease or plant pest control procedures at infected premises	E	
RTE3409 A	Carry out movement and security procedures	AHC BIO304A	Carry out movement and security procedures	E	
		AHC BIO305A	Monitor and review biosecurity measures		New unit
RTE4408 A	Supervise activities on infected premises	AHC BIO401A	Supervise activities on infected premises	E	
RTE4409 A	Carry out field surveillance for a specific emergency disease or plant pest	AHC BIO402A	Carry out field surveillance for a specific emergency disease or plant pest	E	
		AHC BIO403A	Plan and		New unit

			implement a biosecurity program		
RTE5407 A	Manage active operational emergency disease or plant pest sites	AHCBIO501A	Manage active operational emergency disease or plant pest sites	E	
RTE5406 A	Manage the implementation of an emergency disease or plant pest control program	AHCBIO502A	Manage the implementation of an emergency disease or plant pest control program	E	
RTE6401 A	Plan and oversee an emergency disease or plant pest control program	AHCBIO601A	Plan and oversee an emergency disease or plant pest control program	E	
RTE3907 A	Use hand held e-business tools	AHCBUS301 A	Use hand held e-business tools	E	
RTE4901 A	Administer finance, insurance and legal requirements	AHCBUS401 A	Administer finance, insurance and legal requirements	E	
RTC4905 A	Cost a project	AHCBUS402 A	Cost a project	E	
RTE4902 A	Support and review business structures and relationships	AHCBUS403 A	Support and review business structures and relationships	E	
RTC4911 A	Operate within a budget framework	AHCBUS404 A	Operate within a budget	E	

			framework		
RTE4914 A	Participate in an e-business supply chain	AHCBUS405 A	Participate in an e-business supply chain	E	
RTE5807 A	Manage staff	AHCBUS501 A	Manage staff	E	
RTE5921 A	Market products and services	AHCBUS502 A	Market products and services	E	
RTE5920 A	Negotiate and monitor contracts/commercial agreements	AHCBUS503 A	Negotiate and monitor contracts	E	
RTC5908 A	Prepare estimates, quotes and tenders	AHCBUS504 A	Prepare estimates, quotes and tenders	E	
RTE5901 A	Develop a marketing plan	AHCBUS505 A	Develop a marketing plan	E	
RTE5902 A	Develop and review a business plan	AHCBUS506 A	Develop and review a business plan	E	
RTE5906 A	Monitor and review business performance	AHCBUS507 A	Monitor and review business performance	E	
RTE5916 A	Prepare and monitor budgets and financial reports	AHCBUS508 A	Prepare and monitor budgets and financial reports	E	
RTE6907 A	Manage capital works	AHCBUS601 A	Manage capital works	E	
RTD6502 A	Review management plans and strategies	AHCBUS602 A	Review management plans and strategies	E	
RTE6903	Develop and review a	AHCBUS603	Develop and	E	

A	strategic plan	A	review a strategic plan		
RTE6908 A	Design and manage the enterprise quality management system	AHCBUS604 A	Design and manage the enterprise quality management system	E	
RTE6803 A	Manage human resources	AHCBUS605 A	Manage human resources	E	
		AHCBUS606 A	Develop a monitoring, evaluation and reporting program		New unit
		AHCBUS607 A	Implement a monitoring, evaluation and reporting program		New unit
		AHCBUS608 A	Manage risk		New unit
RTD4909 A	Prepare project acquittal	AHCCCF401 A	Prepare project acquittal	E	
RTD4910 A	Report on project	AHCCCF402 A	Report on project	E	
RTD4806 A	Obtain and manage sponsorship	AHCCCF403 A	Obtain and manage sponsorship	E	
RTD4912 A	Contribute to association governance	AHCCCF404 A	Contribute to association governance	E	
RTD4804 A	Develop community networks	AHCCCF405 A	Develop community networks	E	
RTD4805	Facilitate ongoing	AHCCCF406	Facilitate ongoing group	E	

A	group development	A	development		
RTD4807 A	Obtain resources from community and group	AHCCCF407 A	Obtain resources from community and group	E	
RTD4808 A	Promote community programs	AHCCCF408 A	Promote community programs	E	
RTD4505 A	Participate in assessments of project submissions	AHCCCF409 A	Participate in assessments of project submissions	E	
RTD4810 A	Support individuals in resource management change processes	AHCCCF410 A	Support individuals in resource management change processes	E	
RTD4802 A	Develop approaches to include cultural and human diversity	AHCCCF411 A	Develop approaches to include cultural and human diversity	E	
RTD3811 A	Coordinate board/committee elections	AHCCCF412 A	Coordinate board/committee elections	E	
RTD3816 A	Service committees	AHCCCF413 A	Service committees	E	
RTD3812 A	Coordinate fund-raising activities	AHCCCF414 A	Coordinate fund-raising activities	E	
RTD3813 A	Coordinate social events to support group purposes	AHCCCF415 A	Coordinate social events to support group purposes	E	
RTD3814 A	Present proposed courses of action to	AHCCCF416 A	Present proposed courses of	E	

	meeting		action to meeting		
RTD5509 A	Evaluate project submissions	AHCCCF501 A	Evaluate project submissions	E	
RTD5805 A	Facilitate development of group goals and projects	AHCCCF502 A	Facilitate development of group goals and projects	E	
RTD5806 A	Promote group formation and development	AHCCCF503 A	Promote group formation and development	E	
RTD5802 A	Support group and community changes in resource management	AHCCCF504 A	Support group and community changes in resource management	E	
RTD5910 A	Contribute to regional planning process	AHCCCF505 A	Contribute to regional planning process	E	
RTD5911 A	Manage the incorporation of a group	AHCCCF506 A	Manage the incorporation of a group	E	
RTD6505 A	Map regional issues and stakeholders	AHCCCF601 A	Map regional issues and stakeholders	E	
RTC1701 A	Follow basic chemical safety rules	AHCCHM101 A	Follow basic chemical safety rules	E	
RTC2706 A	Apply chemicals under supervision	AHCCHM201 A	Apply chemicals under supervision	E	
		AHCCHM301 A	Conduct fumigation in enclosed		New unit

			spaces		
		AHCCHM302 A	Fumigate soil using chemicals		New unit
RTC3704 A	Prepare and apply chemicals	AHCCHM303 A	Prepare and apply chemicals	E	
RTC3705 A	Transport, handle and store chemicals	AHCCHM304 A	Transport, handle and store chemicals	E	
		AHCCHM305 A	Conduct manual fumigation of vertebrate and invertebrate pests		New unit
RTC4702 A	Minimise risks in the use of chemicals	AHCCHM401 A	Minimise risks in the use of chemicals	E	
RTC4703 A	Plan and implement a chemical use program	AHCCHM402 A	Plan and implement a chemical use program	E	
RTD4303 A	Prepare safe operating procedures for calibration of equipment	AHCCHM403 A	Prepare safe operating procedures for calibration of equipment	E	
RTC5702 A	Develop and manage a chemical use strategy	AHCCHM501 A	Develop and manage a chemical use strategy	E	
RTE2506 A	Assess and receive raw materials for composting	AHCCOM201 A	Assess and receive raw materials for composting	E	
RTE2709	Recognise and respond to fire	AHCCOM202	Recognise and respond to fire	E	



A	emergencies on a composting site	A	emergencies on a composting site		
RTE2507 A	Recognise raw materials, production processes and products on a composting site	AHCCOM203 A	Recognise raw materials, production processes and products on a composting site	E	
RTE3322 A	Operate compost processing plant, machinery and equipment	AHCCOM301 A	Operate compost processing plant, machinery and equipment	E	
RTE3323 A	Dispatch materials and composted product	AHCCOM302 A	Dispatch materials and composted product	E	
RTE2315 A	Operate a compost bagging process	AHCCOM303 A	Operate a compost bagging process	E	
RTE4519 A	Develop a composting recipe	AHCCOM401 A	Develop a composting recipe	E	
RTE4520 A	Plan and schedule compost production	AHCCOM402 A	Plan and schedule compost production	E	
RTE5919 A	Identify and secure raw materials supply for compost production	AHCCOM501 A	Identify and secure raw materials supply for compost production	E	
RTE4113 A	Handle, store and grade deer velvet	AHCDER401 A	Handle, store and grade deer	E	

			velvet		
RTE5105 A	Comply with deer industry national velvet accreditation requirements	AHCDER501 A	Comply with deer industry national velvet accreditation requirements	E	
RTE5108 A	Harvest deer velvet	AHCDER502 A	Harvest deer velvet	E	
		AHCDES501 A	Design sustainable landscapes		New unit
RTF5010 A	Prepare a landscape project design	AHCDES502 A	Prepare a landscape project design	E	
		AHCDES503 A	Assess landscape sites		New unit
		AHCDES504 A	Design for construction of landscape features		New unit
RTE2604 A	Maintain drainage systems	AHCDRG201 A	Maintain drainage systems	E	
RTE3603 A	Install drainage systems	AHCDRG301 A	Install drainage systems	E	
RTE3606 A	Measure drainage system performance	AHCDRG302 A	Measure drainage system performance	E	
RTE3604 A	Troubleshoot drainage systems	AHCDRG303 A	Troubleshoot drainage systems	E	
RTE5607 A	Design drainage systems	AHCDRG501 A	Design drainage systems	E	
RTE2103	Carry out milking shed				Unit removed

A	routines				
RTE2112 A	Milk livestock	AHCDRY201 A	Milk livestock	E	
RTE3117 A	Coordinate milking operations	AHCDRY301 A	Coordinate milking operations	E	
RTE3308 A	Operate a dairy recycling system	AHCDRY302 A	Operate a dairy recycling system	E	
RTE4112 A	Manage milking shed routines	AHCDRY401 A	Manage milking shed routines	E	
RTD3709 A	Handle and store explosives	AHCEXP301 A	Handle and store explosives	E	
RTD3710 A	Identify and select explosive products	AHCEXP302 A	Identify and select explosive products	E	
RTD3711 A	Prepare and use explosives	AHCEXP303 A	Prepare and use explosives	E	
RTD2126 A	Recognise animals	AHCFAU201 A	Recognise fauna	E	
RTD3125 A	Respond to wildlife emergencies	AHCFAU301 A	Respond to wildlife emergencies	E	
RTD5102 A	Manage fauna populations	AHCFAU501 A	Manage fauna populations	E	
RTE2002 A	Assist with prescribed burning	AHCFIR201A	Assist with prescribed burning	E	
RTD5513 A	Manage wildfire hazard reduction programs	AHCFIR501A	Manage wildfire hazard reduction programs	E	
RTE1104	Support horse work	AHCHBR101	Support horse	E	

A		A	work		
RTE2104 A	Carry out regular horse observation	AHCHBR201 A	Monitor horse health and welfare	E	
RTE2148 A	Handle young horses	AHCHBR202 A	Handle young horses	E	
RTE2121 A	Provide daily care for horses	AHCHBR203 A	Provide daily care for horses	E	
RTE2137 A	Assist with natural mating procedures and parturition of horses	AHCHBR204 A	Assist with mating procedures and parturition of horses	E	
RTE3104 A	Carry out basic dentition care procedures on horses				Unit removed
RTE3137 A	Carry out basic hoof care procedures	AHCHBR302 A	Carry out basic hoof care procedures	E	
RTE3106 A	Carry out mare mating procedures	AHCHBR303 A	Carry out mare mating or artificial insemination procedures	E	
RTE3102 A	Educate, ride and care for horses and equipment	AHCHBR304 A	Educate, ride and care for horses and equipment	E	Minor changes - remove breaking in and shoeing from PCs
RTE3112 A	Handle and care for stallions	AHCHBR305 A	Handle and care for stallions	E	
RTE3144 A	Prevent and treat equine injury and disease	AHCHBR306 A	Prevent and treat equine injury and disease	E	

RTE3148 A	Assess conformation of horses	AHCHBR307 A	Assess suitability of horses for stock work	E	
RTE4101 A	Carry out stud stable management duties	AHCHBR401 A	Carry out stud stable management duties	E	
RTE4106 A	Supervise raising young horses	AHCHBR402 A	Supervise raising young horses	E	
RTF3033 A	Implement a maintenance program for hydroponic systems	AHCHYD301 A	Implement a maintenance program for hydroponic systems	E	
RTF3215 A	Install hydroponic systems	AHCHYD302 A	Install hydroponic systems	E	
RTF5302 A	Develop a plan for a hydroponic system	AHCHYD501 A	Develop a plan for a hydroponic system	E	
RTD2501 A	Maintain cultural places	AHCILM201A	Maintain cultural places	E	
RTD2803 A	Observe and report plants and/or animals	AHCILM202A	Observe and report plants and/or animals	E	
RTD2802 A	Record information about country	AHCILM203A	Record information about country	E	
RTD3817 A	Propose appropriate uses of traditional customs	AHCILM301A	Propose appropriate uses of traditional customs	E	
RTD3802 A	Provide appropriate information on	AHCILM302A	Provide appropriate	E	

	cultural knowledge		information on cultural knowledge		
RTD3903 A	Work in an Indigenous community or organisation	AHCILM303A	Work in an Indigenous community or organisation	E	
		AHCILM304A	Follow cultural protocols		New unit
RTD4508 A	Protect places of cultural significance	AHCILM401A	Protect places of cultural significance	E	
RTD4509 A	Report on place of potential cultural significance	AHCILM402A	Report on place of potential cultural significance	E	
RTD4501 A	Contribute to the proposal for a negotiated outcome for a given area of country	AHCILM403A	Contribute to the proposal for a negotiated outcome for a given area of country	E	
RTD4809 A	Record and document community history	AHCILM404A	Record and document community history	E	
RTD4906 A	Develop work practices to accommodate cultural identity	AHCILM405A	Develop work practices to accommodate cultural identity	E	
RTD5502 A	Conduct field research into natural and cultural resources	AHCILM501A	Conduct field research into natural and cultural resources	E	
RTD5507	Develop conservation strategies for cultural	AHCILM502A	Develop conservation	E	

A	resources		strategies for cultural resources		
RTD5511 A	Manage restoration of cultural places	AHCILM503A	Manage restoration of cultural places	E	
RTD5508 A	Develop strategies for Indigenous land or sea management	AHCILM504A	Develop strategies for Indigenous land or sea management	E	
RTD5904 A	Map relationship of business enterprise to culture and country	AHCILM505A	Map relationship of business enterprise to culture and country	E	
RTD5803 A	Operate within community cultures and goals	AHCILM506A	Operate within community cultures and goals	E	
RTD5907 A	Plan for successful cultural practice at work	AHCILM507A	Plan for successful cultural practice at work	E	
RTD5517 A	Propose a negotiated outcome for a given area of country	AHCILM508A	Propose a negotiated outcome for a given area of country	E	
		AHCILM509A	Plan burning activities for natural and cultural resource management		New unit
RTD6801 A	Manage cultural processes in an Indigenous	AHCILM601A	Manage cultural processes in an Indigenous	E	

	organisation		organisation		
RTE2201 A	Carry out basic electric fencing operations	AHCINF201A	Carry out basic electric fencing operations	E	
RTC2209 A	Install, maintain and repair fencing	AHCINF202A	Install, maintain and repair fencing	E	
RTC2210 A	Maintain properties and structures	AHCINF203A	Maintain properties and structures	E	
RTE2205 A	Fabricate and repair metal or plastic structures	AHCINF204A	Fabricate and repair metal or plastic structures	E	
RTC3213 A	Implement property improvement, construction and repair	AHCINF301A	Implement property improvement, construction and repair	E	
RTE3210 A	Plan and construct an electric fence	AHCINF302A	Plan and construct an electric fence	E	
RTC3209 A	Plan and construct conventional fencing	AHCINF303A	Plan and construct conventional fencing	E	
RTE1601 A	Support irrigation work	AHCIRG101A	Support irrigation work	E	
RTE2601 A	Assist with the operation of gravity fed irrigation	AHCIRG201A	Assist with the operation of gravity fed irrigation	E	
RTE2602 A	Assist with the operation of pressurised irrigation	AHCIRG202A	Assist with the operation of pressurised irrigation	E	



RTE2607 A	Install micro-irrigation systems	AHCIRG203A	Install micro-irrigation systems	E	
RTE2603 A	Lay irrigation and/or drainage pipes	AHCIRG204A	Lay irrigation and/or drainage pipes	E	
RTE2605 A	Maintain gravity-fed irrigation systems	AHCIRG205A	Maintain gravity-fed irrigation systems	E	
RTE2606 A	Maintain pressurised irrigation systems	AHCIRG206A	Maintain pressurised irrigation systems	E	
RTE3612 A	Implement a maintenance program for an irrigation system	AHCIRG301A	Implement a maintenance program for an irrigation system	E	
RTE3601 A	Install irrigation systems	AHCIRG302A	Install irrigation systems	E	
RTE3607 A	Measure irrigation delivery system performance	AHCIRG303A	Measure irrigation delivery system performance	E	
RTE3610 A	Operate gravity fed irrigation systems	AHCIRG304A	Operate gravity fed irrigation systems	E	
RTE3611 A	Operate pressurised irrigation systems	AHCIRG305A	Operate pressurised irrigation systems	E	
RTE3605 A	Troubleshoot irrigation systems	AHCIRG306A	Troubleshoot irrigation systems	E	

		AHCIRG307A	Recommend irrigation products and services		New unit
RTE4601 A	Acquire resources for irrigation installation and construction	AHCIRG401A	Acquire resources for irrigation installation and construction	E	
RTE4602 A	Determine hydraulic parameters for an irrigation system	AHCIRG402A	Determine hydraulic parameters for an irrigation system	E	
RTE4604 A	Determine seasonal irrigation scheduling tasks	AHCIRG403A	Determine seasonal irrigation scheduling tasks	E	
RTE4603 A	Implement an irrigation-related environmental protection program	AHCIRG404A	Implement an irrigation-related environmental protection program	E	
RTE4608 A	Plan and coordinate gravity-fed irrigation systems	AHCIRG405A	Plan and coordinate gravity-fed irrigation systems	E	
RTE4607 A	Plan on-site irrigation system installation and construction work	AHCIRG406A	Plan on-site irrigation system installation and construction work	E	
RTE4606 A	Supervise on-site irrigation installation and construction work	AHCIRG407A	Supervise on-site irrigation installation and construction	E	

			work		
RTE4605 A	Schedule irrigations	AHCIRG408A	Schedule irrigations	E	
RTE4609 A	Implement, monitor and adjust irrigation schedules	AHCIRG409A	Implement, monitor and adjust irrigation schedules	E	
RTE5601 A	Audit irrigation systems	AHCIRG501A	Audit irrigation systems	E	
RTE5602 A	Design irrigation system maintenance and monitoring programs	AHCIRG502A	Design irrigation system maintenance and monitoring programs	E	
RTE5603 A	Design irrigation, drainage and water treatment systems	AHCIRG503A	Design irrigation, drainage and water treatment systems	E	
RTE5604 A	Develop an irrigation and drainage management plan	AHCIRG504A	Develop an irrigation and drainage management plan	E	
RTE5605 A	Establish and maintain an irrigation-related environmental protection program	AHCIRG505A	Establish and maintain an irrigation-related environmental protection program	E	
RTD3804 A	Supervise park visitor activities	AHCLPW301 A	Supervise park visitor activities	E	
RTD3202	Construct access	AHCLPW303	Construct	E	

A	tracks	A	access tracks		
RTD3502 A	Carry out inspection of designated area	AHCLPW304 A	Carry out inspection of designated area	E	
RTD3508 A	Perform diving for scientific purposes	AHCLPW305 A	Perform diving for scientific purposes	E	
RTD3507 A	Undertake sampling and testing of water	AHCLPW306 A	Undertake sampling and testing of water	E	
RTD4506 A	Process applications for changes in land use	AHCLPW401 A	Process applications for changes in land use	E	
RTD4502 A	Implement land and sea management practices	AHCLPW402 A	Implement land and sea management practices	E	
RTD4503 A	Inspect and monitor cultural places	AHCLPW403 A	Inspect and monitor cultural places	E	
RTD4507 A	Produce maps for land management purposes	AHCLPW404 A	Produce maps for land management purposes	E	
RTD4504 A	Monitor biodiversity	AHCLPW405 A	Monitor biodiversity	E	
RTC5504 A	Develop a management plan for a designated area	AHCLPW501 A	Develop a management plan for a designated area	E	
		AHCLPW502 A	Manage wildfire hazard reduction programs	N	

RTD5501 A	Assess applications for legislative compliance	AHCLPW503 A	Assess applications for legislative compliance	E	
RTD5518 A	Review assessments for legislative compliance	AHCLPW504 A	Review assessments for legislative compliance	E	
RTD5510 A	Implement plans of management	AHCLPW505 A	Implement natural and cultural resource management plans	E	
RTD5915 A	Investigate suspected breaches of NRM legislation	AHCLPW506 A	Investigate suspected breaches of NRM legislation	E	
RTD6504 A	Coordinate the preparation of a regional resource management plan	AHCLPW601 A	Coordinate the preparation of a regional resource management plan	E	
RTC1202 A	Support landscape work	AHCLSC101A	Support landscape work	E	
RTF2215 A	Assist with landscape construction work	AHCLSC201A	Assist with landscape construction work	E	
RTF2204 A	Construct low-profile timber or modular retaining walls	AHCLSC202A	Construct low-profile timber or modular retaining walls	E	
RTD2206 A	Install aggregate paths	AHCLSC203A	Install aggregate paths	E	

RTF2208 A	Lay paving	AHCLSC204A	Lay paving	E	
RTF2207 A	Protect trees during construction work	AHCLSC205A	Install tree protection devices	E	
RTF3217 A	Set out site for construction works	AHCLSC301A	Set out site for construction works	E	
RTF3204 A	Construct concrete structures and features	AHCLSC302A	Construct landscape features using concrete	E	
RTF3203 A	Construct brick and/or block structures and features	AHCLSC303A	Construct brick and/or block structures and features	E	
RTC3206 A	Erect timber structures and features	AHCLSC304A	Erect timber structures and features	E	
RTF3219 A	Construct stone structures and features	AHCLSC305A	Construct stone structures and features	E	
RTF3220 A	Implement a paving project	AHCLSC306A	Implement a paving project	E	
RTF3221 A	Implement a retaining wall project	AHCLSC307A	Implement a retaining wall project	E	
RTF3208 A	Install metal structures and features	AHCLSC308A	Install metal structures and features	E	
RTF3216 A	Install water features	AHCLSC309A	Install water features	E	
RTF3018 A	Implement a tree transplanting program	AHCLSC310A	Implement a tree transplanting	E	

			program		
RTC4206 A	Supervise landscape project works	AHCLSC401A	Supervise landscape project works	E	
		AHCLSC501A	Survey and establish site levels		New unit
RTF5004 A	Manage landscape projects	AHCLSC502A	Manage landscape projects	E	
RTF4017 A	Plan a tree transplanting program	AHCLSC503A	Manage a tree transplanting program	N	
RTE1101 A	Support extensive livestock work	AHCLSK101 A	Support extensive livestock work	E	
RTE1102 A	Support intensive livestock work	AHCLSK102 A	Support intensive livestock work	E	
RTE2134 A	Assist with feeding in an intensive production system	AHCLSK201 A	Assist with feeding in a production system	E	
RTE2131 B	Care for health and welfare of livestock	AHCLSK202 A	Care for health and welfare of livestock	E	
RTE2124 B	Carry out birthing duties	AHCLSK203 A	Carry out birthing duties	E	
RTE2144 A	Carry out regular livestock observation	AHCLSK204 A	Carry out regular livestock observation	E	
RTE2118 A	Handle livestock using basic techniques	AHCLSK205 A	Handle livestock using basic techniques	E	

RTE2111 A	Identify and mark livestock	AHCLSK206 A	Identify and mark livestock	E	
RTE2136 A	Load and unload livestock	AHCLSK207 A	Load and unload livestock	E	
RTE2113 B	Monitor livestock to parturition	AHCLSK208 A	Monitor livestock to parturition	E	
RTE2114 A	Monitor water supplies	AHCLSK209 A	Monitor water supplies	E	
RTE2115 A	Muster and move livestock	AHCLSK210 A	Muster and move livestock	E	
RTE2128 B	Provide feed for livestock	AHCLSK211 A	Provide feed for livestock	E	
RTE2130 A	Ride and care for horses and equipment	AHCLSK212 A	Ride horses to carry out stock work	E	
RTE2214 A	Clean out intensive production sheds	AHCLSK213 A	Clean out production sheds	E	
RTE2150 A	Maintain intensive production growing environments	AHCLSK214 A	Maintain production growing environments	E	
RTE2153 A	Carry out alpaca handling and husbandry operations	AHCLSK215 A	Carry out alpaca handling and husbandry operations	E	
RTE3115 B	Implement livestock husbandry practices	AHCLSK301 A	Administer medication to livestock	E	Unit rewritten to cover all forms of medication.
RTE3151 A	Mate and monitor reproduction of alpacas	AHCLSK302 A	Mate and monitor reproduction of alpacas	E	



RTE3105 A	Carry out feedlot operations	AHCLSK303 A	Carry out feedlot operations	E	
RTE3140 A	Carry out post-mortem examination of livestock	AHCLSK304 A	Carry out post-mortem examination of livestock	E	
RTE2110 A	Maintain livestock water supplies	AHCLSK305 A	Maintain livestock water supplies	E	
RTE3110 A	Coordinate and monitor intensive production performance	AHCLSK306 A	Coordinate and monitor production performance	E	
RTE3119 A	Euthanase livestock	AHCLSK307 A	Euthanase livestock	E	
RTE3113 A	Identify and draft livestock	AHCLSK308 A	Identify and draft livestock	E	
RTE3402 A	Implement animal health control programs	AHCLSK309 A	Implement animal health control programs	E	Redrafted unit to take more holistic view of animal health.
RTE3118 A	Implement feeding plans for intensive production	AHCLSK310 A	Implement feeding plans for intensive production	E	
RTE3114 A	Implement feeding plans for livestock	AHCLSK311 A	Implement feeding plans for livestock	E	
RTE3116 A	Mate and monitor livestock	AHCLSK312 A	Coordinate artificial insemination and fertility management of livestock	E	
RTE3143 A	Monitor intensive livestock production	AHCLSK313 A	Monitor livestock	E	

	growing environments		production growing environments		
RTE3121 B	Prepare animals for parturition	AHCLSK314 A	Prepare animals for parturition	E	
RTE3147 A	Prepare for and implement natural mating of livestock	AHCLSK315 A	Prepare for and implement natural mating of livestock	E	
RTE3133 B	Prepare livestock for competition	AHCLSK316 A	Prepare livestock for competition	E	
RTE4115 A	Plan to exhibit livestock or fleece	AHCLSK317 A	Plan to exhibit livestock	N	References to wool removed.
RTE3124 B	Rear newborn and young livestock	AHCLSK318 A	Rear newborn and young livestock	E	
RTE3134 A	Slaughter livestock	AHCLSK319 A	Slaughter livestock	E	
RTE3131 A	Transport livestock	AHCLSK320 A	Coordinate and monitor livestock transport	E	
RTE3312 A	Service and repair bores and windmills	AHCLSK321 A	Service and repair bores and windmills	E	
RTE3314 A	Transport farm produce or bulk materials	AHCLSK322 A	Transport farm produce or bulk materials	E	
RTE3908 A	Maintain and monitor feed stocks	AHCLSK323 A	Maintain and monitor feed stocks	E	
RTE2106 A	Care for and train working dogs	AHCLSK324 A	Care for and train working dogs	E	

RTE2127 A	Castrate livestock	AHCLSK325 A	Castrate livestock	E	
RTE2146 A	Mix and mill standard stockfeed	AHCLSK326 A	Mix and mill standard stockfeed	E	
RTE3128 A	Collect, store and administer colostrum	AHCLSK327 A	Collect, store and administer colostrum	E	
RTE3126 A	Remove and facilitate reuse of effluent and manure from an intensive production system	AHCLSK328 A	Remove and facilitate reuse of effluent and manure from an intensive production system	E	
		AHCLSK329 A	Implement procedures for calving		New unit
		AHCLSK330 A	Implement procedures for foaling down mares		New unit
RTE3136 A	Comply with industry animal welfare requirements	AHCLSK331 A	Comply with industry animal welfare requirements	E	
		AHCLSK332 A	Monitor animals in intensive production systems		New unit
		AHCLSK333 A	Monitor pen condition and ration suitability		New unit
RTE4118 A	Develop feeding plans for an intensive production system	AHCLSK401 A	Develop feeding plans for a production	E	

			system		
RTE4104 A	Develop livestock feeding plans	AHCLSK402 A	Develop livestock feeding plans	E	
RTE4105 A	Escort animals during export	AHCLSK403 A	Escort animals during export	E	
RTE4120 A	Implement and monitor animal welfare programs	AHCLSK404 A	Implement and monitor animal welfare programs	E	
RTE4117 A	Implement intensive production systems	AHCLSK405 A	Implement intensive production systems	E	
RTE4109 A	Oversee animal marking operations	AHCLSK406 A	Oversee animal marking operations	E	Minor edits. Mulesing taken out.
RTE4114 A	Plan and monitor intensive production systems	AHCLSK407 A	Plan and monitor intensive production systems	E	
RTE4124 A	Pregnancy test animals	AHCLSK408 A	Pregnancy test animals	E	
RTE4119 A	Supervise animal health programs	AHCLSK409 A	Supervise animal health programs	E	
RTE4102 A	Supervise feedlot operations	AHCLSK410 A	Supervise feedlot operations	E	
RTE4110 A	Supervise natural mating of livestock	AHCLSK411 A	Supervise natural mating of livestock	E	
RTE5917 A	Arrange livestock purchases	AHCLSK412 A	Arrange livestock purchases	E	

RTE4202 A	Design livestock handling/accommodation facilities	AHCLSK413 A	Design livestock handling facilities	E	
RTE4903 A	Arrange transport for grain or livestock	AHCLSK414 A	Arrange transport for farm produce or livestock	E	
RTE4126 A	Oversee alpaca farm activities	AHCLSK415 A	Oversee alpaca farm activities	E	
RTE5107 A	Identify and select animals for breeding	AHCLSK416 A	Identify and select animals for breeding	E	
RTE4108 A	Manage horses for stockwork	AHCLSK417 A	Manage horses for stock work	E	
RTE5103 A	Manage livestock production	AHCLSK501 A	Manage livestock production	E	
RTE5918 A	Arrange marketing of livestock	AHCLSK502 A	Arrange marketing of livestock	E	
RTE5101 A	Develop and implement a breeding strategy	AHCLSK503 A	Develop and implement a breeding strategy	E	
RTE5104 A	Develop livestock health and welfare strategies	AHCLSK504 A	Develop livestock health and welfare strategies	E	
RTE5106 A	Develop production plans for livestock	AHCLSK505 A	Develop production plans for livestock	E	
RTE5301 A	Design livestock effluent systems	AHCLSK506 A	Design livestock effluent systems	E	

RTE3819 A	Process customer complaints	AHCMER301 A	Process customer complaints	E	
RTE3809 A	Provide advice on hardware products	AHCMER302 A	Provide advice on hardware products	E	
RTE3905 A	Sell products and services	AHCMER303 A	Sell products and services	E	
RTE4812 A	Coordinate customer service and networking activities	AHCMER401 A	Coordinate customer service and networking activities	E	
RTE3807 A	Provide advice and sell machinery	AHCMER402 A	Provide advice and sell machinery	E	
RTE3806 A	Provide advice and sell farm chemicals	AHCMER403 A	Provide advice and sell farm chemicals	E	
RTE3808 A	Provide advice on agronomic products	AHCMER404 A	Provide advice on agronomic products	E	
RTE3810 A	Provide advice on livestock products	AHCMER405 A	Provide advice on livestock products	E	
RTE4814 A	Provide information and referrals on environmentally responsible fertiliser and soil ameliorant use	AHCMER406 A	Provide information on fertilisers and soil ameliorants	E	
RTE5909 A	Develop a sales strategy for rural products	AHCMER501 A	Develop a sales strategy for rural products	E	
RTE3317 A	Carry out minor service of milking equipment	AHCMKH301 A	Carry out minor service of milking equipment	E	

RTE3302 A	Service and repair milking equipment	AHCMKH303 A	Service and repair milking equipment	E	
RTE3313 A	Monitor and provide advice on cleaning milking machines	AHCMKH304 A	Monitor and provide advice on cleaning milking machines	E	
RTE2314 A	Mechanically test milking machines	AHCMKH305 A	Mechanically test milking machines	E	
RTE4307 A	Carry out cleaning-time tests of milking machines	AHCMKH401 A	Carry out cleaning-time tests of milking machines	E	
RTE4302 A	Design and fabricate milking equipment installations	AHCMKH402 A	Design and fabricate milking equipment installations	E	
RTE4309 A	Design and install on-farm milk cooling and storage	AHCMKH403 A	Design and install on-farm milk cooling and storage	E	
RTE4304 A	Install milking equipment	AHCMKH404 A	Install milking equipment	E	
RTE4305 A	Performance test milking machines	AHCMKH405 A	Performance test milking machines	E	
RTC1302 A	Assist with routine maintenance of machinery and equipment	AHCMOM101 A	Assist with routine maintenance of machinery and equipment	E	
		AHCMOM201 A	Operate two wheel motorbikes		New unit

RTC2309 A	Operate tractors	AHCMOM202 A	Operate tractors	E	
RTC1301 A	Operate basic machinery and equipment	AHCMOM203 A	Operate basic machinery and equipment	E	
RTC2301 A	Undertake operational maintenance of machinery	AHCMOM204 A	Undertake operational maintenance of machinery	E	
RTC2306 A	Operate vehicles	AHCMOM205 A	Operate vehicles	E	
		AHCMOM206 A	Conduct grader operations		New unit
		AHCMOM207 A	Conduct front-end loader operations		New unit
		AHCMOM208 A	Conduct excavator operations		New unit
		AHCMOM209 A	Conduct dozer operations		New unit
		AHCMOM210 A	Conduct scraper operations		New unit
		AHCMOM211 A	Operate side by side utility vehicles		New unit
RTE2308 A	Operate ride-on vehicles	AHCMOM212 A	Operate quad bikes	N	
RTE3307 A	Coordinate machinery and equipment maintenance and repair	AHCMOM301 A	Coordinate machinery and equipment maintenance and repair	E	



RTC3311 A	Perform specialised machinery maintenance	AHCMOM302 A	Perform machinery maintenance	E	
RTC2307 A	Operate machinery and equipment	AHCMOM304 A	Operate machinery and equipment	E	
RTC3310 A	Operate specialised machinery and equipment	AHCMOM305 A	Operate specialised machinery and equipment	E	
RTE3319 A	Ground spread fertiliser and soil ameliorant	AHCMOM306 A	Ground spread fertiliser and soil ameliorant	E	
RTE3301 A	Operate a cane harvester	AHCMOM307 A	Operate a cane harvester	E	
		AHCMOM308 A	Operate broadacre and row crop harvest machinery and equipment		New unit
		AHCMOM309 A	Operate broadacre sowing machinery and equipment		New unit
		AHCMOM310 A	Operate land-forming machinery and equipment		New unit
		AHCMOM311 A	Operate precision control technology		New unit
		AHCMOM312 A	Operate row crop planting and seeding machinery and equipment		New unit

		AHCMOM313 A	Operate mobile irrigation machinery and equipment		New unit
RTD3315 A	Transport machinery	AHCMOM314 A	Transport machinery	E	
		AHCMOM315 A	Operate chemical application machinery and equipment		New unit
RTE4301 A	Conduct major repair and overhaul of machinery and equipment	AHCMOM401 A	Conduct major repair and overhaul of machinery and equipment	E	
RTC4306 A	Supervise maintenance of machinery and equipment	AHCMOM402 A	Supervise maintenance of machinery and equipment	E	
RTC5303 A	Manage machinery and equipment	AHCMOM501 A	Manage machinery and equipment	E	
RTE5304 A	Implement a machinery management system	AHCMOM502 A	Implement a machinery management system	E	
RTE6301 A	Analyse machinery options	AHCMOM601 A	Analyse machinery options	E	
RTD1501 A	Support natural area conservation	AHCNAR101 A	Support natural area conservation	E	
		AHCNAR102 A	Support native seed collection		New unit
RTD2022 A	Carry out natural area restoration works	AHCNAR201 A	Carry out natural area	E	

			restoration works		
RTD2502 A	Maintain wildlife habitat refuges	AHCNAR202 A	Maintain wildlife habitat refuges	E	
RTD3505 A	Maintain natural areas	AHCNAR301 A	Maintain natural areas	E	
RTD3509 A	Collect and preserve biological samples	AHCNAR302 A	Collect and preserve biological samples	E	
RTD3034 A	Implement revegetation works	AHCNAR303 A	Implement revegetation works	E	
		AHCNAR304 A	Undertake direct seeding		New unit
RTD4510 A	Supervise natural area restoration works	AHCNAR401 A	Supervise natural area restoration works	E	
RTD4020 A	Plan the implementation of revegetation works	AHCNAR402 A	Plan the implementation of revegetation works	E	
RTE5515 A	Manage natural areas on a rural property	AHCNAR501 A	Manage natural areas on a rural property	E	
RTC5519 A	Conduct biological surveys	AHCNAR502 A	Conduct biological surveys	E	
RTD5503 A	Design a natural area restoration project	AHCNAR503 A	Design a natural area restoration project	E	
RTD5003	Manage natural area	AHCNAR504	Manage natural area	E	

A	restoration programs	A	restoration programs		
RTD5522 A	Plan river restoration works	AHCNAR505 A	Plan river restoration works	E	
RTE5524 A	Develop and implement sustainable land use strategies	AHCNAR506 A	Develop and implement sustainable land use strategies	E	
		AHCNRM501 A	Develop a coastal rehabilitation strategy		New unit
		AHCNRM502 A	Develop a water quality monitoring strategy		New unit
		AHCNRM503 A	Support the implementation of waterways strategies		New unit
		AHCNRM504 A	Interpret and report on catchment hydrology		New unit
		AHCNRM505 A	Provide technical advice on sustainable catchment management		New unit
		AHCNRM506 A	Plan and monitor works projects in catchments and waterways		New unit
		AHCNRM507 A	Manipulate and analyse data within		New unit

			geographic information systems		
RTC1006 A	Support nursery work	AHCNSY101 A	Support nursery work	E	
RTF2013 A	Pot-on plants	AHCNSY201 A	Pot up plants	E	
RTF2024 A	Tend nursery plants	AHCNSY202 A	Tend nursery plants	E	
RTC2026 A	Undertake propagation activities	AHCNSY203 A	Undertake propagation activities	E	
RTF2008 A	Maintain indoor plants	AHCNSY204 A	Maintain indoor plants	E	
RTF3021 A	Maintain nursery plants	AHCNSY301 A	Maintain nursery plants	E	
RTF3026 A	Receive and dispatch plants and other nursery products	AHCNSY302 A	Receive and dispatch nursery products	E	
RTF3020 A	Install and maintain interior plant displays	AHCNSY303 A	Install and maintain plant displays	E	
RTF3005 A	Deliver and promote sales of plants	AHCNSY304 A	Deliver and promote sales of plants	E	
RTF3025 A	Prepare specialised plants	AHCNSY305 A	Prepare specialised plants	E	
RTF3014 A	Implement a propagation plan	AHCNSY306 A	Implement a propagation plan	E	
RTE3609 A	Operate fertigation equipment	AHCNSY307 A	Operate fertigation equipment	E	
RTF4014	Plan a growing-on	AHCNSY401	Plan a	E	

A	program	A	growing-on program		
RTF4015 A	Plan a propagation program	AHCNSY402 A	Plan a propagation program	E	
RTC1801 A	Prepare for work	AHCOHS101 A	Work safely	E	
RTC2701 A	Follow OHS procedures	AHCOHS201 A	Participate in OHS processes	E	
RTE3713 A	Carry out workplace OHS procedures	AHCOHS301 A	Contribute to OHS processes	E	
RTC4701 A	Implement and monitor the enterprise OHS program	AHCOHS401 A	Maintain OHS processes	E	
RTC5701 A	Establish and maintain the enterprise OHS program	AHCOHS501 A	Manage OHS processes	E	
RTE1107 A	Support organic production	AHCORG101 A	Support organic production	E	
RTE4518 A	Manage biodynamic production	AHCORG401 A	Manage biodynamic production	E	
RTE4133 A	Manage organic livestock production	AHCORG402 A	Manage organic livestock production	E	
RTE4517 A	Manage organic soil improvement	AHCORG403 A	Manage organic soil improvement	E	
RTE5526 A	Develop an organic management plan	AHCORG501 A	Develop an organic management plan	E	
RTE5923 A	Prepare the enterprise for organic certification	AHCORG502 A	Prepare the enterprise for organic	E	

			certification		
RTC2016 A	Recognise plants	AHCPCM201 A	Recognise plants	E	
RTD2004 A	Collect, prepare and preserve plant specimens	AHCPCM202 A	Collect, prepare and preserve plant specimens	E	
RTF3012 A	Implement a plant nutrition program	AHCPCM301 A	Implement a plant nutrition program	E	
RTC3016 A	Provide information on plants and their culture	AHCPCM302 A	Provide information on plants and their culture	E	
		AHCPCM303 A	Identify an unknown plant specimen		New unit
RTC4024 A	Recommend plants and cultural practices	AHCPCM401 A	Recommend plants and cultural practices	E	
RTE4027 A	Develop a soil health and plant nutrition program	AHCPCM402 A	Develop a soil health and plant nutrition program	E	
RTF4004 A	Develop a plant nutrition program	AHCPCM402 A	Develop a soil health and plant nutrition program	E	
RTF4023 A	Promote plant health	AHCPCM501 A	Diagnose plant health problems	E	
RTC5011 A	Collect and classify plants	AHCPCM502 A	Collect and classify plants	E	
		AHCPCM503 A	Specify plants for landscapes		New unit

		AHCPCM504 A	Design and maintain a specialized landscape		New unit
RTF5005 A	Manage plant health	AHCPCM601 A	Develop and implement a plant health management strategy	N	
RTF1004 A	Support gardening work	AHCPGD101 A	Support gardening work	E	
RTC2012 A	Plant trees and shrubs	AHCPGD201 A	Plant trees and shrubs	E	
RTF2014 A	Prepare and maintain plant displays	AHCPGD202 A	Prepare and maintain plant displays	E	
RTF2017 A	Prune shrubs and small trees	AHCPGD203 A	Prune shrubs and small trees	E	
RTF2025 A	Transplant small trees	AHCPGD204 A	Transplant small trees	E	
RTF2211 A	Prepare a grave site	AHCPGD205 A	Prepare a grave site	E	
RTC2203 A	Conduct visual inspection of park facilities	AHCPGD206 A	Conduct visual inspection of park facilities	E	
RTF3011 A	Implement a plant establishment program	AHCPGD301 A	Implement a plant establishment program	E	
RTF3036 A	Plan and establish plant displays	AHCPGD302 A	Plan and maintain plant displays	E	
RTF3028 A	Perform specialist amenity pruning	AHCPGD303 A	Perform specialist amenity pruning	E	



RTF3207 A	Implement a landscape maintenance program	AHCPGD304 A	Implement a landscape maintenance program	E	
RTC3201 A	Conduct operational inspection of park facilities	AHCPGD305 A	Conduct operational inspection of park facilities	E	
RTC3211 A	Implement a maintenance program for an aquatic environment	AHCPGD306 A	Implement a maintenance program for an aquatic environment	E	
RTF4001 A	Design plant displays	AHCPGD401 A	Design plant displays	E	
RTF4003 A	Plan a plant establishment program	AHCPGD402 A	Plan a plant establishment program	E	
RTF5013 A	Manage plant cultural practices for amenity horticulture	AHCPGD501 A	Manage plant cultural practices	N	
RTF5009 A	Plan the restoration of parks and gardens	AHCPGD502 A	Plan the restoration of parks and gardens	E	
RTC5520 A	Manage parks and reserves	AHCPGD503 A	Manage parks and reserves	E	
RTF5506 A	Develop and implement a streetscape management plan	AHCPGD504 A	Develop and implement a streetscape management plan	E	
RTC5201 A	Conduct comprehensive inspection of park facilities	AHCPGD505 A	Conduct comprehensive inspection of park facilities	E	
RTE1005 A	Support horticultural production	AHCPHT101 A	Support horticultural	E	

			production		
RTE2010 A	Establish horticultural crops	AHCPHT201 A	Plant horticultural crops	E	
RTE2006 A	Carry out canopy maintenance	AHCPHT202 A	Carry out canopy maintenance	E	
RTE2021 A	Support horticultural crop harvesting	AHCPHT203 A	Support horticultural crop harvesting	E	
RTE2028 A	Undertake field budding and grafting	AHCPHT204 A	Undertake field budding and grafting	E	
RTE2033 A	Carry out post-harvest operations	AHCPHT205 A	Carry out postharvest operations	E	
RTE2031 A	Handle and move mushroom boxes	AHCPHT206 A	Handle and move mushroom boxes	E	
RTE2505 A	Perform mushroom substrate process tasks	AHCPHT207 A	Perform mushroom substrate process tasks	E	
RTE2032 A	Water mushroom crops	AHCPHT208 A	Water mushroom crops	E	
RTE3002 A	Coordinate a crop regulation program	AHCPHT301 A	Carry out a crop regulation program	E	
RTE3003 A	Coordinate horticultural crop harvesting	AHCPHT302 A	Coordinate horticultural crop harvesting	E	
RTE3013 A	Implement a post-harvest program	AHCPHT303 A	Implement a post-harvest	E	

			program		
RTE3030 A	Harvest horticultural crops mechanically	AHCPHT304 A	Harvest horticultural crops mechanically	E	
RTE2018 A	Regulate crops	AHCPHT305 A	Regulate crops	E	
RTE2010 A	Establish horticultural crops	AHCPHT306 A	Establish horticultural crops	E	
RTE3512 A	Prepare raw materials and compost the feedstocks	AHCPHT307 A	Prepare raw materials and compost the feedstocks	E	
RTE3513 A	Prepare value-added compost-based products	AHCPHT308 A	Prepare value-added compost-based products	E	
RTE3511 A	Supervise mushroom substrate preparation	AHCPHT309 A	Supervise mushroom substrate preparation	E	
RTE4029 A	Assess olive oil for style and quality	AHCPHT401 A	Assess olive oil for style and quality	E	
RTE4002 A	Develop a crop regulation program	AHCPHT402 A	Develop a crop regulation program	E	
RTE4920 A	Develop harvesting and processing specifications to produce an olive oil	AHCPHT403 A	Develop harvesting and processing specifications to produce an olive oil	E	
RTE4028 A	Implement and monitor a horticultural crop harvesting program	AHCPHT404 A	Implement and monitor a horticultural crop harvesting	E	

			program		
RTE4515 A	Manage mushroom substrate preparation	AHCPHT405 A	Manage mushroom substrate preparation	E	
RTE4516 A	Control Phase II mushroom substrate process	AHCPHT406 A	Control Phase II mushroom substrate process	E	
RTE4013 A	Manage mushroom crop development	AHCPHT407 A	Manage mushroom crop development	E	
RTF5001 A	Develop a horticultural production plan	AHCPHT502 A	Develop a horticultural production plan	E	
RTF5012 A	Manage a controlled growing environment	AHCPHT503 A	Manage a controlled growing environment	E	
RTE2105 A	Collect store and handle eggs from breeder flocks	AHCPLY201 A	Collect store and handle eggs from breeder flocks	E	
RTE2140 A	Maintain health and welfare of poultry	AHCPLY202 A	Maintain health and welfare of poultry	E	
RTE2141 A	Set up shed for placement of day-old chickens	AHCPLY203 A	Set up shed for placement of day-old chickens	E	
RTE2142 A	Collect and pack eggs for human consumption	AHCPLY204 A	Collect and pack eggs for human consumption	E	

RTE3135 A	Artificially inseminate birds	AHCPLY301 A	Artificially inseminate birds	E	
RTE2102 A	Brood poultry	AHCPLY302 A	Brood poultry	E	
RTE2108 A	Identify and sex birds	AHCPLY303 A	Identify and sex birds	E	
RTE2109 A	Incubate eggs	AHCPLY304 A	Incubate eggs	E	
RTE2147 A	Beak trim chickens	AHCPLY305 A	Beak trim chickens	E	
RTE3708 A	Clean and fumigate intensive production sheds	AHCPLY306 A	Clean and fumigate intensive production sheds	E	
RTE3149 A	Supervise free-range poultry operations	AHCPLY401 A	Supervise free-range poultry operations	E	
RTC2401 A	Treat weeds	AHCPMG201 A	Treat weeds	E	
RTC2404 A	Treat plant pests, diseases and disorders	AHCPMG202 A	Treat plant pests, diseases and disorders	E	
RTC3401 A	Control weeds	AHCPMG301 A	Control weeds	E	
RTC3404 A	Control plant pests, diseases and disorders	AHCPMG302 A	Control plant pests, diseases and disorders	E	
RTD3706 A	Maintain biological cultures	AHCPMG303 A	Maintain biological cultures	E	
RTD3707 A	Release biological agents	AHCPMG304 A	Release biological agents	E	

RTD4402 A	Define the pest problem in a local area	AHCPMG401 A	Define the pest problem in a local area	E	
RTD4403 A	Develop a pest management action plan within a local area	AHCPMG402 A	Develop a pest management action plan within a local area	E	
RTD4404 A	Develop monitoring procedures for the local pest management strategy	AHCPMG403 A	Develop monitoring procedures for the local pest management strategy	E	
RTD4405 A	Coordinate the local pest management strategy	AHCPMG404 A	Coordinate the local pest management strategy	E	
RTD4406 A	Implement pest management action plans	AHCPMG405 A	Implement pest management action plans	E	
RTD4407 A	Investigate a reported pest treatment failure	AHCPMG406 A	Investigate a reported pest treatment failure	E	
RTD3405 A	Monitor and evaluate the local pest management action plan	AHCPMG407 A	Monitor and evaluate the local pest management action plan	E	
RTE4401 A	Control weeds, pests and/or diseases in crops	AHCPMG408 A	Control weeds, pests and/or diseases	E	
RTD5404 A	Coordinate the pest management strategy in a regional or broader context	AHCPMG501 A	Coordinate the pest management strategy in a regional or broader	E	

			context		
RTD5401 A	Define the pest problem in a regional or broader context	AHCPMG502 A	Define the pest problem in a regional or broader context	E	
RTD5402 A	Develop a strategy for the management of target pests	AHCPMG503 A	Develop a strategy for the management of target pests	E	
RTD5403 A	Develop a system for monitoring the pest management strategy	AHCPMG504 A	Develop a system for monitoring the pest management strategy	E	
RTD5405 A	Evaluate the pest management strategy	AHCPMG505 A	Evaluate the pest management strategy	E	
RTD5512 A	Manage the implementation of legislation	AHCPMG506 A	Manage the implementation of legislation	E	
RTE6402 A	Develop a plant pest survey strategy	AHCPMG601 A	Develop a plant pest survey strategy	E	
RTE6403 A	Develop a plant pest destruction strategy	AHCPMG602 A	Develop a plant pest destruction strategy	E	
RTE2151 A	Care for health and welfare of pigs	AHCPRK201 A	Care for health and welfare of pigs	E	
RTE2145 A	Care for weaner and grower pigs	AHCPRK202 A	Care for weaner and grower pigs	E	
RTE2129	Move and handle pigs	AHCPRK203	Move and	E	

A		A	handle pigs		
RTE3123 A	Pregnancy test pigs	AHCPRK301 A	Pregnancy test pigs	E	
RTE3127 A	Treat rectal prolapse in pigs	AHCPRK302 A	Treat rectal prolapse in pigs	E	
RTE2133 A	Artificially inseminate pigs	AHCPRK303 A	Artificially inseminate pigs	E	
RTE2143 A	Mate pigs and monitor dry sow performance	AHCPRK304 A	Mate pigs and monitor dry sow performance	E	
RTE4116 A	Implement a feeding strategy for pig production	AHCPRK401 A	Implement a feeding strategy for pig production	E	
RTD2202 A	Conduct erosion and sediment control activities	AHCSAW201 A	Conduct erosion and sediment control activities	E	
RTD3205 A	Construct conservation earthworks	AHCSAW301 A	Construct conservation earthworks	E	
RTD3212 A	Implement erosion and sediment control measures	AHCSAW302 A	Implement erosion and sediment control measures	E	
RTD4205 A	Set out conservation earthworks	AHCSAW401 A	Set out conservation earthworks	E	
RTD4207 A	Supervise on-site implementation of conservation earthworks	AHCSAW402 A	Supervise on-site implementation of conservation	E	



			earthworks		
RTD5202 A	Design control measures and structures	AHCSAW501 A	Design control measures and structures	E	
RTD5203 A	Plan erosion and sediment control measures	AHCSAW502 A	Plan erosion and sediment control measures	E	
RTD5204 A	Plan conservation earthworks	AHCSAW503 A	Plan conservation earthworks	E	
RTE1105 A	Undertake basic shearing and crutching	AHCSHG101 A	Undertake basic shearing and crutching	E	
RTE2107 A	Crutch sheep	AHCSHG201 A	Crutch sheep	E	
RTE2216 A	Assist in preparing for shearing and crutching	AHCSHG202 A	Assist in preparing for shearing and crutching	E	
RTE1106 A	Shear sheep to novice level	AHCSHG203 A	Shear sheep to novice level	E	
RTE2149 A	Shear sheep to improver level	AHCSHG204 A	Shear sheep to improver level	E	
RTE2302 A	Grind combs and cutters for machine shearing	AHCSHG205 A	Grind combs and cutters for machine shearing	E	
RTE2310 A	Prepare handpiece and downtube for machine shearing	AHCSHG206 A	Prepare handpiece and downtube for machine shearing	E	
RTE2138 A	Shear goats	AHCSHG207 A	Shear goats	E	
RTE2152	Shear alpacas	AHCSHG208	Shear alpacas	E	

A		A			
RTE2154 A	Support alpaca shearing operations	AHCSHG209 A	Support alpaca shearing operations	E	
RTE3122 A	Prepare livestock for shearing	AHCSHG301 A	Prepare livestock for shearing	E	
RTE3318 A	Prepare combs and cutters for machine shearing	AHCSHG302 A	Prepare combs and cutters for machine shearing	E	
RTE3304 A	Maintain and service shearing handpieces	AHCSHG303 A	Maintain and service shearing handpieces	E	
RTE3129 A	Shear sheep to professional level	AHCSHG304 A	Shear sheep to professional level	E	
RTE3139 A	Maintain consistent shearing performance	AHCSHG305 A	Maintain consistent shearing performance	E	
RTE3107 A	Carry out post-shearing procedures	AHCSHG306 A	Carry out post-shearing procedures	E	
RTE3152 A	Plan and prepare for alpaca shearing	AHCSHG307 A	Plan and prepare for alpaca shearing	E	
RTE4129 A	Apply advanced shearing techniques	AHCSHG401 A	Apply advanced shearing techniques	E	
RTE4310 A	Conduct equipment experting for machine shearing	AHCSHG402 A	Conduct equipment experting for machine shearing	E	

RTE4917 A	Account for shearing shed supplies	AHCSHG403 A	Account for shearing shed supplies	E	
RTE4111 A	Manage shearing and crutching operations	AHCSHG404 A	Manage shearing and crutching operations	E	
RTE4904 A	Arrange employment for shearing operations	AHCSHG405 A	Arrange employment for shearing operations	E	
RTE4916 A	Prepare shearing team wages	AHCSHG406 A	Prepare shearing team wages	E	
		AHCSHG407 A	Oversee and instruct shed staff		New unit
RTF2504 A	Determine basic properties of soil/growing media	AHCSOL201 A	Determine basic properties of soil and/or growing media	E	
RTF3510 A	Design and prepare growing media	AHCSOL301 A	Prepare growing media	E	
		AHCSOL302 A	Construct a soil profile		New unit
RTF3503 A	Sample soils and analyse results	AHCSOL401 A	Sample soils and interpret results	E	
RTE4511 A	Develop a soil use map for a property	AHCSOL402 A	Develop a soil use map for a property	E	
RTC4512 A	Prepare acid sulphate soil management plans	AHCSOL403 A	Prepare acid sulphate soil management plans	E	
RTC4513	Supervise acid	AHCSOL404	Supervise acid	E	

A	sulphate soil remediation and management projects	A	sulphate soil remediation and management projects		
RTF5521 A	Monitor and manage soils	AHCSOL501 A	Monitor and manage soils for production	E	
		AHCSPO301A	Operate a screen cleaner		New unit
		AHCSPO302A	Operate an indent cylinder		New unit
		AHCSPO303A	Operate a gravity table		New unit
		AHCSPO304A	Operate seed modification machinery		New unit
		AHCSPO305A	Operate seed treatment machinery		New unit
		AHCSPO306A	Operate specialised seed processing machinery		New unit
		AHCSPO307A	Handle, package and store commercial quantities of seed		New unit
		AHCSPO308A	Sample seed before and after processing		New unit
RTE3305 A	Install and terminate extra low voltage wiring systems	AHCTEQ301 A	Install and terminate extra low voltage	E	

			wiring systems		
RTF1003 A	Support turf work	AHCTRF101A	Support turf work	E	
RTF2020 A	Assist with turf construction	AHCTRF201A	Assist with turf construction	E	
RTF2015 A	Prepare turf surfaces for play	AHCTRF202A	Prepare turf surfaces for play	E	
RTF2019 A	Renovate grassed areas	AHCTRF203A	Renovate grassed areas	E	
RTF2023 A	Support turf establishment	AHCTRF204A	Support turf establishment	E	
RTF3001 A	Construct turf playing surfaces	AHCTRF301A	Construct turf playing surfaces	E	
RTF3010 A	Establish turf	AHCTRF302A	Establish turf	E	
RTF3004 A	Implement a grassed area maintenance program	AHCTRF303A	Implement a grassed area maintenance program	E	
RTF3023 A	Monitor turf health	AHCTRF304A	Monitor turf health	E	
RTF3027 A	Renovate sports turf	AHCTRF305A	Renovate sports turf	E	
RTF4005 A	Develop a sports turf maintenance program	AHCTRF401A	Develop a sports turf maintenance program	E	
		AHCTRF402A	Plan and implement sports turf renovation		New unit
RTF5008 A	Plan the establishment of sports turf playing	AHCTRF501A	Plan the establishment	E	

	surfaces		of sports turf playing surfaces		
RTD2402 A	Clear features that harbour pest animals	AHCVPT201 A	Clear features that harbour pest animals	E	
RTD2116 A	Muster pest animals	AHCVPT202 A	Muster pest animals	E	
RTD2125 A	Use firearms to humanely destroy animals	AHCVPT203 A	Use firearms to humanely destroy animals	E	
RTE3406 A	Implement vertebrate pest control program	AHCVPT302 A	Implement vertebrate pest control program	E	
RTD3132 A	Survey pest animals	AHCVPT303 A	Survey pest animals	E	
RTD2403 A	Conduct vertebrate pest activities from aircraft	AHCVPT304 A	Conduct vertebrate pest activities from aircraft	E	
RTD2405 A	Tag and locate Judas animals	AHCVPT305 A	Tag and locate Judas animals	E	
RTD2101 A	Apply animal trapping techniques	AHCVPT306 A	Apply animal trapping techniques	E	
RTE2608 A	Set up, operate and maintain water delivery system	AHCWAT201 A	Set up, operate and maintain water delivery system	E	
RTE3608 A	Monitor and operate water treatment processes	AHCWAT301 A	Monitor and operate water treatment processes	E	
RTE5608 A	Design water treatment systems	AHCWAT501 A	Design water treatment	E	

			systems		
RTE5606 A	Manage water systems	AHCWAT502 A	Manage water systems	E	
RTE1103 A	Support woolshed activities	AHCWOL101 A	Support woolshed activities	E	
RTE2117 A	Pen sheep	AHCWOL201 A	Pen sheep	E	
RTE2119 A	Perform board duties	AHCWOL202 A	Perform board duties	E	
RTE2120 A	Assist with pressing wool	AHCWOL203 A	Carry out wool pressing	E	
RTE2155 A	Undertake basic skirting of alpaca fleece	AHCWOL204 A	Undertake basic skirting of alpaca fleece	E	
RTE3111 A	Appraise wool using industry descriptions	AHCWOL301 A	Appraise wool using industry descriptions	E	
RTE3138 B	Determine wool characteristics	AHCWOL303 A	Prepare wool based on its characteristics	E	Major edit to work role
RTE3141 A	Prepare fleece wool for classing	AHCWOL304 A	Prepare fleece wool for classing	E	
RTE3142 A	Prepare skirtings and oddments	AHCWOL305 A	Prepare skirtings and oddments	E	
RTE3130 A	Supervise clip preparation	AHCWOL306 A	Supervise clip preparation	E	Minor changes. Edit to include board, table and presser duties
RTE3902 A	Document a wool clip	AHCWOL307 A	Document a wool clip	E	

RTE3120 A	Prepare facilities for shearing and crutching	AHCWOL308 A	Prepare facilities for shearing and crutching	E	Minor changes. Edits to Elements PCs S&K - add supply of sheep
RTE3145 A	Press wool	AHCWOL310 A	Press wool for a clip	E	
		AHCWOL311 A	Perform shed duties		New unit
RTE3109 A	Class goat fibre	AHCWOL312 A	Class goat fibre	E	
RTE3150 A	Class alpaca fleece	AHCWOL313 A	Class alpaca fleece	E	
RTE4103 A	Determine wool classing strategies	AHCWOL401 A	Determine wool classing strategies	E	
RTE4123 A	Use individual fleece measurements to prepare wool for sale	AHCWOL402 A	Use individual fleece measurements to prepare wool for sale	E	
		AHCWOL403 A	Prepare for, implement and review wool harvesting, clip preparation and classing		New unit
		AHCWOL404 A	Establish work routines and manage wool harvesting and preparation staff		New unit
RTE3108 A	Class fleece wool	AHCWOL405 A	Class fleece wool	E	
RTC1201	Maintain the	AHCWRK101	Maintain the	E	



A	workplace	A	workplace		
RTE2503 B	Observe and report on weather	AHCWRK201 A	Observe and report on weather	E	
RTC2702 A	Observe environmental work practices	AHCWRK202 A	Observe environmental work practices	E	
RTD2703 A	Operate in isolated and remote situations	AHCWRK203 A	Operate in isolated and remote situations	E	
RTC2705 A	Work effectively in the industry	AHCWRK204 A	Work effectively in the industry	E	
RTC2801 A	Participate in workplace communications	AHCWRK205 A	Participate in workplace communications	E	
RTE2901 A	Observe enterprise quality assurance procedures	AHCWRK206 A	Observe enterprise quality assurance procedures	E	
RTE2902 B	Collect and record production data	AHCWRK207 A	Collect and record production data	E	
RTE2804 A	Provide information on products and services	AHCWRK208 A	Provide information on products and services	E	
		AHCWRK209 A	Participate in environmentally sustainable work practices		Recoded BSB unit
RTE3504 B	Collect samples for a rural production or horticulture	AHCWRK301 A	Collect samples for a rural production or	E	

	monitoring program		horticulture monitoring program		
RTE3506 A	Monitor weather conditions	AHCWRK302 A	Monitor weather conditions	E	
RTC3701 A	Respond to emergencies	AHCWRK303 A	Respond to emergencies	E	
RTD3703 A	Respond to rescue incidents	AHCWRK304 A	Respond to rescue incidents	E	
RTC3805 A	Coordinate work site activities	AHCWRK305 A	Coordinate work site activities	E	
RTE3901 A	Comply with industry quality assurance requirements	AHCWRK306 A	Comply with industry quality assurance requirements	E	
RTE3103 A	Apply quality assurance procedures in wool preparation	AHCWRK306 A	Comply with industry quality assurance requirements	E	
RTE3818 A	Develop and apply fertiliser and soil ameliorant product knowledge	AHCWRK307 A	Develop and apply fertiliser and soil ameliorant product knowledge	E	
RTE3008 A	Handle bulk materials in storage area	AHCWRK308 A	Handle bulk materials in storage area	E	
RTE3801 A	Provide on-job training support	AHCWRK310 A	Provide on-job training support	E	
RTC3218 A	Undertake a site assessment	AHCWRK311 A	Conduct site inspections	N	

RTE3714 A	Maintain and monitor environmental work practices	AHCWRK313 A	Implement and monitor environmental y sustainable work practices	E	
RTE4915 A	Implement and monitor quality assurance procedures	AHCWRK401 A	Implement and monitor quality assurance procedures	E	
RTD4811 A	Provide information on environmental issues and policies	AHCWRK402 A	Provide information on issues and policies	E	
RTC4908 A	Supervise work routines and staff performance	AHCWRK403 A	Supervise work routines and staff performance	E	
RTD3501 A	Assist in the implementation of legislation	AHCWRK404 A	Ensure compliance with pest legislation	N	
RTE5903 A	Plan, implement and review a quality assurance program	AHCWRK501 A	Plan, implement and review a quality assurance program	E	
RTC5913 A	Collect and manage data	AHCWRK502 A	Collect and manage data	E	
RTC5914 A	Prepare reports	AHCWRK503 A	Prepare reports	E	
RTE5924 A	Research and apply rural industry knowledge	AHCWRK504 A	Assess new industry developments	E	
RTE5525 A	Manage trial and/or research material	AHCWRK505 A	Manage trial and/or research material	E	

		AHCWRK507 A	Implement professional practice		New unit
		AHCWRK508 A	Interpret legislation		New unit
RTC5801 A	Provide specialist advice to clients	AHCWRK509 A	Provide specialist advice to clients	E	
		AHCWRK510 A	Audit site operations		New unit
		AHCWRK511 A	Develop workplace policy and procedures for sustainability		Recoded BSB unit
RTD6902 A	Monitor projects in a program	AHCWRK601 A	Monitor projects in a program	E	
RTE6802 A	Lead and manage community or industry organisations	AHCWRK602 A	Lead and manage community or industry organisations	E	
RTE6503 A	Design and conduct a field-based research trial	AHCWRK603 A	Design and conduct a field-based research trial	E	
RTC2704 A	Provide basic first aid				Unit removed
RTD2313 A	Clean machinery of plant, animal and soil material				Unit removed. Content merged with AHC BIO201 A.
RTD3815 A	Represent group at functions				Unit removed

RTD4907 A	Establish an office				Unit removed
RTE1105 A	Undertake basic shearing and crutching				Unit removed
RTE2213 A	Weld and fabricate stainless steel				Unit removed
RTE2308 A	Operate ride-on vehicles				Unit removed
RTE3303 A	Operate all terrain vehicles				Unit removed
RTE3309 A	Operate machinery in adverse conditions				Unit removed
RTE3316 A	Disconnect/ reconnect fixed wired equipment				Unit removed
RTE3712 A	Administer medication to animals				Unit removed. See RTE3115A
RTE4127 A	Class wool for special markets				Unit removed
RTE4801 A	Provide information on marketing the clip				Unit removed
RTE4813 A	Provide information and advice on wool preparation				Unit removed
RTF1002 A	Support arboricultural work				Unit removed
RTF1007 A	Support floricultural production				Unit removed. See AHCPHT101 A
RTF4006 A	Plan a tree pruning program				Unit removed
RTF4019 A	Prepare and implement plans to				Unit removed

	minimise tree stress				
RTF4021 A	Plan the removal of trees				Unit removed
RTF4514 A	Develop soil survey maps				Unit removed
RTE5527 A	Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs				Unit removed

## Overview

### What is a Training Package?

A Training Package is an integrated set of nationally endorsed competency standards, assessment guidelines and Australian Qualifications Framework (AQF) qualifications for a specific industry, industry sector or enterprise.

Each Training Package:

- provides a consistent and reliable set of components for training, recognising and assessing peoples skills, and may also have optional support materials
- enables nationally recognised qualifications to be awarded through direct assessment of workplace competencies
- encourages the development and delivery of flexible training which suits individual and industry requirements
- encourages learning and assessment in a work-related environment which leads to verifiable workplace outcomes.

### How do Training Packages fit within the National Skills Framework?

The National Skills Framework applies nationally, is endorsed by the Ministerial Council for Vocational and Technical Education, and comprises the Australian Quality Training Framework 2010 (AQTF 2010), and Training Packages endorsed by the National Quality Council (NQC).

### How are Training Packages developed?

Training Packages are developed by Industry Skills Councils or enterprises to meet the identified training needs of specific industries or industry sectors. To gain national endorsement of Training Packages, developers must provide evidence of extensive research, consultation and support within the industry area or enterprise.

### How do Training Packages encourage flexibility?

Training Packages describe the skills and knowledge needed to perform effectively in the workplace without prescribing how people should be trained. Training Packages acknowledge that people can achieve vocational competency in many ways by emphasising what the learner can do, not how or where they learned to do it. For example, some experienced workers might be able to demonstrate competency against the units of competency, and even gain a qualification, without completing a formal training program.

With Training Packages, assessment and training may be conducted at the workplace, off-the-job, at a training organisation, during regular work, or through work experience, work placement, work simulation or any combination of these.

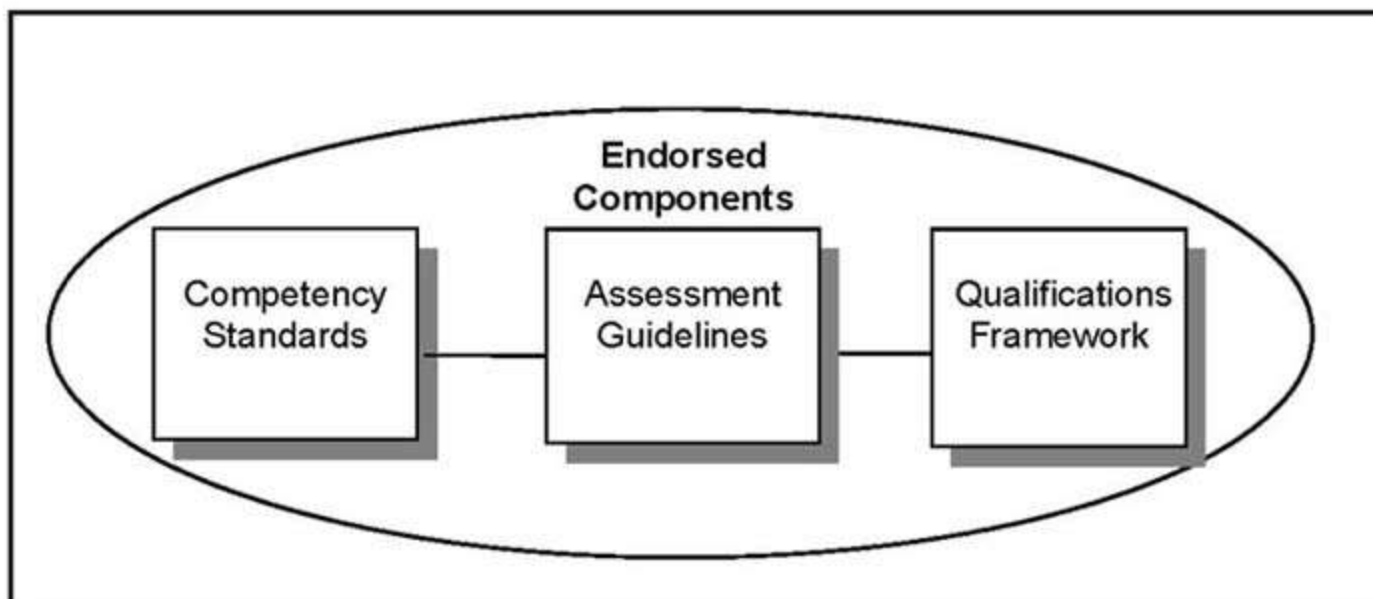
### **Who can deliver and assess using Training Packages?**

Training and assessment using Training Packages must be conducted by a Registered Training Organisation (RTO) that has the qualifications or specific units of competency on its scope of registration, or that works in partnership with another RTO, as specified in the AQTF 2010.

### **Training Package Components**

Training Packages are made up of mandatory components endorsed by the NQC, and optional support materials.

The nationally endorsed components include the Competency Standards, Assessment Guidelines and Qualifications Framework. These form the basis of training and assessment in the Training Package and, as such, they must be used.



### **Competency Standards**

Each unit of competency identifies a discrete workplace requirement and includes the knowledge and skills that underpin competency as well as language, literacy and numeracy; and occupational health and safety requirements. The units of competency must be adhered to in training and assessment to ensure consistency of outcomes.

### **Assessment Guidelines**

The Assessment Guidelines provide an industry framework to ensure all assessments meet industry needs and nationally agreed standards as expressed in the Training Package and the AQTF 2010. The Assessment Guidelines must be followed to ensure the integrity of assessment leading to nationally recognised qualifications.

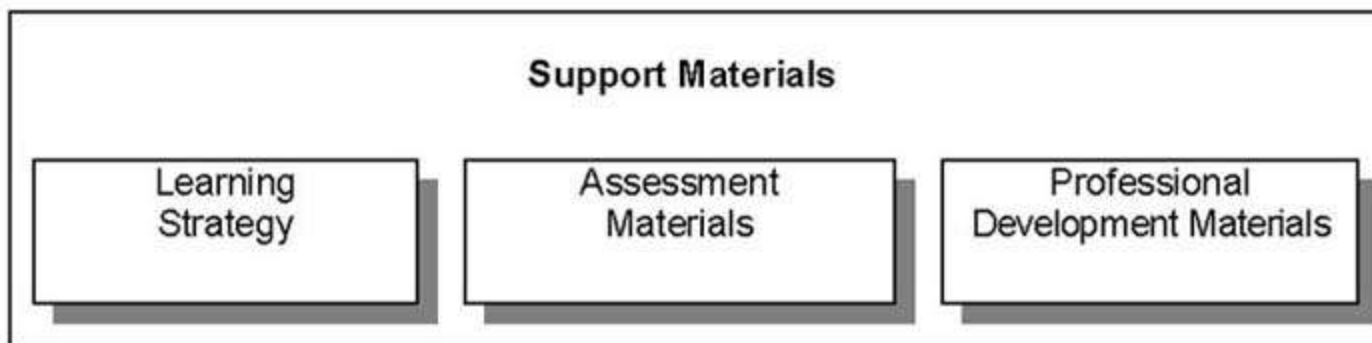
### Qualifications Framework

Each Training Package provides details of those units of competency that must be achieved to award AQF qualifications. The rules around which units of competency can be combined to make up a valid AQF qualification in the Training Package are referred to as the "packaging rules". The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

### Training Package Support Materials

The endorsed components of Training Packages are complemented and supported by optional support materials that provide for choice in the design of training and assessment to meet the needs of industry and learners.

Training Package support materials can relate to single or multiple units of competency, an industry sector, a qualification or the whole Training Package. They tend to fall into one or more of the categories illustrated below.



Training Package support materials are produced "by a range of stakeholders such as RTOs, individual trainers and assessors, private and commercial developers and Government agencies.

Where such materials have been quality assured through a process of "noting" by the NQC, they display the following official logo. Noted support materials are listed on the National Training Information Service (NTIS), together with a detailed description and information on the type of product and its availability < [www.ntis.gov.au](http://www.ntis.gov.au)>.



It is not compulsory to submit support materials for noting; any resources that meet the requirements of the Training Package can be used.

### Training Package, Qualification and Unit of Competency Codes



There are agreed conventions for the national codes used for Training Packages and their components. Always use the correct codes, exactly as they appear in the Training Package, **and with the code always before the title.**

### Training Package Codes

Each Training Package has a unique five-character national code assigned when the Training Package is endorsed, for example AHC10. The first three characters are letters identifying the Training Package industry coverage and the last two characters are numbers identifying the year of endorsement.

### Qualification Codes

Within each Training Package, each qualification has a unique eight-character code, for example AHC10110. Qualification codes are developed as follows:

- the first three letters identify the Training Package;
- the first number identifies the qualification level (noting that, in the qualification titles themselves, arabic numbers are **not** used);
- the next two numbers identify the position in the sequence of the qualification at that level; and
- the last two numbers identify the year in which the qualification was endorsed. (Where qualifications are added after the initial Training Package endorsement, the last two numbers may differ from other Training Package qualifications as they identify the year in which those particular qualifications were endorsed.)

Within each Training Package, each unit of competency has a unique code. Unit of competency codes are assigned when the Training Package is endorsed, or when new units of competency are added to an existing endorsed Training Package. Unit codes are developed as follows:

- a typical code is made up of 12 characters, normally a mixture of uppercase letters and numbers, as in AHCAGB301A;
- the first three characters signify the Training Package - AHC10 - in the above example and up to eight characters, relating to an industry sector, function or skill area, follow;
- the last character is always a letter and identifies the unit of competency version. An "A" at the end of the code indicates that this is the original unit of competency. "B", or another incremented version identifier means that minor changes have been made. Typically this would mean that wording has changed in the range statement or evidence guide, providing clearer intent; and
- where changes are made that alter the outcome, a new code is assigned and the title is changed.

### Training Package, Qualification and Unit of Competency Titles

There are agreed conventions for titling Training Packages and their components. Always use the correct titles, exactly as they appear in the Training Package, and with the code always placed before the title.

### Training Package Titles

The title of each endorsed Training Package is unique and relates the Training Packages broad industry coverage.

### **Qualification Titles**

The title of each endorsed Training Package qualification is unique. Qualification titles use the following sequence:

- first, the qualification is identified as either Certificate I, Certificate II, Certificate III, Certificate IV, Diploma, Advanced Diploma, Vocational Graduate Certificate, or Vocational Graduate Diploma;
- this is followed by the words "in" for Certificates I to IV, and "of" for Diploma, Advanced Diploma, Vocational Graduate Certificate and Vocational Graduate Diploma;
- then, the industry descriptor, for example Telecommunications; and
- then, if applicable, the occupational or functional stream in brackets, for example (Computer Systems).

For example:

- AHC10110 Certificate I in Conservation and Land Management

### **Unit of Competency Titles**

Each unit of competency title is unique. Unit of competency titles describe the competency outcome concisely, and are written in sentence case.

For example:

- AHCAGB301A Keep records for a primary production business

## **Qualifications Framework**

### **The Australian Qualifications Framework**

#### **What is the Australian Qualifications Framework?**

A brief overview of the Australian Qualifications Framework (AQF) follows. For a full explanation of the AQF, see the AQF Implementation Handbook.

[http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF\\_Handbook\\_07.pdf](http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF_Handbook_07.pdf) The AQF provides a comprehensive, nationally consistent framework for all qualifications in

post-compulsory education and training in Australia. In the vocational education and training (VET) sector it assists national consistency for all trainees, learners, employers and providers by enabling national recognition of qualifications and Statements of Attainment.

Training Package qualifications in the VET sector must comply with the titles and guidelines of the AQF. Endorsed Training Packages provide a unique title for each AQF qualification which must always be reproduced accurately.

### **Qualifications**

Training Packages can incorporate the following eight AQF qualifications.

- Certificate I in ...

- Certificate II in ...
- Certificate III in ...
- Certificate IV in ...
- Diploma of ...
- Advanced Diploma of ...
- Vocational Graduate Certificate of ...
- Vocational Graduate Diploma of ...

Graduate Certificates and Graduate Diplomas can also be awarded in the vocational education and training sector under certain conditions see the *AQF Implementation Handbook* for details.

On completion of the requirements defined in the Training Package, a Registered Training Organisation (RTO) may issue a nationally recognised AQF qualification. Issuance of AQF qualifications must comply with the advice provided in the *AQF Implementation Handbook* and the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

### **Statement of Attainment**

A Statement of Attainment is issued by a Registered Training Organisation when an individual has completed one or more units of competency from nationally recognised qualification(s)/courses(s). Issuance of Statements of Attainment must comply with the advice provided in the current *AQF Implementation Handbook* and the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Under the AQTF 2010, RTOs must recognise the achievement of competencies as recorded on a qualification testamur or Statement of Attainment issued by other RTOs. Given this, recognised competencies can progressively build towards a full AQF qualification.

### **AQF Guidelines and Learning Outcomes**

The *AQF Implementation Handbook* provides a comprehensive guideline for each AQF qualification. A summary of the learning outcome characteristics and their distinguishing features for each VET related AQF qualification is provided below.

#### **Certificate I**

##### *Characteristics of Learning Outcomes*

Breadth, depth and complexity of knowledge and skills would prepare a person to perform a defined range of activities most of which may be routine and predictable.

Applications may include a variety of employment related skills including preparatory access and participation skills, broad-based induction skills and/or specific workplace skills. They may also include participation in a team or work group.

##### *Distinguishing Features of Learning Outcomes*

Do the competencies enable an individual with this qualification to:

- demonstrate knowledge by recall in a narrow range of areas;
- demonstrate basic practical skills, such as the use of relevant tools;
- perform a sequence of routine tasks given clear direction

- receive and pass on messages/information.

## **Certificate II**

### *Characteristics of Learning Outcomes*

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of operations to be applied.

Performance of a prescribed range of functions involving known routines and procedures and some accountability for the quality of outcomes.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others as part of a group or team.

### *Distinguishing Features of Learning Outcomes*

Do the competencies enable an individual with this qualification to:

- demonstrate basic operational knowledge in a moderate range of areas;
- apply a defined range of skills;
- apply known solutions to a limited range of predictable problems;
- perform a range of tasks where choice between a limited range of options is required;
- assess and record information from varied sources;
- take limited responsibility for own outputs in work and learning.

## **Certificate III**

### *Characteristics of Learning Outcomes*

Breadth, depth and complexity of knowledge and competencies would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specified problems. This would be applied

across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.

Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team co-ordination may be involved.

### *Distinguishing Features of Learning Outcomes*

Do the competencies enable an individual with this qualification to:

- demonstrate some relevant theoretical knowledge

- apply a range of well-developed skills
- apply known solutions to a variety of predictable problems
- perform processes that require a range of well-developed skills where some discretion and judgement is required
- interpret available information, using discretion and judgement
- take responsibility for own outputs in work and learning
- take limited responsibility for the output of others.

## **Certificate IV**

### *Characteristics of Learning Outcomes*

Breadth, depth and complexity of knowledge and competencies would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills. Applications involve responsibility for, and limited organisation of, others.

### *Distinguishing Features of Learning Outcomes*

Do the competencies enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating some theoretical concepts
- apply solutions to a defined range of unpredictable problems
- identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas
- identify, analyse and evaluate information from a variety of sources
- take responsibility for own outputs in relation to specified quality standards
- take limited responsibility for the quantity and quality of the output of others.

## **Diploma**

### *Characteristics of Learning Outcomes*

Breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and co-ordination.

The self directed application of knowledge and skills, with substantial depth in some areas where judgment is required in planning and selecting appropriate equipment, services and techniques for self and others.

Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation

## **Advanced Diploma**

### *Characteristics of Learning Outcomes*

Breadth, depth and complexity involving analysis, design, planning, execution and evaluation across a range of technical and/or management functions including development of new criteria or applications or knowledge or procedures.

The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved.

Applications involve significant judgement in planning, design, technical or leadership/guidance functions related to products, services, operations or procedures.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

### *Distinguishing Features of Learning Outcomes*

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of specialised knowledge with depth in some areas
- analyse, diagnose, design and execute judgements across a broad range of technical or management functions
- generate ideas through the analysis of information and concepts at an abstract level
- demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills
- demonstrate accountability for personal outputs within broad parameters
- demonstrate accountability for personal and group outcomes within broad parameters.

## **Vocational Graduate Certificate**

### *Characteristics of competencies or learning outcomes*

- The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Substantial breadth and complexity involving the initiation, analysis, design, planning, execution and evaluation of technical and management functions in highly varied and highly specialised contexts.

- Applications involve making significant, high-level, independent judgements in major broad or planning, design, operational, technical and management functions in highly varied and specialised contexts. They may include responsibility and broad-ranging accountability for the structure, management and output of the work or functions of others.
- The degree of emphasis on breadth, as opposed to depth, of knowledge and skills may vary between qualifications granted at this level.

#### *Distinguishing features of learning outcomes*

- Demonstrate the self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major broad or technical and management functions in highly varied and highly specialised contexts.
- Generate and evaluate ideas through the analysis of information and concepts at an abstract level.
- Demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills in complex contexts.
- Demonstrate responsibility and broad-ranging accountability for the structure, management and output of the work or functions of others.

### **Vocational Graduate Diploma**

#### *Characteristics of competencies or learning outcomes*

- The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Substantial breadth, depth and complexity involving the initiation, analysis, design, planning, execution and evaluation of major functions, both broad and highly specialised, in highly varied and highly specialised contexts.
- Further specialisation within a systematic and coherent body of knowledge.
- Applications involve making high-level, fully independent, complex judgements in broad planning, design, operational, technical and management functions in highly varied and highly specialised contexts. They may include full responsibility and accountability for all aspects of work and functions of others, including planning, budgeting and strategy development.
- The degree of emphasis on breadth, as opposed to depth, of knowledge and skills may vary between qualifications granted at this level.

#### *Distinguishing features of learning outcomes*

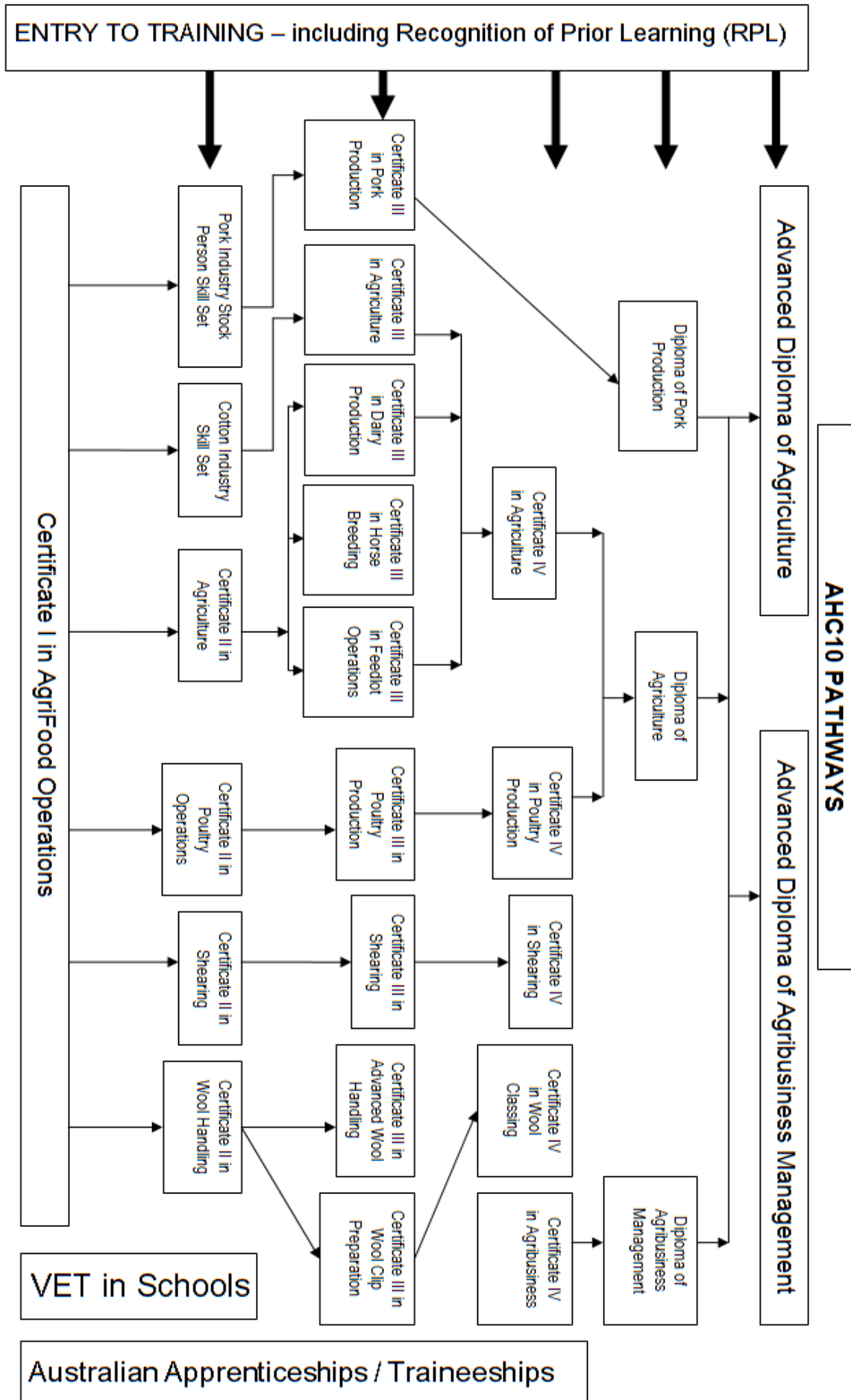
- Demonstrate the self-directed development and achievement of broad and highly specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major functions, both broad and within highly varied and highly specialised contexts.

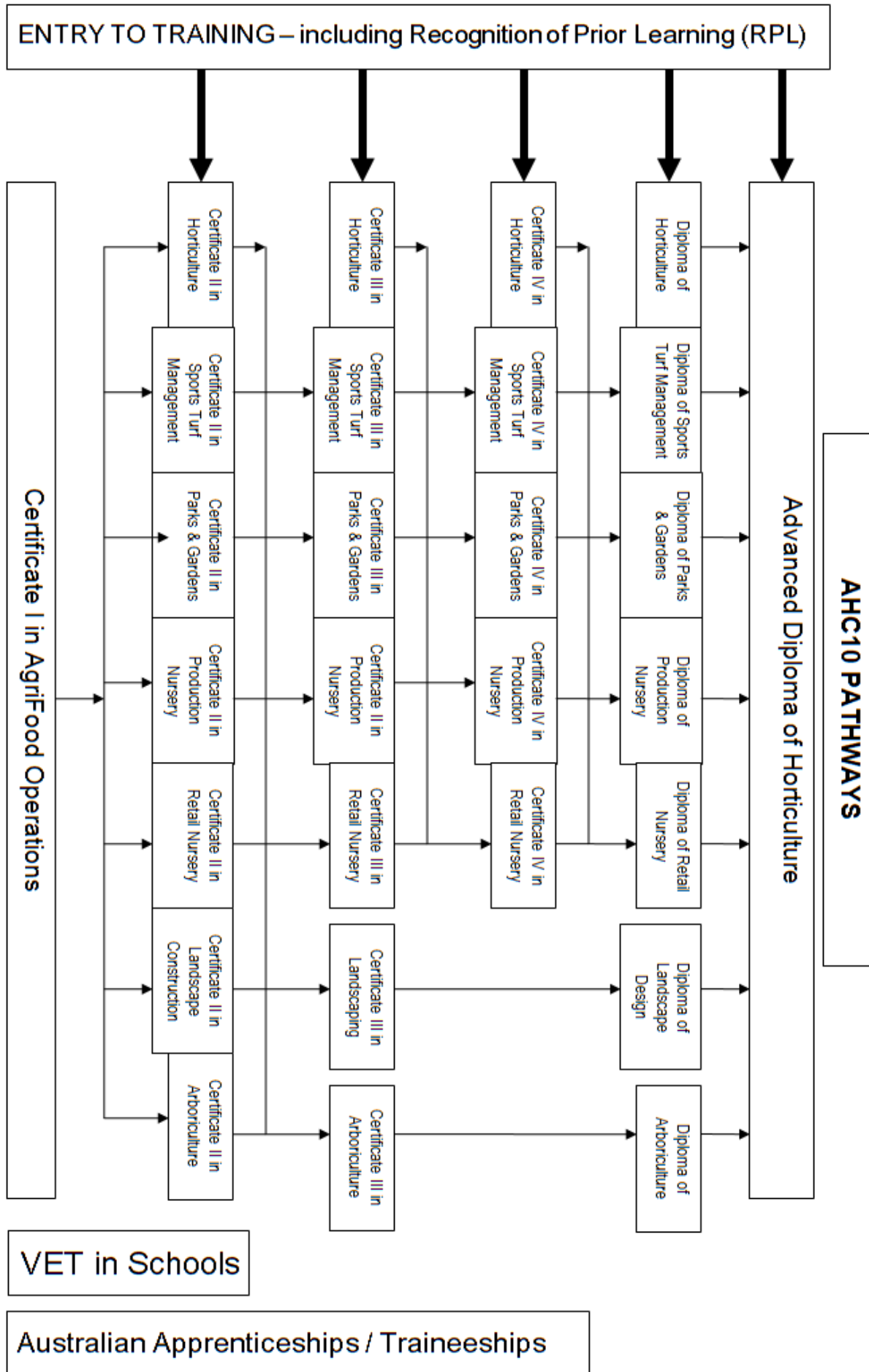
- Generate and evaluate complex ideas through the analysis of information and concepts at an abstract level.
- Demonstrate an expert command of wide-ranging, highly specialised, technical, creative or conceptual skills in complex and highly specialised or varied contexts.
- Demonstrate full responsibility and accountability for personal outputs.
- Demonstrate full responsibility and accountability for all aspects of the work or functions of others, including planning, budgeting and strategy.

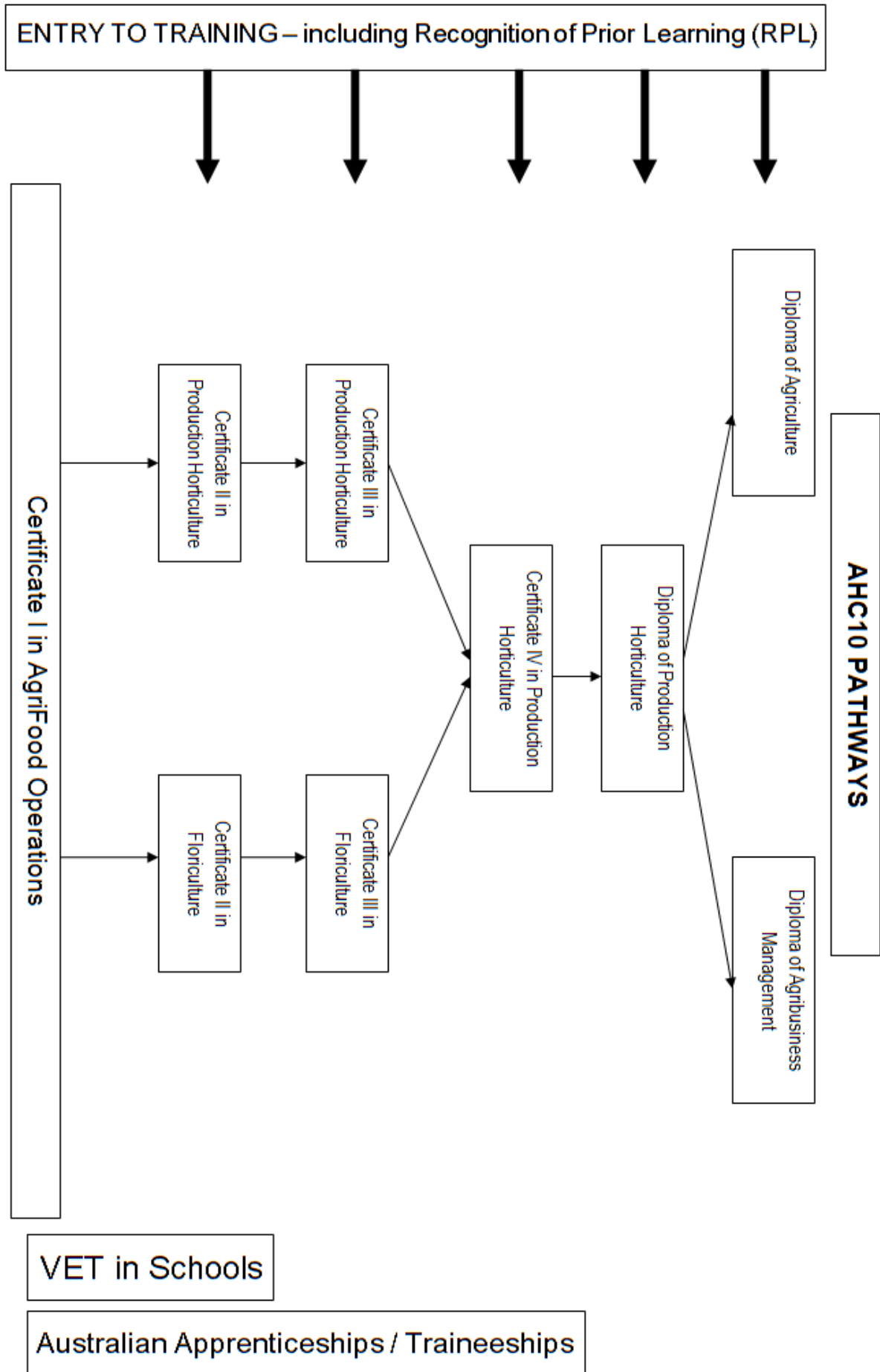


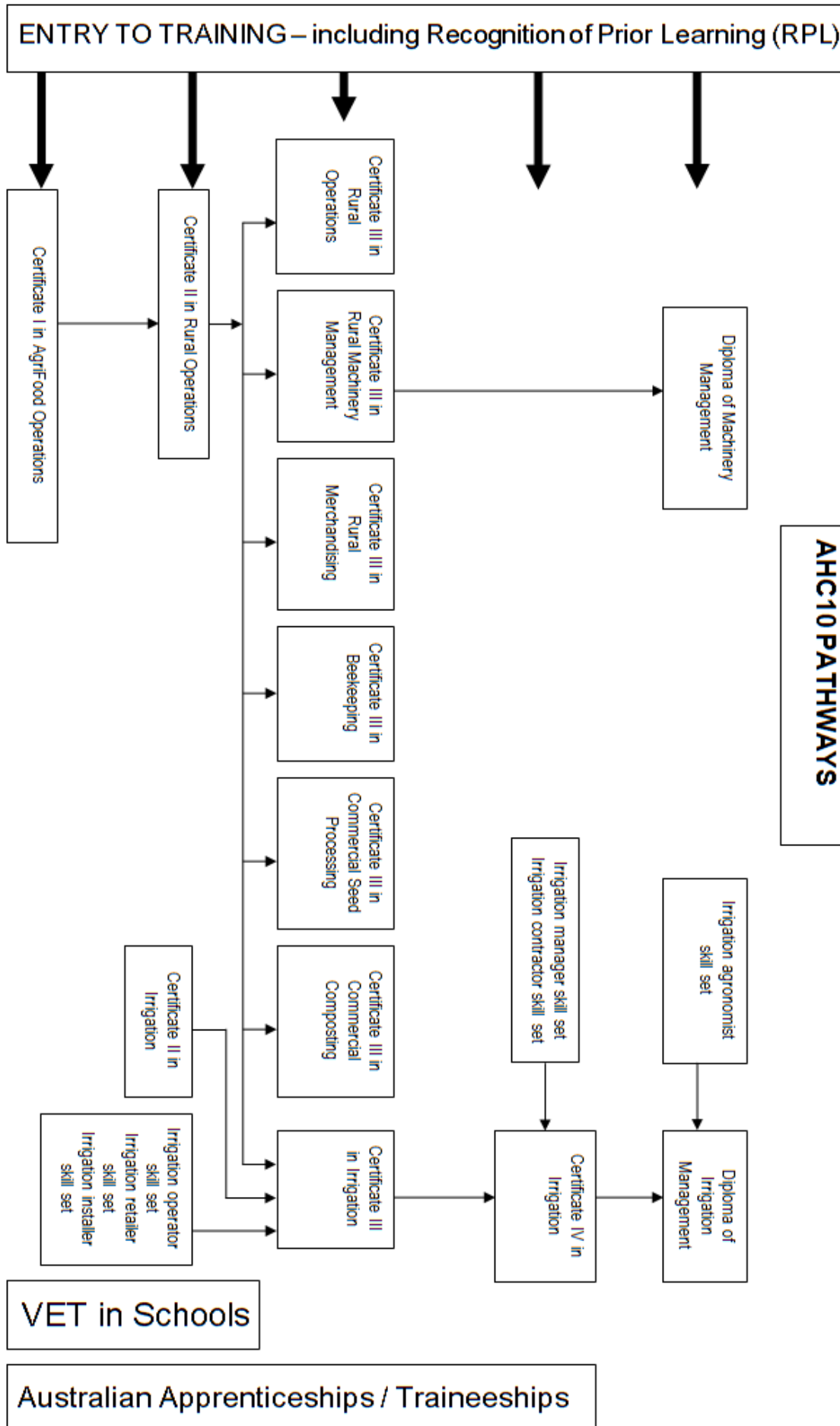
# Qualification Pathways

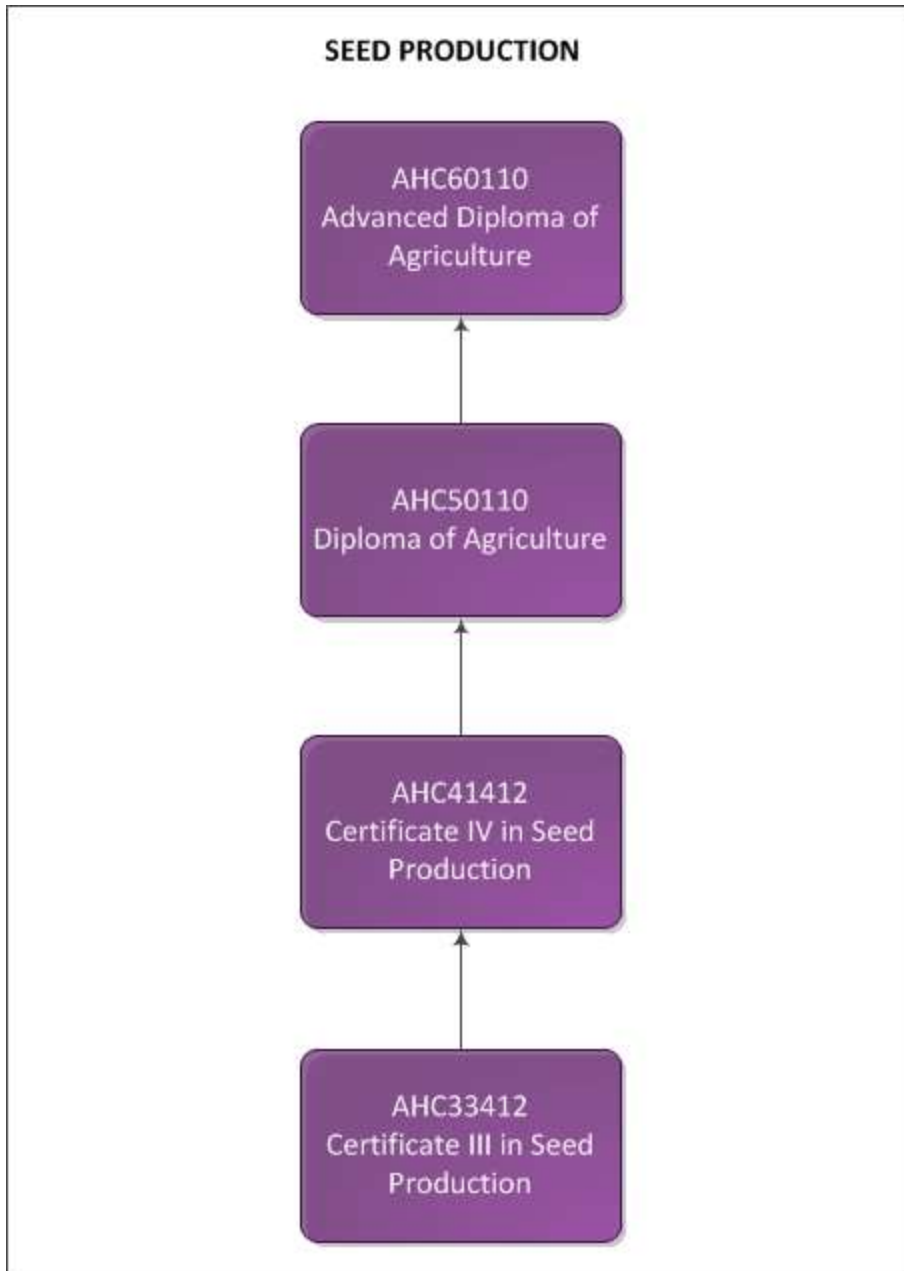
Qualification Pathways

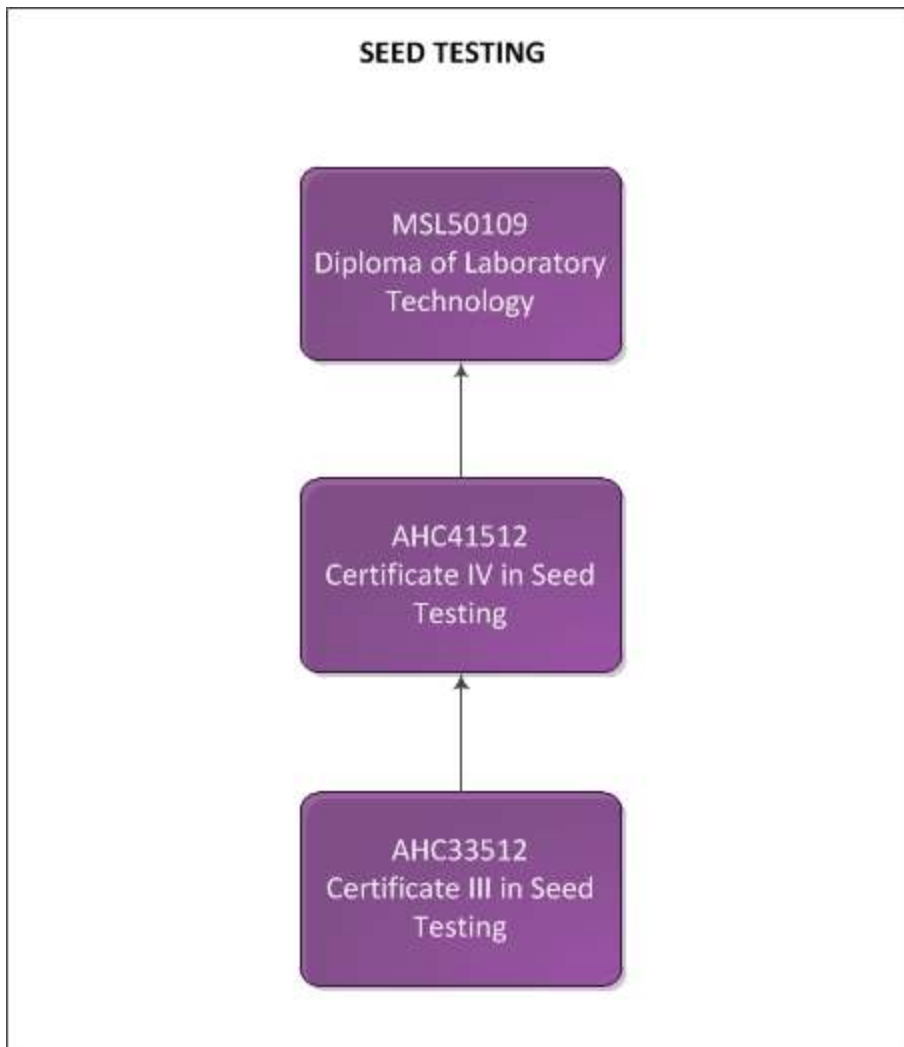


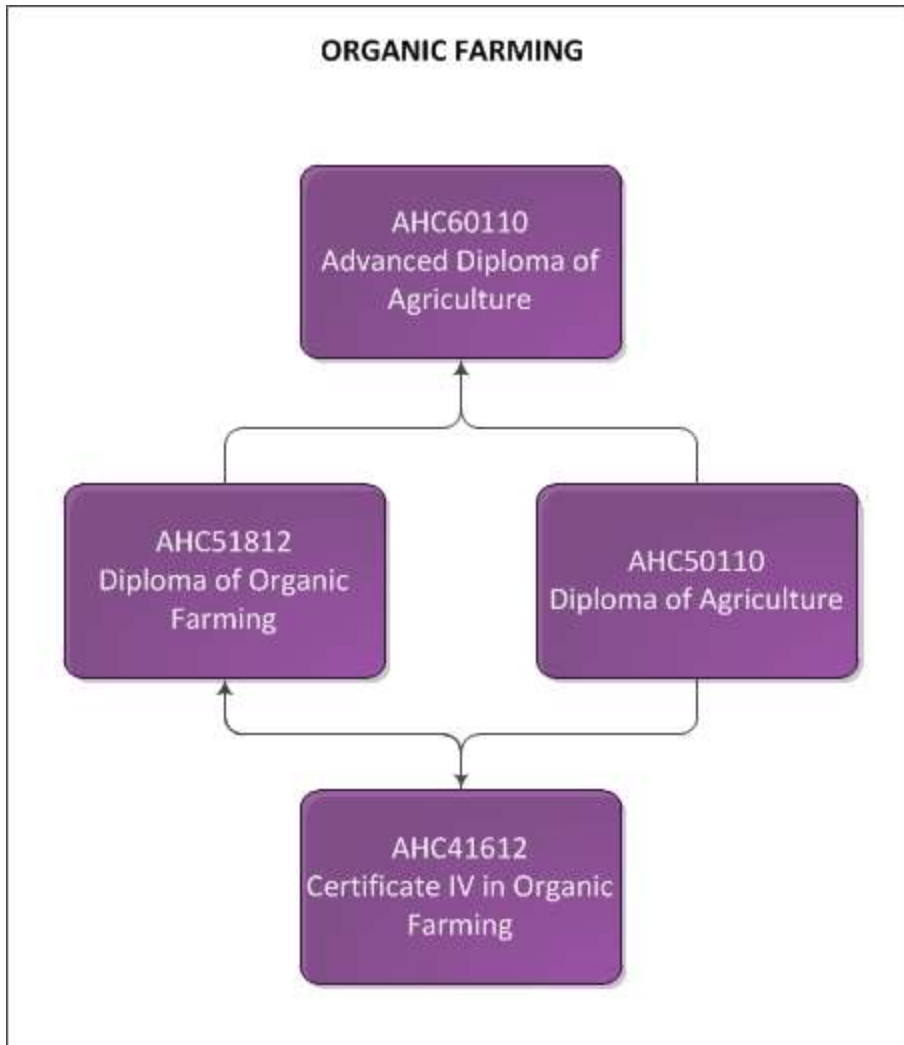




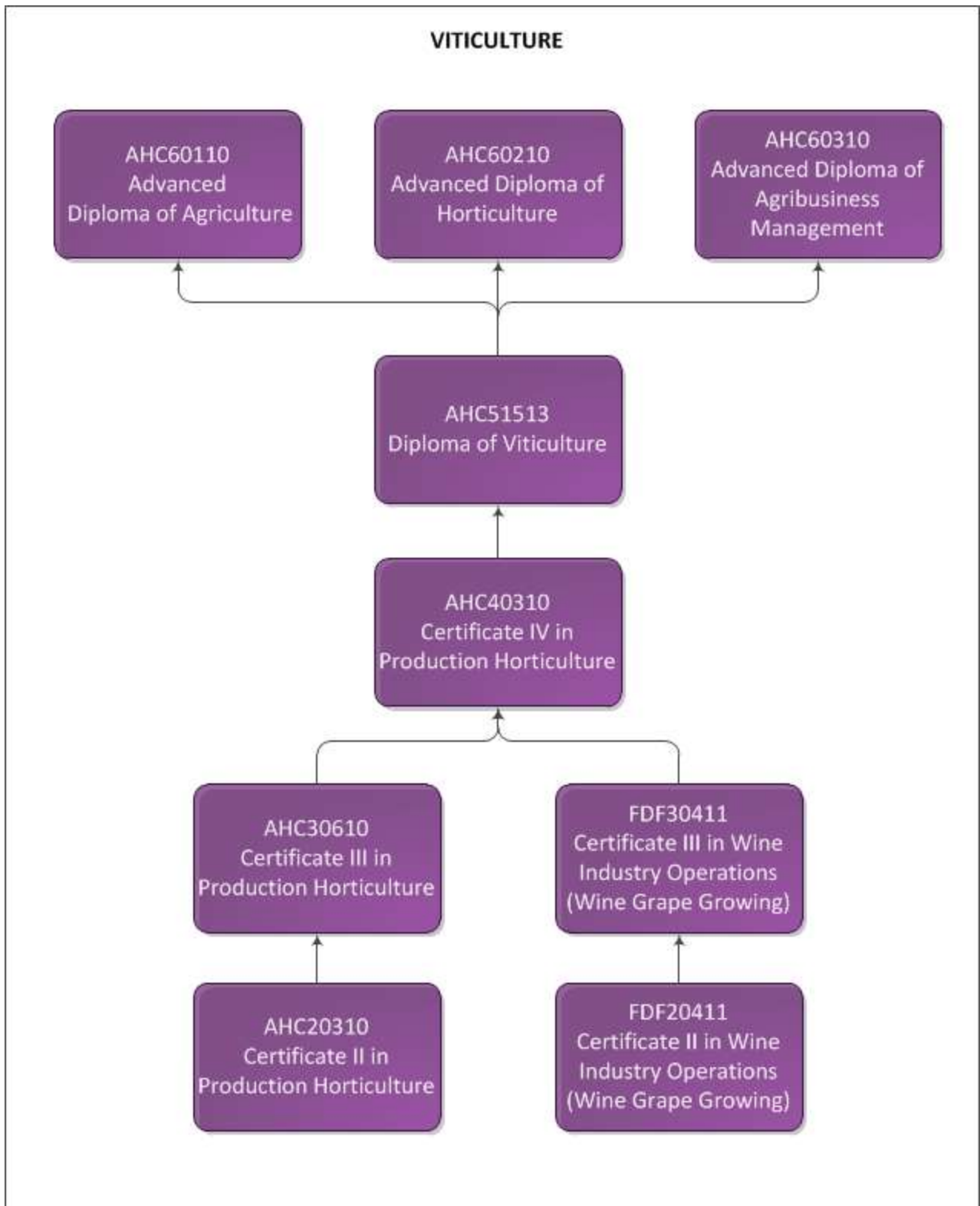












## Skill Sets in this Training Package

### Skill Sets

## Definition

Skill sets are defined as single units of competency, or combinations of units of competency from an endorsed Training Package, which link to a licence or regulatory requirement, or defined industry need.

## Wording on Statements of Attainment

Skill sets are a way of publicly identifying logical groupings of units of competency which meet an identified need or industry outcome. Skill sets are not qualifications.

**Where skill sets are identified in a Training Package, the Statement of Attainment can set out the competencies a person has achieved in a way that is consistent and clear for employers and others. This is done by including the wording "these competencies meet [insert skill set title or identified industry area] need" on the Statement of Attainment. This wording applies only to skill sets that are formally identified as such in the endorsed Training Package.** See the 2010 edition of the AQF Implementation Handbook for advice on wording on Statements of Attainment.

[http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF\\_Handbook\\_07.pdf](http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF_Handbook_07.pdf)

## Skill Sets in this Training Package

There are fourteen Skill Sets within the AHC10 Agriculture, Horticulture and Conservation and Land Management Training Package. These are:

- AHCSS00001 Advanced Chemical Spray Application Skill Set
- AHCSS00002 Agricultural Chemical Skill Set
- AHCSS00003 Cotton Industry Skill Set
- AHCSS00004 Gravity Fed Irrigation Operator Skill Set
- AHCSS00005 Irrigation Agronomist Skill Set
- AHCSS00006 Irrigation Contractor Skill Set
- AHCSS00007 Irrigation Installer Skill Set
- AHCSS00008 Irrigation Manager Skill Set
- AHCSS00009 Irrigation Retailer Skill Set
- AHCSS00010 Pork Industry Stock Person Skill Set
- AHCSS00011 Pressurised Irrigation System Operator Skill Set
- AHCSS00012 Recognise Aboriginal Cultural Sites Skill Set
- AHCSS00013 Report on Aboriginal Cultural Sites Skill Set
- AHCSS00014 Seed Crop Field Inspector Skill Set
- AHCSS00015 Carbon Farming Initiative Advisor Skill Set
- AHCSS00016 Carbon Farming Business Advisor Skill Set
- AHCSS00017 Carbon Farming Livestock Project Implementer Skill Set
- AHCSS00018 Carbon Farming Initiative Waste and Manure Management Project Implementer Skill Set
- AHCSS00019 Carbon Farming Initiative Soil or Biochar Project Implementer Skill Set
- AHCSS00020 Carbon Farming Initiative Savannah Burning, Feral Animal, Rangelands

**Skill Sets in this Training Package**

- Project Implementer Skill Set
- AHCSS00021 Carbon Farming Initiative Vegetation Project Implementer Skill Set
- AHCSS00022 Carbon Farming Initiative Emissions Avoidance from Soil and Crops Project Implementer Skill Set
- AHCSS00023 Basic Introduction to Beekeeping Skill Set

## Assessment Guidelines

### Introduction

These Assessment Guidelines provide the endorsed framework for assessment of units of competency in this Training Package. They are designed to ensure that assessment is consistent with the *Australian Quality Training Framework (AQTF) Essential Standards for Initial and Continuing Registration*. Assessments against the units of competency in this Training Package must be carried out in accordance with these Assessment Guidelines.

### Assessment System Overview

This section provides an overview of the requirements for assessment when using this Training Package, including a summary of the AQTF requirements; licensing/registration requirements; and assessment pathways.

Quality assessment underpins the credibility of the vocational education and training sector. The Assessment Guidelines of a Training Package are an important tool in supporting quality assessment.

Assessment within the National Skills Framework is the process of collecting evidence and making judgements about whether competency has been achieved to confirm whether an individual can perform to the standards expected in the workplace, as expressed in the relevant endorsed unit of competency.

Assessment must be carried out in accordance with the:

- benchmarks for assessment
- specific industry requirements
- principles of assessment
- rules of evidence
- assessment requirements set out in the AQTF

### Benchmarks for Assessment

The endorsed units of competency in this Training Package are the benchmarks for assessment. As such, they provide the basis for nationally recognised Australian Qualifications Framework (AQF) qualifications and Statements of Attainment issued by Registered Training Organisations (RTOs).

### Principles of Assessment

All assessments carried out by RTOs are required to demonstrate compliance with the principles of assessment:

validity

reliability

flexibility

fairness

sufficiency

These principles must be addressed in the:

design, establishment and management of the assessment system for this Training

Package development of assessment tools, and the conduct of assessment.

Assessment is valid when the process is sound and assesses what it claims to assess. Validity requires that:

(a)	assessment against the units of competency must cover the broad range of skills and knowledge that are essential to competent performance
(b)	assessment of knowledge and skills must be integrated with their practical application
(c)	judgement of competence must be based on sufficient evidence (that is, evidence gathered on a number of occasions and in a range of contexts using different assessment methods). The specific evidence requirements of each unit of competency provide advice on sufficiency

### *Reliability*

Reliability refers to the degree to which evidence presented for assessment is consistently interpreted and results in consistent assessment outcomes. Reliability requires the assessor to have the required competencies in assessment and relevant vocational competencies (or to assess in conjunction with someone who has the vocational competencies). It can only be achieved when assessors share a common interpretation of the assessment requirements of the unit(s) being assessed.

### *Flexibility*

To be flexible, assessment should reflect the candidate's needs; provide for recognition of competencies no matter how, where or when they have been acquired; draw on a range of methods appropriate to the context, competency and the candidate; and support continuous competency development.

### *Fairness*

Fairness in assessment requires consideration of the individual candidate's needs and characteristics, and any reasonable adjustments that need to be applied to take account of them. It requires clear communication between the assessor and the candidate to ensure that the candidate is fully informed about, understands and is able to participate in, the assessment process, and agrees that the process is appropriate. It also includes an

opportunity for the person being assessed to challenge the result of the assessment and to be reassessed if necessary.

### *Sufficiency*

Sufficiency relates to the quality and quantity of evidence assessed. It requires collection of enough appropriate evidence to ensure that all aspects of competency have been satisfied and that competency can be demonstrated repeatedly. Supplementary sources of evidence may be necessary. The specific evidence requirements of each unit of competency provide advice on sufficiency. Sufficiency is also one of the rules of evidence.

### **Rules of Evidence**

The rules of evidence guide the collection of evidence that address the principles of validity and reliability, guiding the collection of evidence to ensure that it is valid, sufficient, current and authentic.

Valid evidence must relate directly to the requirements of the unit of competency. In ensuring evidence is valid, assessors must ensure that the evidence collected supports demonstration of the outcomes and performance requirements of the unit of competency together with the knowledge and skills necessary for competent performance. Valid evidence must encapsulate the breadth and depth of the unit of competency, which will necessitate using a number of different assessment methods.

### *Sufficient*

Sufficiency relates to the quality and quantity of evidence assessed. It requires collection of enough appropriate evidence to ensure that all aspects of competency have been satisfied and that competency can be demonstrated repeatedly. Supplementary sources of evidence may be necessary. The specific evidence requirements of each unit of competency provide advice on sufficiency.

### *Current*

In assessment, currency relates to the age of the evidence presented by a candidate to demonstrate that they are still competent. Competency requires demonstration of current performance, so the evidence collected must be from either the present or the very recent past.

### *Authentic*

To accept evidence as authentic, an assessor must be assured that the evidence presented for assessment is the candidate's own work.

## **Assessment Requirements of the Australian Quality Training Framework**

Assessment leading to nationally recognised AQF qualifications and Statements of Attainment in the vocational education and training sector must meet the requirements of the AQTF as expressed in the AQTF 2010 *Essential Standards for Registration*.

The AQTF 2010 *Essential Standards for Initial and Continuing Registration* can be downloaded from < [www.training.com.au](http://www.training.com.au) >.

The following points summarise the assessment requirements.

### **Registration of Training Organisations**

Assessment must be conducted by, or on behalf of, an RTO formally registered by a State or Territory Registering Body in accordance with the AQTF. The RTO must have the specific units of competency and/or AQF qualifications on its scope of registration.

### **Quality Training and Assessment**

Each RTO must provide quality training and assessment across all its operations. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*, Standard 1.

### **Assessor Competency Requirements**

Each person involved in training, assessment or client service must be competent for the functions they perform. AQTF 2010 *Essential Standards for Initial and Continuing Registration*, Standard 1 for assessor (and trainer) competency requirements. See also the AQTF 2010 *Users' Guide to the Essential Standards for Registration* Appendix 2.

### **Assessment Requirements**

The RTOs assessments, including RPL, must meet the requirements of the relevant endorsed Training Package. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Each RTO must have strategies for training and assessment that meet the requirements of the relevant Training Package or accredited course and are developed in consultation with industry stakeholders. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

### **National Recognition**

Each RTO must recognise the AQF qualifications and Statements of Attainment issued by any other RTO. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

### **Access and Equity and Client Outcomes**

Each RTO must adhere to the principles of access and equity and maximise outcomes for its clients. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

### **Monitoring Assessments**

Training and/or assessment provided on behalf of the RTO must be monitored to ensure that it is in accordance with all aspects of the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

### **Recording Assessment Outcomes**

Each RTO must manage records to ensure their accuracy and integrity. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

### **Issuing AQF Qualifications and Statements of Attainment**

Each RTO must issue AQF qualifications and Statements of Attainment that meet the requirements of the current AQF Implementation Handbook and the endorsed Training Packages within the scope of its registration. An AQF qualification is issued once the full requirements for a qualification, as specified in the nationally endorsed Training Package are met. A Statement of Attainment is issued when an individual has completed one or more units of competency from nationally recognised qualification(s)/course(s). See the AQTF and the edition of the AQF Implementation Handbook-available on the AQF Council website < [www.aqf.edu.au](http://www.aqf.edu.au)>.

This section provides information on licensing/registration requirements for this Training Package, with the following important disclaimer.

Licensing and registration requirements that apply to specific industries, and VET, vary between each State and Territory and can regularly change. The developers of this Training Package and DEEWR consider that the licensing/registration requirements described in this section apply to RTOs, assessors or candidates with respect to this Training Package. While reasonable care has been taken in its preparation, the developers of this Training Package and DEEWR cannot guarantee that the list is definitive or accurate at the time of reading; the information in this section is provided in good faith on that basis.

Contact the relevant State or Territory department(s) to check if the licensing/registration requirements still apply, and to check if there are any others with which you must comply. For further information contact AgriFood Skills Australia at [www.agrifoodskills.net.au](http://www.agrifoodskills.net.au) .

### **Requirements for Assessors**

Assessors will be required to meet the AQTF requirements. This includes meeting the required licensing, registration or regulatory requirements as well as demonstrated technical competency for the AHC units assessed.

RTOs need to take into account a range of considerations when designing assessment strategies. In particular, the majority of units have been written with a focus on a workplace assessment environment. Where this is obligatory it is identified in the unit of competency.

Wherever possible, integrated (holistic) assessment is the preferred means of assessment. Holistic assessment should reflect the grouping of competencies as they would be demonstrated in an actual work role. The context of assessment is defined in each unit of competency.

#### **Design of assessment**

The design of assessment needs to ensure that all aspects of competency are covered:

- task skills (performance of individual tasks)
- job/role environment skills (deals with the responsibilities and expectations of the workplace)
- relevant underpinning knowledge

and where qualification levels require:

- task management skills (managing a number of different tasks within the job)
- contingency management skills (responding to problems, breakdowns and changes in routine).

### Evidence gathering methods

Evidence gathering methods must be gender and culturally-inclusive and take into account the language, literacy and numeracy skills of both candidate and assessor. Assessors may consider :

- incorporating a range of assessment techniques
- integrating the assessment of units related to the performance of 'whole of work' tasks, roles or functions
- using a holistic approach which combines knowledge, understanding,
- problem-solving, technical skills and applications to new situations into the assessment process
- assessing in the workplace (wherever possible), using familiar skills and materials
- eliminating any unnecessary reading or written assessment (if these skills are not required to do the job, they should not be part of the assessment)
- ensuring understanding of questions by rephrasing to clarify and using the language and terms of the job and the workplace
- encouraging the candidate to ask questions to clarify instructions
- providing clarification of purpose and process of assessment
- considering cultural and gender issues when setting up the assessment.

### Workplace assessment considerations

Where assessment is occurring in the workplace, assessors should consult on the assessment process with the parties involved. Candidates should be briefed on the process of making judgements against the standards and made to feel as relaxed as possible.

The assessment should take place over a reasonable length of time so that the candidate has the opportunity to demonstrate work responsibility and contingency management. Third party reports of workplace performance, if available, are helpful for this.

Consider the other staff in the workplace likely to be affected by the process. All staff directly or indirectly involved in the process should be briefed on the factors which will impact on

Ensure that assessment is as compatible as possible with the normal pattern of work and causes minimal disruption. Assessment resources for this Training Package should provide ways in which to address these matters.

### Assessment in a simulated environment

Where assessment is occurring out of the workplace, it is important to ensure that:

- the assessment takes place in a situation as close as possible to workplace reality
- all aspects of competency are assessed
- the assessment takes place over a reasonable length of time so that the candidate has the opportunity to demonstrate work responsibility and contingency management (third party reports of workplace performance, if available, are helpful for this)
- equipment, resources and documents used in assessment closely reflect workplace reality.



It is critical that the designer of the simulation is thoroughly familiar with the application of the competency and is experienced in current and relevant workplace practices. The simulation or assessment environment must provide opportunities to:

- demonstrate use of required equipment and other resources
- show the complexity of dealing with multiple tasks
- reflect time pressures and deadlines
- involve prioritising among competing tasks
- deal with customers/clients, including difficult ones
- work with others in a team
- communicate with diverse groups
- find, discuss and test solutions to problems
- explore animal health, welfare and ethical issues
- explore health and safety issues
- answer practically-oriented, applied knowledge questions
- show the level of verbal and written expression sufficient for, but not exceeding, the work requirements.

Training and assessment in remote and regional areas

Training and assessing candidates in remote and regional areas present a range of challenges. These include:

- lack of numbers preventing the establishment of traditional class sizes
- physical remoteness of some communities, where access to training facilities is limited
- scarcity of trainers with the required industry experience
- scarcity of physical training resources (e.g. current and emerging technology).
- Some options for overcoming these challenges include:
  - partnerships between RTOs to establish classes, i.e. programs delivered on a regional rather than local basis
  - delivering certain units by distance mode
  - partnerships between industry and RTOs to share resources and personnel
  - partnerships between schools and RTOs
  - recruiting suitably qualified workplace supervisors to oversee instruction and assessment on the job
  - travelling to remote workplaces to provide instruction and assessment
  - use of technology (e.g. email, video demonstration, CDs and internet) and self-paced resources
  - use of block release delivery methodology.

Implementation of AHC10 Agriculture, Horticulture and Conservation and Land Management Training Package within the school sector needs to ensure the following:

- currency of skills and knowledge of those charges with training and assessing students
- access to industry-current equipment, facilities and training resources so that students acquire a realistic view of the realities and conditions within the workplace
- comprehensive coverage of underpinning skills and knowledge as delineated within the competency standards
- appropriateness of learning and assessment experiences to ensure that these are current and realistic.

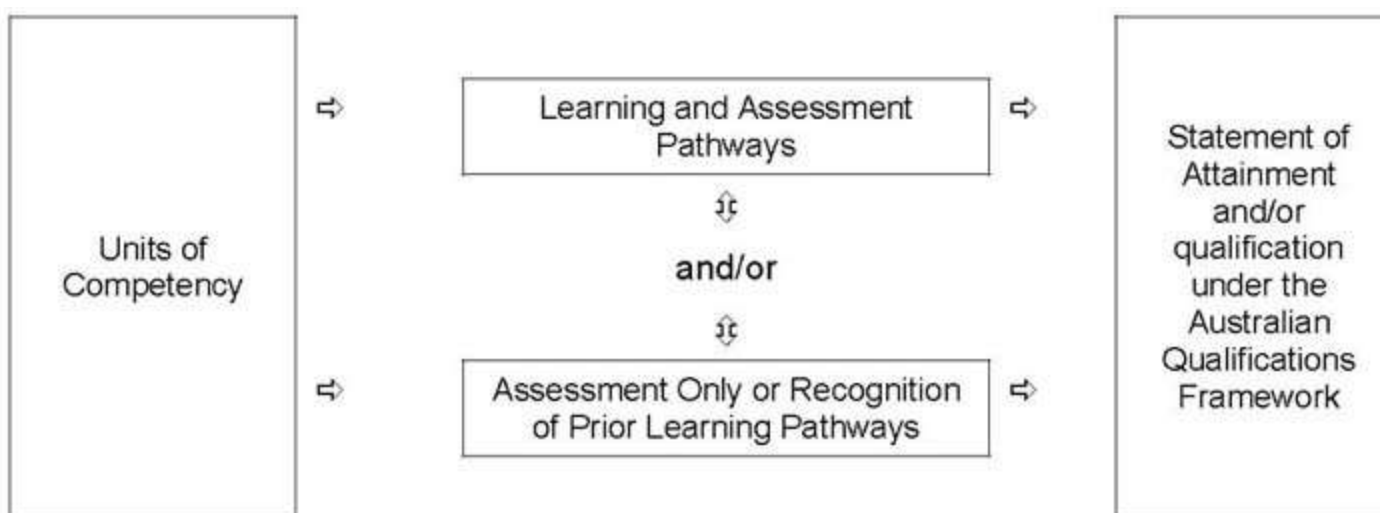
It is recommended that delivery of qualifications in schools should only include Certificates I and II.

### Pathways

The competencies in this Training Package may be attained in a number of ways including through:

- formal or informal education and training
- experiences in the workplace
- general life experience, and/or
- any combination of the above.

Assessment under this Training Package leading to an AQF qualification or Statement of Attainment may follow a learning and assessment pathway, an assessment-only or recognition pathway, or a combination of the two as illustrated in the following diagram.



Each of these assessment pathways leads to full recognition of competencies held - the critical issue is that the candidate is competent, not how the competency was acquired.

Assessment, by any pathway, must comply with the assessment requirements set out in the Assessment Guidelines of the Training Package, and the AQTF, 2 where relevant, the Australian Qualifications Framework.

## Learning and Assessment Pathways

Usually, learning and assessment are integrated, with assessment evidence being collected and feedback provided to the candidate at anytime throughout the learning and assessment process.

Learning and assessment pathways may include structured programs in a variety of contexts using a range of strategies to meet different learner needs. Structured learning and assessment programs could be: group-based, work-based, project-based, self-paced, action learning-based; conducted by distance or e-learning; and/or involve practice and experience in the workplace.

Learning and assessment pathways to suit Australian Apprenticeships have a mix of formal structured training and structured workplace experience with formative assessment activities through which candidates can acquire and demonstrate skills and knowledge from the relevant units of competency.

## Credit Pathways

*Credit* is the value assigned for the recognition of equivalence in content between different types of learning and/or qualifications which reduces the volume of learning required to achieve a qualification.

Credit arrangements must be offered by all RTOs that offer Training Package qualifications. Each RTO must have a systematic institutional approach with clear, accessible and transparent policies and procedures.

Competencies already held by individuals can be formally assessed against the units of competency in this Training Package, and should be recognised regardless of how, when or where they were acquired, provided that the learning is relevant to the unit of competency outcomes.

## Recognition of Prior Learning

Recognition of Prior Learning (RPL) is an assessment process which determines the credit outcomes of an individual application for credit.

The availability of Recognition of Prior Learning (RPL) provides all potential learners with access to credit opportunities.

The recognition of prior learning pathway is appropriate for candidates who have previously attained skills and knowledge and who, when enrolling in qualifications, seek to shorten the duration of their training and either continue or commence working. This may include the following groups of people:

existing workers; individuals with overseas qualifications; recent migrants with established work histories; people returning to the workplace; and people with disabilities or injuries requiring a change in career.

As with all assessment, RPL assessment should be undertaken by academic or teaching staff with expertise in the subject, content of skills area, as well as knowledge of and expertise in RPL assessment policies and procedures.

Assessment methods used for RPL should provide a range of ways for individuals to demonstrate that they have met the required outcomes and can be granted credit. These might include:

questioning (oral or written) consideration of a portfolio and review of contents consideration of third party reports and/or other documentation such as documentation such as articles, reports, project material, papers, testimonials or other products prepared by the RPL applicant that relate to the learning outcomes of the relevant qualification component mapping of learning outcomes from prior formal or non-formal learning to the relevant qualification components

observation of performance, and

participation in structured assessment activities the individual would normally be required to undertake if they were enrolled in the qualification component/s.

In a Recognition of Prior Learning (RPL) pathway, the candidate provides current, quality evidence of their competency against the relevant unit of competency. This process may be directed by the candidate and verified by the assessor. Where the outcomes of this process indicate that the candidate is competent, structured training is not required. The RPL requirements of the AQTF must be met.

As with all assessment, the assessor must be confident that the evidence indicates that the candidate is currently competent against the endorsed unit of competency. This evidence may take a variety of forms and might include certification, references from past employers, testimonials from clients, work samples and/or observation of the candidate. The onus is on candidates to provide sufficient evidence to satisfy assessors that they currently hold the relevant competencies. In judging evidence, the assessor must ensure that the evidence of prior learning is:

authentic (the candidate's own work);

valid (directly related to the current version of the relevant endorsed unit of competency);

reliable (shows that the candidate consistently meets the endorsed unit of competency);

current (reflects the candidate's current capacity to perform the aspect of the work covered by the endorsed unit of competency); and

sufficient (covers the full range of elements in the relevant unit of competency and addresses the four dimensions of competency, namely task skills, task management skills, contingency management skills, and job/role environment skills).

### **Credit Transfer**

*Credit transfer is a process which provides learners with agreed and consistent credit outcomes based on equivalences in content between matched qualifications.*

This process involves education institutions:

mapping, comparing and evaluating the extent to which the defined learning outcomes and assessment requirements of the individual components of one qualification are equivalent to the learning outcomes and assessment requirements of the individual components of another qualification

making an educational judgment of the credit outcomes to be assigned between the matched components of the two qualifications

setting out the agreed credit outcomes in a documented arrangement or agreement, and publicising the arrangement/agreement and credit available.

## Combination of Pathways

Credit may be awarded on the basis of a combination of credit transfer plus an individual RPL assessment for additional learning. Once credit has been awarded on the basis of RPL, subsequent credit transfer based on these learning outcomes should not include revisiting the RPL assessment but should be based on credit transfer or articulation or other arrangements between providers.

Where candidates for assessment have gained competencies through work and life experience and gaps in their competence are identified, or where they require training in new areas, a combination of pathways may be appropriate.

In such situations, the candidate may undertake an initial assessment to determine their current competency. Once current competency is identified, a structured learning and assessment program ensures that the candidate acquires the required additional competencies identified as gaps.

## Assessor Requirements

This section identifies the specific requirements on the vocational competence and experience for assessors, to ensure that they meet the needs of industry and their obligations under AQTF, and clarifies how others may contribute to the assessment process where one person alone does not hold all the required competencies.

## Assessor Competencies

The AQTF specifies mandatory competency requirements for assessors. For information, Element 1.4 from the AQTF 2007 *Essential Standards for Registration* follows:

1.4	Training and assessment is delivered by trainers and assessors who:
a)	have the necessary training and assessment competencies as determined by the National Quality Council or its successors, and
b)	have the relevant vocational competencies at least to the level being delivered or assessed, and
c)	can demonstrate current industry skills directly relevant to the training/assessment being undertaken, and
d)	continue developing their Vocational Education and Training (VET) knowledge and skills as well as their industry currency and trainer/assessor competence.
	* See AQTF 2010 <i>Users' Guide to the Essential Standards for Registration</i> Appendix 2

## Industry Assessment Contextualisation 1

The competencies in this Training Package may be attained in a number of ways including through :

- formal or informal education and training
- experiences in the workplace
- general life experience, and/or
- any combination of the above.

### Guidelines

Assessment under this Training Package leading to an AQF qualification or Statement of Attainment may follow a learning and assessment pathway, an assessment-only or recognition pathway, or a combination of the two as illustrated in the following diagram.

Each of these assessment pathways leads to full recognition of competencies held - the critical issue is that the candidate is competent, not how the competency was acquired. Assessment, by any pathway, must comply with the assessment requirements set out in the Assessment Guidelines of the Training Package and the AQTF 2007.

### Learning and Assessment Pathways

Usually, learning and assessment are integrated, with assessment evidence being collected and feedback provided to the candidate at anytime throughout the learning and assessment process.

Learning and assessment pathways may include structured programs in a variety of contexts using a range of strategies to meet different learner needs. Structured learning and assessment programs could be: group-based, work-based, project-based, self-paced, action

learning-based; conducted by distance or e-learning; and/or involve practice and experience in the workplace.

Learning and assessment pathways to suit Australian Apprenticeships have a mix of formal structured training and structured workplace experience with formative assessment activities through which candidates can acquire and demonstrate skills and knowledge from the relevant units of competency.

### Assessment-Only or Recognition of Prior Learning Pathway

Competencies already held by individuals can be formally assessed against the units of competency in this Training Package, and should be recognised regardless of how, when or where they were achieved.

In an assessment-only or Recognition of Prior Learning (RPL) pathway, the candidate provides current, quality evidence of their competency against the relevant unit of competency. This process may be directed by the candidate and verified by the assessor, such as in the compilation of portfolios; or directed by the assessor, such as through observation of workplace performance and skills application, and oral and/or written assessment. Where the outcomes of this process indicate that the candidate is competent, structured training is not required. The RPL requirements of the AQTF 2007 must be met (Standard 1).

As with all assessment, the assessor must be confident that the evidence indicates that the candidate is currently competent against the endorsed unit of competency. This evidence may take a variety of forms and might include certification, references from past employers, testimonials from clients, and work samples. The onus is on candidates to provide sufficient evidence to satisfy assessors that they currently hold the relevant competencies. In judging evidence, the assessor must ensure that the evidence of prior learning is:

- authentic (the candidate's own work)
- valid (directly related to the current version of the relevant endorsed unit of competency)
- reliable (shows that the candidate consistently meets the endorsed unit of competency)
- current (reflects the candidate's current capacity to perform the aspect of the work covered by the endorsed unit of competency), and
- sufficient (covers the full range of elements in the relevant unit of competency and addresses the four dimensions of competency, namely task skills, task management skills, contingency management skills, and job/role environment skills).

The assessment only or recognition of prior learning pathway is likely to be most appropriate in the following scenarios:

- candidates enrolling in qualifications who want recognition for prior learning or current competencies
- existing workers
- individuals with overseas qualifications
- recent migrants with established work histories
- people returning to the workplace, and
- people with disabilities or injuries requiring a change in career.

#### Combination of Pathways

Where candidates for assessment have gained competencies through work and life experience and gaps in their competence are identified, or where they require training in new areas, a combination of pathways may be appropriate.

In such situations, the candidate may undertake an initial assessment to determine their current competency. Once current competency is identified, a structured learning and assessment program ensures that the candidate acquires the required additional competencies identified as gaps.

#### Assessor Requirements

This section identifies the mandatory competencies for assessors, and clarifies how others may contribute to the assessment process where one person alone does not hold all the required competencies.

#### Assessor Competencies

The AQTF 2007 specifies mandatory competency requirements for assessors. For information, Standard 1, Element 1.4 from the AQTF 2007 Essential Standards for Registration follows:

1.4	a)	Training and assessment is delivered by trainers and assessors who:
	a)	have the necessary training and assessment competencies as determined by the National Quality Council or its successors
	b)	have the relevant vocational competencies at least to the level being delivered or

	assessed
c)	continue developing their vocational and training and assessment competencies to support continuous improvements in the delivery of the RTOs services.

### Designing Assessment Tools

This section provides an overview on the use and development of assessment tools. Use of Assessment Tools

Assessment tools provide a means of collecting the evidence that assessors use in making judgments about whether candidates have achieved competency.

There is no set format or process for the design, production or development of assessment tools. Assessors may use prepared assessment tools, such as those specifically developed to support this Training Package, or they may develop their own.

### Using Prepared Assessment Tools

If using prepared assessment tools, assessors should ensure these are benchmarked, or mapped, against the current version of the relevant unit of competency. This can be done by checking that the materials are listed on the National Training Information Service [www.ntis.gov.au](http://www.ntis.gov.au). Materials on the list have been noted by the National Quality Council as meeting their quality criteria for Training Package support materials.

### Developing Assessment Tools

When developing assessment tools, assessors must ensure that they:

- are benchmarked against the relevant unit or units of competency
- are reviewed as part of the continuous improvement of assessment strategies as required under Standard 1 of the AQTF 2007
- meet the assessment requirements expressed in Standard 1 of the AQTF 2007. A key reference for assessors developing assessment tools is TAA04 Training and Assessment Training Package and the unit of competency TAAASS403A Develop assessment tools. There is no set format or process for the design, production or development of assessment materials.

### Conducting Assessment

This section details the mandatory assessment requirements and provides information on equity in assessment including reasonable adjustment.

### Assessment Requirements

Assessments must meet the criteria set out in the AQTF 2007 Essential Standards for Registration.

For information, the mandatory assessment requirements from Standard 1 from the AQTF 2007 Essential Standards for Registration are as follows:

1.5	Assessment, including Recognition of Prior Learning:
a)	meets the requirements of the relevant Training Package or accredited course,



	b)	is conducted in accordance with the principles of assessment and the rules of evidence, and
	c)	meets workplace and, where relevant, regulatory requirements.

### Designing Assessment Tools

This section provides an overview on the use and development of assessment tools.

#### Use of Assessment Tools

Assessment tools provide a means of collecting the evidence that assessors use in making judgments about whether candidates have achieved competency.

There is no set format or process for the design, production or development of assessment tools. Assessors may use prepared assessment tools, such as those specifically developed to support this Training Package, or they may develop their own.

#### Using Prepared Assessment Tools

If using prepared assessment tools, assessors should ensure these relate to the current version of the relevant unit of competency. The current unit of competency can be checked on the National Register < [www.ntis.gov.au](http://www.ntis.gov.au) >.

#### Developing Assessment Tools

When developing assessment tools, assessors must ensure that they:

- are benchmarked against the relevant unit or units of competency
- are reviewed as part of the continuous improvement of assessment strategies as required under Standard 1 of the AQTF 2007
- meet the assessment requirements expressed in Standard 1 of the AQTF 2010

*Essential Standards for Initial and Continuing Registration.*

A key reference for assessors developing assessment tools is TAE10 Training and Education Training Package.

#### Language, Literacy and Numeracy

The design of assessment tools must reflect the language, literacy and numeracy competencies required for the performance of a task in the workplace and not exceed these expectations.

#### Conducting Assessment

This section details the mandatory assessment requirements and provides information on equity in assessment including reasonable adjustment.

#### Mandatory Assessment Requirements

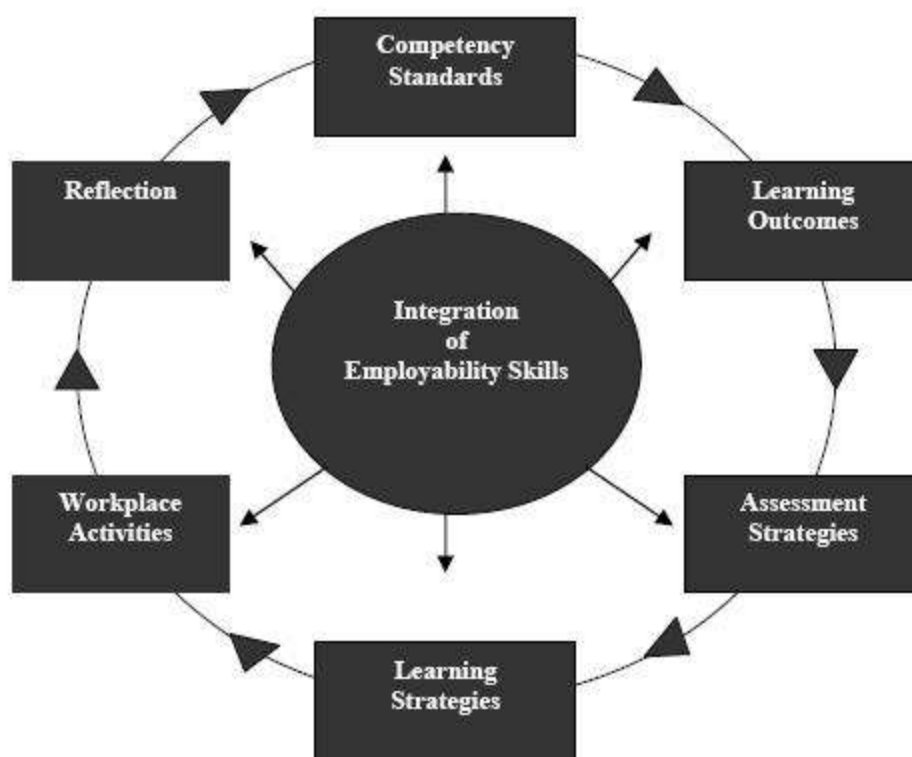
Assessments must meet the criteria set out in the 2010 *Essential Standards for Initial and Continuing Registration*. For information, the mandatory assessment requirements from Standard 1 from the AQTF 2010 *Essential Standards for Initial and Continuing Registration* are as follows:

1.5	Assessment, including Recognition of Prior Learning:
-----	--

	a)	meets the requirements of the relevant Training Package or accredited course,
	b)	is conducted in accordance with the principles of assessment and the rules of evidence, and
	c)	meets workplace and, where relevant, regulatory requirements.
	d)	is systematically validated.

**Assessment of Employability Skills**

Employability Skills are integral to workplace competency. As such they must be considered in the design, customisation, delivery and assessment of vocational education and training programs in an integrated and holistic way, as represented diagrammatically below.



Employability Skills are embedded and explicit within each unit of competency, and an Employability Skills Summary is available for each qualification. Training providers must use Employability Skills information in order to design valid and reliable training and assessment strategies. This analysis could include:

- reviewing units of competency to locate relevant Employability Skills and determine how they are applied within the unit
- analysing the Employability Skills Summary for the qualification in which the unit or units are packaged to help clarify relevant industry and workplace contexts and the application of Employability Skills at that qualification outcome
- designing training and assessment to address Employability Skills requirements.

## **Employability Skills in the Agriculture, Horticulture and Conservation and Land Management context**

Employability Skills are integral to workplace competency. As such they must be considered in the design, customisation, delivery and assessment of vocational education and training programs in an integrated and holistic way, as represented diagrammatically below.

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- analysing the Employability Skills Summary for the qualification in which the unit or units are packaged to help clarify relevant industry and workplace contexts and the application of Employability Skills at that qualification outcome
- designing training and assessment to address Employability Skills requirements.

For more information on Employability Skills in AgriFood Skills Australia Training Packages go to the AgriFood Skills Australia website at <http://www.agrifoodskills.net.au> .

The National Quality Council has endorsed a model for assessing and reporting Employability Skills, which contains further suggestions about good practice strategies in teaching, assessing, learning and reporting Employability Skills. The model is available from <<http://www.training.com.au/>>.

The endorsed approach includes learners downloading qualification specific Employability Skills Summaries for Training Package qualifications from an online repository at <<http://employabilityskills.training.com.au>>

For more information on Employability Skills in AgriFood Skills Australia Training Packages go to the AgriFood Skills Australia website at <http://www.agrifoodskills.net.au>.

Employability Skills are reported on each qualification using the following statement on the qualification testamur: "A summary of the Employability Skills developed through this qualification can be downloaded from <http://employabilityskills.training.com.au> "

### **Access and Equity**

An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this Training Package: training and assessment must be bias-free.

Under the rules for their development, Training Packages must reflect and cater for the increasing diversity of Australia's VET clients and Australia's current and future workforce.

The flexibilities offered by Training Packages should enhance opportunities and potential outcomes for all people so that we can all benefit from a wider national skills base and a shared contribution to Australia's economic development and social and cultural life.

### **Reasonable adjustments**

It is important that education providers take meaningful, transparent and reasonable steps to consult, consider and implement reasonable adjustments for students with disability.

Under the *Disability Standards for Education 2005*, education providers must make reasonable adjustments for people with disability to the maximum extent that those adjustments do not cause that provider unjustifiable hardship. While "reasonable adjustment" and "unjustifiable hardship" are different concepts and involve different considerations, they both seek to strike a balance between the interests of education providers and the interests of students with and without disability.

An adjustment is any measure or action that a student requires because of their disability, and which has the effect of assisting the student to access and participate in education and training on the same basis as students without a disability. An adjustment is reasonable if it achieves this purpose while taking into account factors such as the nature of the student's disability, the views of the student, the potential effect of the adjustment on the student and others who might be affected, and the costs and benefits of making the adjustment.

An education provider is also entitled to maintain the academic integrity of a course or program and to consider the requirements or components that are inherent or essential to its nature when assessing whether an adjustment is reasonable. There may be more than one adjustment that is reasonable in a given set of circumstances; education providers are required to make adjustments that are reasonable and that do not cause them unjustifiable hardship.

The Training Package Guidelines provides more information on reasonable adjustment, including examples of adjustments. Go to <http://www.deewr.gov.au/tpdh/Pages/home.aspx>.

## **Industry Assessment Contextualisation 2**

### **Access and Equity**

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See Part 4, Chapter 2 of the *Training Package Development Handbook* (DEST, September 2007) for more information on reasonable adjustment, including examples of adjustments.  
Assessment for equity groups

It is important that assessment processes take into account a diversity of individual needs and learning styles related to disability, race, socio-economic status, gender, language, ethnicity, geographical isolation, sexuality, work commitments and family responsibilities.

Some inclusive assessment practices which will enhance the learning of all students include:

- know what, in particular, you are assessing, and make this clear to students
- create assessment activities in which students have the opportunity to link their learning to what they already know
- make your expectations clear
- make explicit the way in which competency will be assessed, both in discussion with the class beforehand and prior to any assessment activities
- provide alternative pathways to stated outcomes: allow for flexibility in approach, organisation and assessment. The greater the diversity of methods of assessment, the fairer the process for the greatest number of students
- make accommodations based on individual circumstance and need. Remember that students may need the opportunity to experiment to find the adaptation or accommodation which best meets their learning needs
- include self-assessment as a component of the course. Self-assessment involves discussion with students about the criteria according to which they assess their own performance and the level of performance required for different levels
- discuss assessment alternatives with staff with previous experience teaching students with disabilities. You (and your department) should regularly review any alternative arrangements to ensure that these meet both the student's needs (which may change over time) and stated course outcomes.

#### Assessment for Indigenous learners

There is evidence that Aboriginal and Torres Strait Islander people, both traditional and contemporary, approach learning differently from the Western intellectual tradition, which is relevant to effective training and assessment. It is understood that Aboriginal and Torres Strait Islander people may:

- learn better in groups than individually
- learn better in the surroundings of their community than in an institutional environment
- prefer oral communications to written forms
- learn on the basis of trial and error in the presence of an experienced person in preference to concept building approaches
- have a highly-developed sense of spatial relations by which they learn; hence stories,
- maps and pictures would be preferable to oral explanations.

To be effective, it is necessary that training and assessment recognises, adopts and practises appropriate delivery and assessment approaches.

Trainers and assessors who are not Aboriginal or Torres Strait Islanders need information on aspects of Aboriginal and Torres Strait Islander culture. They need to work closely with Aboriginal and Torres Strait Islander people to adopt practices that reflect Aboriginal and Torres Strait Islander approaches. The community should be asked to identify experts to provide information and to assist with assessment of relevant protocols, for example, where required.

There are a number of ways an RTO can establish and maintain culturally appropriate training and assessment practices, including:

- ensuring a high proportion of Aboriginal and Torres Strait Islander participation in all aspects of planning, development, delivery and evaluation
- establishing and maintaining a collaborative relationship with local Aboriginal and Torres Strait Islander communities
- as a mainstream (non-Indigenous) RTO, establishing auspice relationships with Aboriginal and Torres Strait Islander organisations and individuals, including direct and indirect involvement of persons identified as appropriate by the local community
- ensuring ongoing training of non-Aboriginal and Torres Strait Islander staff at all levels of the RTO, delivered by Aboriginal and Torres Strait Islander personnel.

A flexible approach to assessment will be required by RTOs in order to meet the requirements of Aboriginal and Torres Strait Islander organisations and individuals under this domain within the AHC10 Agriculture, Horticulture and Conservation and Land Management Training Package. Principles that underpin assessment include:

- assessment should be transparent, i.e. clearly seen and understood by the candidate and others
- assessment should empower the candidate on the basis of consent, self-assessment and responsibility for the process
- assessment should involve designated community experts working in collaboration with RTO assessors in order to provide appropriate recognition of cultural and community skills and knowledge
- assessments must provide constructive feedback to candidates and support for further competency development.

Assessors may exercise limited discretion in response to organisational or individual requirements, but any changes must not alter the meaning or integrity of the unit of competency. Refer to the section on Competency Standards for more information.

#### Assessment for people with a disability

A disability presents some impairment to everyday activity. Some people with a disability do not have any impairments resulting from their disability. For example, a person who has a hearing impairment which is compensated for by a hearing aid may function without any adjustments. While some people with a disability may have an impairment because of the environment, not the disability itself. For example, hearing loss can be accentuated in a room with loud, competing noise and poor acoustics.

A disability may affect or relate to a range of human functions, including mobility, stamina, lifting ability, memory, vision, hearing, speech, comprehension and mood swings. This may be due to accidents, illnesses or birth.

It is important to remember that it is not the disability itself that should be of interest but its impact on the student's ability to access material and demonstrate knowledge.

Training providers have a legal obligation under the Disability Standards for Education to ensure that students who have a disability are able to access and participate in education without experiencing discrimination. The information provided below is aimed at assisting teachers/trainers to meet the reasonable adjustment needs of people who have a disability.

#### Adjustments in training and assessment

An open mind, common sense and tailoring to individual circumstances will, as often as not, ensure individuals achieve the standards that employers and training providers expect. Reasonable adjustments need only be that - reasonable. It is about identifying what adjustments might reasonably be made and how they may be put into place. Training and assessment can be made more appropriate and fairer for a person who has a disability through attitude, preparation and application.

#### Attitude

The attitude of others is often the greatest barrier for people who have a disability. While most people who have a disability will only ever require minor adjustments to ensure learning is positive, some will require additional support. There are many support agencies that can provide advice, however teachers/trainers may need to take additional time to ensure their teaching/training meets the learning support needs of the individual concerned.

Positive language creates an atmosphere of mutual respect, which is essential to learning. For example, using language that identifies learners as people rather than language that identifies them by one of their characteristics conveys that the person is more important than the characteristic, such as the difference between a 'person who has an intellectual disability' and an 'intellectually disabled person'. A person who has an intellectual disability could also be identified by a range of equally important characteristics - height, age, sporting interests, etc. However, the term 'intellectually disabled person' refers to the disability as the major, and often only, defining characteristic.

#### Preparation

It is important to identify any functional issues arising from the nature and extent of a person's disability. This can usually be done by discussing such issues with the individual. In most cases, this consultation will identify reasonable adjustment needs which can be put into place. There are many simple things that teachers/trainers can do to make reasonable adjustments to enable individuals who have a disability to succeed in training and assessment. In some cases, professional support may be required.

**Application**

Once reasonable adjustments have been implemented it is important to monitor and evaluate what has been done to ensure the best environment for continuous learning because:

- adjustments may only need to be temporary - i.e. mechanisms may only need to be in place during an induction period or due to a temporary disability, in which case evaluation will ensure appropriateness without the need for ongoing monitoring
- adjustments may need reinforcing - when adjustments need to be ongoing, monitoring may reinforce patterns of behaviour in order for them to become 'natural'
- adjustments may need improving - where adjustments are ongoing or substantial, a commitment to continuous improvement is recommended through monitoring.

In most cases an informal discussion with the person concerned may be all that is necessary. However, should adjustments be substantial, or a learner not be acquiring competence at a reasonable rate, a more formal process may be required. This may include:

- performance indicators - training providers, learners and employers should have agreed indicators of performance which can be measured and monitored
- independent support - a third party, independent of the training and/or assessment environment, may need to be involved
- experimentation - if existing adjustments are not proving satisfactory, creative solutions may be needed
- continuing review - formal monitoring is encouraged if adjustments are changed or if substantial adjustments are necessary.

For further information on training and assessment for people with specific needs, the DEEWR website has information about the National Disability Coordination Officer Program, which 'provides information, co-ordination and referral services for people with a disability interested in or enrolled in post-school education and training' ( [www.deewr.gov.au](http://www.deewr.gov.au) ). The Disability Education Standards Guidance Notes can also be accessed at on the DEEWR web site at: [www.deewr.gov.au/Schooling/DisabilityStandardsforEducation/Documents/Disability\\_Standards\\_Education\\_Guidance\\_Notes\\_pdf](http://www.deewr.gov.au/Schooling/DisabilityStandardsforEducation/Documents/Disability_Standards_Education_Guidance_Notes_pdf) .

**Reasonable adjustment**

Below are some of the practical things that can be done as part of providing reasonable adjustment to learners with specific support needs to enable them to undertake training and assessment. Clearly, each case will be different and will need to be discussed with the person and in some cases expert help will be needed, at least in the initial stages.

Type of disability	Reasonable adjustment
--------------------	-----------------------



Acquired brain injury	<ul style="list-style-type: none"> <li>• Memory aids (posters, notes, etc.)</li> <li>• Reflective listening skills</li> <li>• Stress minimisation</li> <li>• Time and patience.</li> </ul>
Hearing impairment	<ul style="list-style-type: none"> <li>• Audio loops for people using hearing aids</li> <li>• Plain English documents</li> <li>• Fire and alarm systems with flashing lights</li> <li>• Sign language interpreters</li> <li>• Telephone typewriters.</li> </ul>
Intellectual disability	<ul style="list-style-type: none"> <li>• Additional time</li> <li>• Assessment which is appropriate to the skill (i.e. avoiding written assessment for practical tasks)</li> <li>• Mentors</li> <li>• Plain English documents</li> <li>• Practical learning sessions</li> <li>• Repetition of learning exercises.</li> </ul>
Mobility impairment	<ul style="list-style-type: none"> <li>• Access to aids, such as for holding documents</li> <li>• Adjustable tables</li> <li>• Lifting limits</li> <li>• Note-taking support</li> <li>• Verbal rather than written presentations</li> <li>• Personal computers</li> <li>• Wheelchair access.</li> </ul>
Psychiatric disability	<ul style="list-style-type: none"> <li>• Identification and avoidance of stresses</li> <li>• Ongoing rather than formal assessments</li> <li>• Reflective listening skills</li> </ul>
	<ul style="list-style-type: none"> <li>• 'Time-out' breaks in assessment.</li> </ul>
Speech impairment	<ul style="list-style-type: none"> <li>• Information summaries</li> <li>• Stress minimisation</li> <li>• Time and patience</li> <li>• Written rather than verbal opportunities</li> </ul>

	<ul style="list-style-type: none"> <li>• Additional writing time for assignments and tests.</li> </ul>
Vision impairment	<ul style="list-style-type: none"> <li>• Audiotapes</li> <li>• Braille translations</li> <li>• Enlarged computer screen images</li> <li>• Enlarged text and images</li> <li>• Good lighting or reading lamps</li> <li>• Guide dog provision</li> <li>• Informing the person before moving furniture</li> <li>• Voice synthesisers on computers.</li> </ul>

Training and assessment resources and information for equity groups

The following references provide a range of information and resources related to training and assessment for equity groups.

- The Australian Disability Clearing House on Education and Training [www.adcet.edu.au](http://www.adcet.edu.au) website includes resources and articles about the training and assessment of people with a disability.
- Information source for Aboriginal and/or Torres Strait Islander people training and assessment include: National Aboriginal and Torres Strait Education website: [www.natsiew.nexus.edu.au](http://www.natsiew.nexus.edu.au) . In addition most State and Territory Education Departments have an Aboriginal and/or Torres Strait Islander Unit who may be able to provide advice and information.
- The Working with Diversity web site at [www.westone.gov.au/workingwithdiversity](http://www.westone.gov.au/workingwithdiversity) includes a range of resources including:
  - Working with diversity: A Guide to Equity and the AQTF
  - Working with diversity: Quality Training for Indigenous Australians
  - Working with diversity: Quality Training for People with a Disability
- Other relevant, up to date resources may be available in the resources section of the Skills area of the Department of Education, Employment and Workplace Relations at [www.deewr.gov.au](http://www.deewr.gov.au) .
- Other informative resources include:

LiteracyNet at [www.literacynet.deewr.gov.au](http://www.literacynet.deewr.gov.au) . The site contains key information about Australian adult literacy activities and links to a range of additional program, professional development, resource and research sites.

#### Further Sources of Information

The section provides a listing of useful contacts and resources to assist assessors in planning, designing, conducting and reviewing of assessments against this Training Package.

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## Contacts

### Contacts

AgriFood Skills Australia

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Telephone: +61 2 6163 7205

Facsimile: +61 2 6162 0610

Email: [trainingpackages@agrifoodskills.net.au](mailto:trainingpackages@agrifoodskills.net.au)

Website: [www.agrifoodskills.net.au](http://www.agrifoodskills.net.au)

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Web: [www.tvetaustralia.com.au](http://www.tvetaustralia.com.au)

For information on the TAA04 Training and Assessment Training Package contact:  
Innovation & Business Skills Australia Level 2, Building B, 192 Burwood Road  
HAWTHORN

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Facsimile: +61 3 9815 7001

Web: [www.ibsa.org.au](http://www.ibsa.org.au) Email: [virtual@ibsa.org.au](mailto:virtual@ibsa.org.au) General Resources

Refer to <http://antapubs.dest.gov.au/publications/search.asp> to locate the following ANTA publications.

*AQF Implementation Handbook, third Edition*. Australian Qualifications Framework Advisory

Board, 2002, [aqf.edu.au](http://aqf.edu.au)

Australian Quality Training Framework 2007 (AQTF 2007) - for information and resources go to [www.training.com.au/aqtf2007](http://www.training.com.au/aqtf2007)

*AQTF 2007 Essential Standards for Registration*. Training organisations must meet these standards in order to deliver and assess nationally recognised training and issue nationally recognised qualifications. They include three standards, a requirement for registered training organisations to gather information on their performance against three quality indicators, and nine conditions of registration

AQTF 2007 *User's Guide to the Essential Standards for Registration*. A User's Guide for training organisations who must meet these standards in order to deliver and assess nationally recognised training and issue nationally recognised qualifications.

AQTF 2007 *Standards for Accredited Courses*. State and Territory accrediting bodies are responsible for accrediting courses. This standard provides a national operating framework and template for the accreditation of courses.

TAA04 *Training and Assessment Training Package*. This is available from the Innovation and Innovation & Business Skills Australia (IBSA) Industry Skills Council and can be viewed, and components downloaded, from the National Training Information Service (NTIS).

National Training Information Service, an electronic database providing comprehensive information about RTOs, Training Packages and accredited courses - [www.ntis.gov.au](http://www.ntis.gov.au)

*Training Package Development Handbook* (DEST, August 2007). Can be downloaded from [www.dest.gov.au](http://www.dest.gov.au)

#### Assessment Resources

*Training Package Assessment Guides* - a range of resources to assist RTOs in developing Training Package assessment materials (originally developed by ANTA with funding from the Department of Education, Training and Youth Affairs) and made up of 10 separate titles, as described at the publications page of [www.dest.gov.au](http://www.dest.gov.au). Go to [www.resourcegenerator.gov.au/loadpage.asp?TPAG.htm](http://www.resourcegenerator.gov.au/loadpage.asp?TPAG.htm)

Printed and/or CD ROM versions of the Guides can be purchased from Technical and Vocational Education and Training (TVET) Australia Limited. The resource includes the following guides:

- Training Package Assessment Materials Kit
- Assessing Competencies in Higher Qualifications
- Recognition Resource
- Kit to Support Assessor Training
- Candidates Kit: Guide to Assessment in New Apprenticeships
- Assessment Approaches for Small Workplaces
- Assessment Using Partnership Arrangements
- Strategies for ensuring Consistency in Assessment
- Networking for Assessors
- Quality Assurance Guide for Assessment

An additional guide "Delivery and Assessment Strategies" has been developed to complement these resources.

#### Assessment Tool Design and Conducting Assessment

VETASSESS & Western Australian Department of Training and Employment 2000, *Designing*

*Tests - Guidelines for designing knowledge based tests for Training Packages.*

Vocational Education and Assessment Centre 1997, *Designing Workplace Assessment Tools, A self-directed learning program*, NSW TAFE.

Manufacturing Learning Australia 2000, *Assessment Solutions*, Australian Training Products, Melbourne.

Rumsey, David 1994, *Assessment practical guide*, Australian Government Publishing Service, Canberra.

#### Assessor Training

Australian Committee on Training Curriculum (ACTRAC) 1994, *Assessor training program - learning materials*, Australian Training Products, Melbourne.

Australian National Training Authority, *A Guide for Professional Development*, ANTA, Brisbane.

Australian Training Products Ltd *Assessment and Workplace Training, Training Package - Toolbox*, ATPL Melbourne (available from TVET).

Green, M, et al. 1997, *Key competencies professional development Package*, Department for Education and Children's Services, South Australia.

Victorian TAFE Association 2000, *The professional development CD: A learning tool*, VTA, Melbourne.

#### Assessment System Design and Management

Office of Training and Further Education 1998, *Demonstrating best practice in VET project - assessment systems and processes*, OTFE (now OTTE) Victoria.

Toop, L., Gibb, J. & Worsnop, P. *Assessment system designs*, Australian Government Publishing Service, Canberra.

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Web: [www.tvetaustralia.com.au](http://www.tvetaustralia.com.au)

*For information on the TAE10 Training and Education Training Package contact: Innovation & Business Skills Australia*

*Telephone: (03) 9815 7000*

*Facsimile: (03) 9815 7001*

*Email: [virtual@ibsa.org.au](mailto:virtual@ibsa.org.au)*

Web: [www.ibsa.org.au](http://www.ibsa.org.au)

## General Resources

*AQF Implementation Handbook, Fourth Edition 2007. Australian Qualifications Framework Advisory Board, 2002* < [www.aqf.edu.au](http://www.aqf.edu.au) >

*Australian Quality Training Framework (AQTF) and AQTF 2010 Users' Guide to the Essential Standards for Registration*  
<http://www.training.com.au/pages/menuitem5cbe14d51b49dd34b225261017a62dbc.aspx>

For general information and resources go to <http://www.training.com.au/>

The National Register is an electronic database providing comprehensive information about RTOs, Training Packages and accredited courses - < [www.ntis.gov.au](http://www.ntis.gov.au) >

The Training Package Development Handbook site provides National Quality Council policy for the development of Training Packages. The site also provides guidance material for the application of that policy, and other useful information and links.

<http://www.deewr.gov.au/Skills/Overview/Policy/TPDH/Pages/main.aspx>

## Assessment Resources

Registered training organisations (RTOs) are at the forefront of vocational education and training (VET) in Australia. They translate the needs of industry into relevant, quality, client-focussed training and assessment.

RTOs should strive for innovation in VET teaching and learning practices and develop highly flexible approaches to assessment which take cognisance of specific needs of learners, in order to improve delivery and outcomes of training.

Resources can be purchased or accessed from: TVET Australia provides an integrated service to enable users of the national training

system to identify and acquire training materials, identify copyright requirements and enter licenses for use of that material consistent with the scope and direction of the NQC.

<http://www.productservices.tvetaustralia.com.au/>

## Assessment Guidelines - Industry Contextualisation

### Additional Advice for Assessment Design

RTOs need to take into account a range of considerations when designing assessment strategies. In particular, the majority of Units in the AHC10 Agriculture, Horticulture and Conservation and Land Management Training Package Version 3 have been written with a focus on a workplace assessment environment. Where this is obligatory it is identified in the Unit of Competency.

Wherever possible integrated (holistic) assessment is the preferred means of assessment. Holistic assessment should reflect the grouping of competencies as they would be demonstrated in an actual work role. The context of assessment is defined in each Unit of Competency.

The design of assessment needs to ensure that all aspects of competency are covered:

- task skills (performance of individual tasks)
- job/role environment skills (deals with the responsibilities and expectations of the workplace)
- relevant underpinning knowledge

and where qualification levels require:

- task management skills (managing a number of different tasks within the job)
- contingency management skills (responding to problems, breakdowns and changes in routine).

Assessors may exercise limited discretion in response to organisational or individual requirements, but any changes must not alter the meaning or integrity of the Unit of Competency. *Refer to the section on Competency Standards for more information.*

### Evidence Gathering Methods

Evidence gathering methods must be gender and culturally-inclusive and take into account the language, literacy and numeracy skills of both candidate and assessor. Assessors may consider:

- incorporating a range of assessment techniques
- integrating the assessment of units related to the performance of 'whole of work' tasks, roles or functions
- using a holistic approach which combines knowledge, understanding, problem-solving, technical skills and applications to new situations into the assessment process
- assessing in the workplace (wherever possible), using familiar skills and materials
- eliminating any unnecessary reading or written assessment (if these skills are not required to do the job, they should not be part of the assessment)
- ensuring understanding of questions by rephrasing to clarify and using the language and terms of the job and the workplace
- encouraging the candidate to ask questions to clarify instructions
- providing clarification of purpose and process of assessment
- considering cultural and gender issues when setting up the assessment.
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### Workplace Assessment Considerations

Where assessment is occurring in the workplace, assessors should consult on the assessment process with the parties involved. Candidates should be briefed on the process of making judgements against the standards and made to feel as relaxed as possible.

The assessment should take place over a reasonable length of time so that the candidate has the opportunity to demonstrate work responsibility and contingency management. Third-party reports of workplace performance, if available, are helpful for this.

Consider the other staff in the workplace likely to be affected by the process. All staff directly or indirectly involved in the process should be briefed on the factors which will impact on them, such as duration or changes in work routine.

Ensure that assessment is as compatible as possible with the normal pattern of work and causes minimal disruption. Assessment resources for this Training Package should provide ways in which to address these matters.

#### Assessment in a Simulated Environment

Where assessment is occurring out of the workplace, it is important to ensure that:

- the assessment takes place in a situation as close as possible to workplace reality
- all aspects of competency are assessed
- the assessment takes place over a reasonable length of time so that the candidate has the opportunity to demonstrate work responsibility and contingency management (third-party reports of workplace performance, if available, are helpful for this)
- equipment, resources and documents used in assessment closely reflect workplace reality.

It is critical that the designer of the simulation is thoroughly familiar with the application of the competency and is experienced in current and relevant workplace practices. The simulation or assessment environment must provide opportunities to:

- demonstrate use of required equipment and other resources
- show the complexity of dealing with multiple tasks
- reflect time pressures and deadlines
- involve prioritising among competing tasks
- deal with customers/clients, including difficult ones
- work with others in a team
- communicate with diverse groups
- find, discuss and test solutions to problems
- explore food safety and hygiene issues
- explore health and safety issues
- answer practically-oriented, applied knowledge questions
- show the level of verbal and written expression sufficient for, but not exceeding, the work requirements.

#### Training and Assessment in Remote and Regional Areas

Training and assessing candidates in remote and regional areas present a range of challenges. These include:

- lack of numbers preventing the establishment of traditional class sizes
- physical remoteness of some communities, where access to training facilities is limited
- scarcity of trainers with the required industry experience
- scarcity of physical training resources (e.g. current and emerging technology).

Some options for overcoming these challenges include:

- partnerships between RTOs to establish classes, i.e. programs delivered on a regional rather than local basis
- delivering certain units by distance mode



- partnerships between industry and RTOs to share resources and personnel
- partnerships between schools and RTOs
- recruiting suitably qualified workplace supervisors to oversee instruction and assessment on the job
- travelling to remote workplaces to provide instruction and assessment
- use of technology (e.g. email, video demonstration, CDs and internet) and self-paced resources
- use of block release delivery methodology.

### Training and Assessment for Schools

Implementation of AHC10 Agriculture, Horticulture and Conservation and Land Management Training Package Version 3 within the school sector needs to ensure the following:

- currency of skills and knowledge of those charges with training and assessing students
- access to industry-current equipment, facilities and training resources so that students acquire a realistic view of the realities and conditions within the workplace
- comprehensive coverage of underpinning skills and knowledge as delineated within the units of competency
- appropriateness of learning and assessment experiences to ensure that these are current and realistic.

It is recommended that delivery of qualifications in schools should only include Certificates I and II.

### Assessment for Equity Groups

It is important that assessment processes take into account a diversity of individual needs and learning styles related to disability, race, socio-economic status, gender, language, ethnicity, geographical isolation, sexuality, work commitments and family responsibilities.

Some inclusive assessment practices which will enhance the learning of all students include:

- know what, in particular, you are assessing, and make this clear to students
- create assessment activities in which students have the opportunity to link their learning to what they already know
- make your expectations clear
- make explicit the way in which competency will be assessed, both in discussion with the class beforehand and prior to any assessment activities
- provide alternative pathways to stated outcomes: allow for flexibility in approach, organisation and assessment. The greater the diversity of methods of assessment, the fairer the process for the greatest number of students
- make accommodations based on individual circumstance and need. Remember that students may need the opportunity to experiment to find the adaptation or accommodation which best meets their learning needs
- include self-assessment as a component of the course. Self-assessment involves discussion with students about the criteria according to which they assess their own performance and the level of performance required for different levels

- discuss assessment alternatives with staff with previous experience teaching students with disabilities. You (and your department) should regularly review any alternative arrangements to ensure that these meet both the student's needs (which may change over time) and stated course outcomes.

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#### Assessment for Indigenous Learners

There is evidence that Aboriginal and Torres Strait Islander people, both traditional and contemporary, approach learning differently from the Western intellectual tradition, which is relevant to effective training and assessment. It is understood that Aboriginal and Torres Strait Islander people may:

- learn better in groups than individually
- learn better in the surroundings of their community than in an institutional environment
- prefer oral communications to written forms
- learn on the basis of trial and error in the presence of an experienced person in preference to concept building approaches
- have a highly-developed sense of spatial relations by which they learn; hence stories, maps and pictures would be preferable to oral explanations.

To be effective, it is necessary that training and assessment recognises, adopts and practises appropriate delivery and assessment approaches.

Trainers and assessors who are not Aboriginal or Torres Strait Islanders need information on aspects of Aboriginal and Torres Strait Islander culture. They need to work closely with Aboriginal and Torres Strait Islander people to adopt practices that reflect Aboriginal and Torres Strait Islander approaches. The community should be asked to identify experts to provide information and to assist with assessment of relevant protocols, for example, where required.

There are a number of ways an RTO can establish and maintain culturally appropriate training and assessment practices, including:

- ensuring a high proportion of Aboriginal and Torres Strait Islander participation in all aspects of planning, development, delivery and evaluation
- establishing and maintaining a collaborative relationship with local Aboriginal and Torres Strait Islander communities
- as a mainstream (non-Indigenous) RTO, establishing auspice relationships with Aboriginal and Torres Strait Islander organisations and individuals, including direct and indirect involvement of persons identified as appropriate by the local community
- ensuring ongoing training of non-Aboriginal and Torres Strait Islander staff at all levels of the RTO, delivered by Aboriginal and Torres Strait Islander personnel.

A flexible approach to assessment will be required by RTOs in order to meet the requirements of Aboriginal and Torres Strait Islander organisations and individuals under this domain within the AHC10 Agriculture, Horticulture and Conservation and Land Management Training Package Version 3. Principles that underpin assessment include:

- assessment should be transparent, i.e. clearly seen and understood by the candidate and others

- assessment should empower the candidate on the basis of consent, self-assessment and responsibility for the process
- assessment should involve designated community experts working in collaboration with RTO assessors in order to provide appropriate recognition of cultural and community skills and knowledge
- assessments must provide constructive feedback to candidates and support for further competency development.

### Assessment for People with a Disability

A disability presents some impairment to everyday activity. Some people with a disability do not have any impairments resulting from their disability. For example, a person who has a hearing impairment which is compensated for by a hearing aid may function without any adjustments. Some people with a disability may have an impairment because of the environment, not the disability itself. For example, hearing loss can be accentuated in a room with loud, competing noise and poor acoustics.

A disability may affect or relate to a range of human functions, including mobility, stamina, lifting ability, memory, vision, hearing, speech, comprehension and mood swings. This may be due to accidents, illnesses or birth.

It is important to remember that it is not the disability itself that should be of interest but its impact on the student's ability to access material and demonstrate knowledge.

Training providers have a legal obligation under the Disability Standards for Education to ensure that students who have a disability are able to access and participate in education without experiencing discrimination. The information provided below is aimed at assisting teachers/trainers to meet the reasonable adjustment needs of people who have a disability.

### Adjustments in Training and Assessment

An open mind, common sense and tailoring to individual circumstances will, as often as not, ensure individuals achieve the standards that employers and training providers expect. Reasonable adjustments need only be that - reasonable. It is about identifying what adjustments might reasonably be made and how they may be put into place. Training and assessment can be made more appropriate and fairer for a person who has a disability through attitude, preparation and application.

#### *Attitude*

The attitude of others is often the greatest barrier for people who have a disability. While most people who have a disability will only ever require minor adjustments to ensure learning is positive, some will require additional support. There are many support agencies that can provide advice, however teachers/trainers may need to take additional time to ensure their teaching/training meets the learning support needs of the individual concerned.

Positive language creates an atmosphere of mutual respect, which is essential to learning. For example, using language that identifies learners as people rather than language that identifies them by one of their characteristics conveys that the person is more important than the characteristic, such as the difference between a 'person who has an intellectual disability' and an 'intellectually disabled person'. A person who has an intellectual disability could also be identified by a range of equally important characteristics - height, age, sporting interests, etc. However, the term 'intellectually disabled person' refers to the disability as the major, and often only, defining characteristic.

### ***Preparation***

It is important to identify any functional issues arising from the nature and extent of a person's disability. This can usually be done by discussing such issues with the individual. In most cases, this consultation will identify reasonable adjustment needs which can be put into place. There are many simple things that teachers/trainers can do to make reasonable adjustments to enable individuals who have a disability to succeed in training and assessment. In some cases, professional support may be required.

### ***Application***

Once reasonable adjustments have been implemented it is important to monitor and evaluate what has been done to ensure the best environment for continuous learning because:

- adjustments may only need to be temporary, i.e. mechanisms may only need to be in place during an induction period or due to a temporary disability, in which case evaluation will ensure appropriateness without the need for ongoing monitoring
- adjustments may need reinforcing - when adjustments need to be ongoing, monitoring may reinforce patterns of behaviour in order for them to become 'natural'
- adjustments may need improving - where adjustments are ongoing or substantial, a commitment to continuous improvement is recommended through monitoring.

In most cases an informal discussion with the person concerned may be all that is necessary.

However, should adjustments be substantial, or a learner not be acquiring competence at a reasonable rate, a more formal process may be required. This may include:

- performance indicators - training providers, learners and employers should have agreed indicators of performance which can be measured and monitored
- independent support - a third party, independent of the training and/or assessment environment, may need to be involved
- experimentation - if existing adjustments are not proving satisfactory, creative solutions may be needed
- continuing review - formal monitoring is encouraged if adjustments are changed or if substantial adjustments are necessary.

For further information on training and assessment for people with specific needs, the DEEWR website has information about the National Disability Coordination Officer Program, which 'provides information, coordination and referral services for people with a disability interested in or enrolled in post-school education and training' ( [www.deewr.gov.au](http://www.deewr.gov.au) ). The Disability Education Standards Guidance Notes can also be accessed at on the DEEWR web site at:

[http://www.deewr.gov.au/Schooling/Programs/Documents/Disability\\_Standards\\_for\\_Education\\_2005\\_pdf.pdf](http://www.deewr.gov.au/Schooling/Programs/Documents/Disability_Standards_for_Education_2005_pdf.pdf).

### Reasonable Adjustment

Below are some of the practical things that can be done as part of providing reasonable adjustment to learners with specific support needs to enable them to undertake training and assessment. Clearly, each case will be different and will need to be discussed with the person and in some cases expert help will be needed, at least in the initial stages.

<b>Type of disability</b>	<b>Reasonable adjustment</b>
Acquired brain injury	<ul style="list-style-type: none"> <li>• Memory aids (posters and notes)</li> <li>• Reflective listening skills</li> <li>• Stress minimisation</li> <li>• Time and patience.</li> </ul>
Hearing impairment	<ul style="list-style-type: none"> <li>• Audio loops for people using hearing aids</li> <li>• Plain English documents</li> <li>• Fire and alarm systems with flashing lights</li> <li>• Sign language interpreters</li> <li>• Telephone typewriters.</li> </ul>
Intellectual disability	<ul style="list-style-type: none"> <li>• Additional time</li> <li>• Assessment which is appropriate to the skill (i.e. avoiding written assessment for practical tasks)</li> <li>• Mentors</li> <li>• Plain English documents</li> <li>• Practical learning sessions</li> <li>• Repetition of learning exercises.</li> </ul>
Mobility impairment	<ul style="list-style-type: none"> <li>• Access to aids, such as for holding documents</li> <li>• Adjustable tables</li> <li>• Lifting limits</li> <li>• Note-taking support</li> <li>• Verbal rather than written presentations</li> <li>• Personal computers</li> <li>• Wheelchair access.</li> </ul>

Psychiatric disability	<ul style="list-style-type: none"> <li>• Identification and avoidance of stresses</li> <li>• Ongoing rather than formal assessments</li> <li>• Reflective listening skills</li> <li>• 'Time-out' breaks in assessment.</li> </ul>
Speech impairment	<ul style="list-style-type: none"> <li>• Information summaries</li> <li>• Stress minimisation</li> <li>• Time and patience</li> <li>• Written rather than verbal opportunities</li> <li>• Additional writing time for assignments and tests.</li> </ul>
Vision impairment	<ul style="list-style-type: none"> <li>• Audiotapes</li> <li>• Braille translations</li> <li>• Enlarged computer screen images</li> <li>• Enlarged text and images</li> <li>• Good lighting or reading lamps</li> <li>• Guide dog provision</li> <li>• Informing the person before moving furniture</li> <li>• Voice synthesisers on computers.</li> </ul>

#### Training and Assessment Resources and Information for Equity Groups

The following references provide a range of information and resources related to training and assessment for equity groups.

- The Australian Disability Clearing House on Education and Training [www.adcet.edu.au](http://www.adcet.edu.au) website includes resources and articles about the training and assessment of people with a disability.
- Information source for Aboriginal and/or Torres Strait Islander people training and assessment include: National Aboriginal and Torres Strait Education website: <http://www.natsiew.edu.au>. In addition most State and Territory Education Departments have an Aboriginal and/or Torres Strait Islander Unit who may be able to provide advice and information.
- The Working with Diversity web site at <http://www.westone.wa.gov.au/workingwithdiversity> includes a range of resources including:
  - *Working with diversity: A Guide to Equity and the AQTF*
  - *Working with diversity: Quality Training for Indigenous Australians*
  - *Working with diversity: Quality Training for People with a Disability*
- Other relevant, up to date resources may be available in the resources section of the Skills area of the Department of Education, Employment and Workplace Relations at [www.deewr.gov.au](http://www.deewr.gov.au).

1) Other informative resources include:

- LiteracyNet at <http://www.deewr.gov.au/skills/programs/litandnum/literacynet/Pages/default.aspx>. The site contains key information about Australian adult literacy activities and links to a range of additional program, professional development, resource and research sites.

## Competency Standards

### What is competency?

The broad concept of industry competency concerns the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency requires the application of specified skills, knowledge and attitudes relevant to effective participation in an industry, industry sector or enterprise.

Competency covers all aspects of workplace performance and involves performing individual tasks; managing a range of different tasks; responding to contingencies or breakdowns; and, dealing with the responsibilities of the workplace, including working with others. Workplace competency requires the ability to apply relevant skills, knowledge and attitudes consistently over time and in the required workplace situations and environments. In line with this concept of competency Training Packages focus on what is expected of a competent individual in the workplace as an outcome of learning, rather than focussing on the learning process itself.

Competency standards in Training Packages are determined by industry to meet identified industry skill needs. Competency standards are made up of a number of units of competency each of which describes a key function or role in a particular job function or occupation. Each unit of competency within a Training Package is linked to one or more AQF qualifications.

### Contextualisation of Units of Competency by RTOs

Registered Training Organisations (RTOs) may contextualise units of competency in this endorsed Training Package to reflect required local outcomes. Contextualisation could involve additions or amendments to the unit of competency to suit particular delivery methods, learner profiles, specific enterprise equipment requirements, or to otherwise meet local needs. However, the integrity of the overall intended outcome of the unit of competency must be maintained.

Any contextualisation of units of competency in this Training Package must be within the bounds of the following advice:

- RTOs must not remove or add to the number and content of elements and performance criteria.
- RTOs can include specific industry terminology in the range statement.
- Any amendments and additions to the range statement made by RTOs must not diminish the breadth of application of the competency, or reduce its portability.

- RTOs may add detail to the evidence guide in areas such as the critical aspects of evidence or required resources and infrastructure—but only where these expand the breadth of the competency and do not limit its use.

### **Components of Units of Competency**

The components of units of competency are summarised below, in the order in which they appear in each unit of competency.

#### **Unit Title**

The unit title is a succinct statement of the outcome of the unit of competency. Each unit of competency title is unique, both within and across Training Packages.

#### **Unit Descriptor**

The unit descriptor broadly communicates the content of the unit of competency and the skill area it addresses. Where units of competency have been contextualised from units of competency from other endorsed Training Packages, summary information is provided. There may also be a brief second paragraph that describes its relationship with other units of competency, and any licensing requirements.

#### **Employability Skills**

This sub-section contains a statement that the unit contains Employability skills.

#### **Pre-requisite Units (optional)**

If there are any units of competency that must be completed before the unit, these will be listed.

#### **Application of the Unit**

This sub-section fleshes out the unit of competency's scope, purpose and operation in different contexts, for example, by showing how it applies in the workplace.

#### **Competency Field (Optional)**

The competency field either reflects the way the units of competency are categorised in the Training Package or denotes the industry sector, specialisation or function. It is an optional component of the unit of competency.

#### **Sector (optional)**

The industry sector is a further categorisation of the competency field and identifies the next classification, for example an elective or supervision field.



## Elements of Competency

The elements of competency are the basic building blocks of the unit of competency. They describe in terms of outcomes the significant functions and tasks that make up the competency.

## Performance Criteria

The performance criteria specify the required performance in relevant tasks, roles, skills and in the applied knowledge that enables competent performance. They are usually written in passive voice. Critical terms or phrases may be written in bold italics and then defined in range statement, in the order of their appearance in the performance criteria.

## Required Skills and Knowledge

The essential skills and knowledge are either identified separately or combined. *Knowledge* identifies what a person needs to know to perform the work in an informed and effective manner. *Skills* describe the application of knowledge to situations where understanding is converted into a workplace outcome.

## Range Statement

The range statement provides a context for the unit of competency, describing essential operating conditions that may be present with training and assessment, depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. As applicable, the meanings of key terms used in the performance criteria will also be explained in the range statement.

## Evidence Guide

The evidence guide is critical in assessment as it provides information to the Registered Training Organisation (RTO) and assessor about how the described competency may be demonstrated. The evidence guide does this by providing a range of evidence for the assessor to make determinations, and by providing the assessment context. The evidence guide describes:

- conditions under which competency must be assessed including variables such as the assessment environment or necessary equipment;
- relationships with the assessment of any other units of competency;
- suitable methodologies for conducting assessment including the potential for workplace simulation;
- resource implications, for example access to particular equipment, infrastructure or situations;
- how consistency in performance can be assessed over time, various contexts and with a range of evidence; and
- the required underpinning knowledge and skills

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## Employability Skills in Units of Competency

The detail and application of Employability Skills facets will vary according to the job-role requirements of each industry. In developing Training Packages, industry stakeholders are consulted to identify appropriate facets of Employability Skills which are incorporated into the relevant units of competency and qualifications.

Employability Skills are not a discrete requirement contained in units of competency (as was the case with Key Competencies). Employability Skills are specifically expressed in the context of the work outcomes described in units of competency and will appear in elements, performance criteria, range statements and evidence guides. As a result, users of Training Packages are required to review the entire unit of competency in order to accurately determine Employability Skills requirements.

### How Employability Skills relate to the Key Competencies

The eight nationally agreed Employability Skills now replace the seven Key Competencies in Training Packages. Trainers and assessors who have used Training Packages prior to the introduction of Employability Skills may find the following comparison useful.

#### Employability Skills Mayer Key Competencies

Communication	Communicating ideas and information
Teamwork	Working with others and in teams
Problem solving	Solving problems Using mathematical ideas and techniques
Initiative and enterprise	
Planning and organising	Collecting, analysing and organising information Planning and organising activities
Self-management	
Learning	
Technology	Using technology

When analysing the above table it is important to consider the relationship and natural overlap of Employability Skills. For example, using technology may involve communication skills and combine the understanding of mathematical concepts.

### Explicitly embedding Employability Skills in units of competency

This Training Package seeks to ensure that industry-endorsed Employability Skills are explicitly embedded in units of competency. The application of each skill and the level of detail included in each part of the unit will vary according to industry requirements and the nature of the unit of competency.

Employability Skills must be both explicit and embedded within units of competency. This means that Employability Skills will be:

- embedded in units of competency as part of the other performance requirements that make up the competency as a whole
- explicitly described within units of competency to enable Training Packages users to identify accurately the performance requirements of each unit with regards to Employability Skills.

This Training Package also seeks to ensure that Employability Skills are well-defined and written into units of competency so that they are apparent, clear and can be delivered and assessed as an essential component of unit work outcomes.

### Sample unit of competency components showing Employability Skills

The following table shows the sequence of a unit of competency, and each cell contains text taken from a range of units. It provides examples of where and how various Employability Skills could be embedded in each component.

Please note that in the example, the bracketed Employability Skills are provided for clarification only and would not be present in units of competency within this Training Package.

<b>Unit Title</b>	Give formal presentations and take part in meetings ( <b>Communication</b> )
<b>Unit Descriptor</b>	This unit covers the skills and knowledge required to promote the use and implementation of innovative work practices to effect change. ( <b>Initiative and enterprise</b> )
<b>Element</b>	Proactively resolve issues. (problem solving)
<b>Performance Criteria</b>	Information is organised in a format suitable for analysis and dissemination in accordance with organisational requirements. ( <b>Planning and organising</b> )
<b>Range Statement</b>	Software applications may include email, internet, word processing, spreadsheet, database or accounting packages. (technology)
<b>Required Skills and Knowledge</b>	<p>Modify activities depending on differing workplace contexts, risk situations and environments. (<b>Learning</b>)</p> <p>Work collaboratively with others during a fire emergency. (teamwork)</p> <p>Instructions, procedures and other information relevant the maintenance of vessel and port security. (<b>Communication</b>)</p>

Evidence of having worked constructively with a wide range of community groups and stakeholders to solve problems and adapt or design new solutions to meet identified needs in crime prevention. In particular, evidence must be obtained on the ability to:

### **Evidence Guide**

- assess response options to identified crime-prevention needs and determine the optimal action to be implemented
- in consultation with relevant others, design an initiative to address identified issues. (**Initiative and enterprise**).

### **Employability Skills Summaries and units of competency**

An Employability Skills Summary exists for each qualification. Summaries include broad advice on industry expectations with regard to Employability Skills at the qualification level. Summaries should be used by trainers and assessors to assist in identifying the Employability Skills requirements contained within units of competency.

## **Competency Standards - Industry Contextualisation**

### **AHC10v3 Contextualisation Guidelines**

This Training Package is relevant to the broad spectrum of Australian industries where food and fibre production, horticulture and land management is undertaken and users are encouraged to customise qualifications and contextualise units of competency to suit their enterprise or sector purposes, provided that the customisation rules are followed.

Customisation of this Training Package may be achieved by:

- choosing appropriate electives from units provided in this Training Package
- importing elective units from other Training Packages or accredited courses
- contextualising units of competency to better suit an enterprise or industry context.

The export of units to other Training Packages is encouraged provided the following rules are observed.

#### **Choosing Appropriate Electives**

The electives listed in the Agriculture, Horticulture and Conservation and Land Management Training Package provide for skill development in all areas identified by industry representatives during consultations.

Most qualifications are able to be customised since candidates are able to choose particular combinations of elective units to suit their individual needs or work context.

### Importing Elective Units from Other Training Packages or Accredited Courses

To achieve maximum cross-industry application, the packaging rules enable units of competency to be imported from any Training Package or accredited course that is directly relevant to the candidate's current or intended work environment. In providing this flexibility it is incumbent on RTOs to ensure that the integrity of qualifications in the Training Package is maintained. The following guidelines for importing units apply.

- Imported units must relate to the core functions or roles in the candidate's current or intended work environment.
- The original title and code for the imported unit of competency must be retained.
- Imported units must come from other endorsed Training Packages or accredited courses.
- Imported units must align to the qualification level outlined in the relevant qualification packaging rules.

### Exporting Competencies to Other Training Packages

AHC10v3 has some application across industries outside the scope of the AHC10v3 Training Package. All AHC10v3 units may be imported to other Training Packages provided that:

- the original unit code and unit title are retained
- they are only contextualised to the extent outlined in the *section on Competency Standards*
- the user advises the appropriate Industry Skills Council in writing of the specific competencies exported to enable input during future revisions and ongoing communication.

### Contextualisation of Units of Competency

AHC10v3 competencies are able to be used in a wide range of industry sectors and enterprises. To enable this, contextualising of the units of competency is actively encouraged provided the requirements outlined in the earlier *section on Competency Standards* are met.

# AHC10110 Certificate I in Conservation and Land Management

## Modification History

Not Applicable

## Description

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

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

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate II in Conservation and Land Management or Certificate II in Rural Operations.

### Licensing considerations

There are no specific licences that relate to this qualification.

### Job roles

There are no specific job outcomes to this qualification, but the skills achieved will assist in successfully undertaking a Certificate II pre-vocational program or job outcome qualification, or will facilitate entry into an Australian Apprenticeship.

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>Listening and understanding</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>Working as an individual and a team member</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using basic technology skills</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of six (6) units made up of two (2) core units and four (4) elective units.

### ELECTIVE UNITS

- a maximum of four (4) elective units or four (4) units from units aligned to Certificates I or II in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the conservation and land management industry.

**CORE UNITS****Occupational Health and Safety**

AHCOHS101A      Work safely

**Work**

AHCWRK101A      Maintain the workplace

**ELECTIVE UNITS****Chemicals**

AHCCHM101A      Follow basic chemical safety rules

**Machinery operation and maintenance**

AHCMOM101A      Assist with routine maintenance of machinery and equipment

**Natural area restoration**

AHCNAR101A      Support natural area conservation

AHCNAR102A      Support native seed collection

**Nursery**

AHCNSY101A      Support nursery work



# AHC10210 Certificate I in AgriFood Operations

## Modification History

Release	TP Version	Comments
2	AHC10v4	Edited Packaging Rules for increased clarity
1	AHC10	Initial release

## Description

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

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

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate II in Agriculture, Certificate II in Horticulture, Certificate II in Production Horticulture and Certificate II in Rural Operations.

### Licensing considerations

There are no specific licences that relate to this qualification.

### Job roles

There are no specific job outcomes to this qualification, but the skills achieved will assist in successfully undertaking a Certificate II pre-vocational program or job outcome qualification, or will facilitate entry into an Australian Apprenticeship.

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>Listening and understanding</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>Working as an individual and a team member</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using basic technology skills</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of six (6) units made up of two (2) core units and four (4) elective units.

### **ELECTIVE UNITS**

- a minimum of two (2) elective units from the list below
- a maximum of two (2) units may be selected from units packaged in Certificates I or II in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in AgriFood industries.

### **CORE UNITS**

#### **Occupational Health and Safety**

AHCOHS101A      Work safely

#### **Work**

AHCWRK101A      Maintain the workplace

### **ELECTIVE UNITS**

#### **Broadacre cropping**

AHCBAC101A      Support agricultural crop work

#### **Chemicals**

AHCCHM101A      Follow basic chemical safety rules

#### **Horse breeding**

AHCHBR101A      Support horse work

#### **Irrigation**

AHCIRG101A      Support irrigation work

#### **Landscape**

AHCLSC101A      Support landscape work

#### **Livestock**

AHCLSK101A      Support extensive livestock work

AHCLSK102A Support intensive livestock work

### **Machinery operation and maintenance**

AHCMOM101A Assist with routine maintenance of machinery and equipment

### **Nursery**

AHCNSY101A Support nursery work

### **Organic production**

AHCORG101A Support organic production

### **Parks and gardens**

AHCPGD101A Support gardening work

### **Production horticulture**

AHCPHT101A Support horticultural production

### **Shearing**

AHCSHG101A Undertake basic shearing and crutching

### **Tools and equipment**

MEM18001C Use hand tools

MEM18002B Use power tools/hand held operations

### **Turf**

AHCTRF101A Support turf work

### **Wool**

AHCWOL101A Support woolshed activities

## AHC20110 Certificate II in Agriculture

### Modification History

Release	TP Version	Comments
4	AHC10v5	Replaced imported elective unit <i>TLID2010A Operate a forklift</i> with <i>TLILIC2001A Licence to operate a forklift truck</i> in response to changes in national licencing regulations  Equivalent imported units updated
3	AHC10v4	Equivalent imported units updated
2	AHC10v2.1	Elective bank groupings modified to provide greater flexibility
1	AHC10	Initial release

### Description

This qualification provides an entry level occupational outcome in agriculture.

The qualification enables individuals to select a livestock production or cropping context as a job focus or, in the case of mixed farming enterprises, both.

### Pathways Information

#### Qualification Pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry. Completion of the Cotton Industry Skill Set will provide credit in this qualification.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Agriculture (Dairy Production), Certificate III in Pork Production, Certificate III in Horse Breeding.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

## Job roles

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

- Assistant animal attendant/stockperson
- Assistant Farm or Station hand
- Assistant Farm or Station worker
- Assistant Farm or Station labourer
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## Licensing/Regulatory Information

There is no direct link between this qualification and licensing, legislative and/or regulatory requirements. However, an individual unit of competency may specify relevant licensing, legislative and/or regulatory requirements.

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<ul style="list-style-type: none"> <li>Identifying opportunities that might not be obvious to others</li> <li>Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Collecting analysing and organising information</li> <li>Being appropriately resourceful</li> <li>Taking initiative and making decisions within workplace role</li> <li>Determining or applying required resources</li> <li>Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using basic technology skills</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of seventeen (17) units made up of two (2) core units and fifteen (15) elective units.

**ELECTIVE UNITS**

- a minimum of seven (7) units must come from elective group A
- a minimum of five (5) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units aligned to Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course.  
Selected units must be relevant to job outcomes in agriculture.

**CORE UNITS****Occupational health and safety**

Unit code	Unit title
AHCOHS201A	Participate in OHS processes

**Work**

Unit code	Unit title
AHCWRK209A	Participate in environmentally sustainable work practices

## ELECTIVE GROUP A

### Biosecurity

Unit code	Unit title
AHCBIO201A	Inspect and clean machinery for plant, animal and soil material
AHCBIO202A	Follow site quarantine procedures

### Broadacre cropping

Unit code	Unit title
AHCBAC201A	Assist agricultural crop establishment
AHCBAC202A	Assist agricultural crop maintenance
AHCBAC203A	Assist agricultural crop harvesting

### Chemicals

Unit code	Unit title
AHCCHM201A	Apply chemicals under supervision

### First aid

Unit code	Unit title
HLTFA201A	Provide basic emergency life support

### Infrastructure

Unit code	Unit title
AHCINF201A	Carry out basic electric fencing operations



AHCINF202A	Install, maintain and repair fencing
AHCINF203A	Maintain properties and structures
AHCINF204A	Fabricate and repair metal or plastic structures

### Irrigation

Unit code	Unit title
AHCIRG201A	Assist with the operation of gravity fed irrigation
AHCIRG204A	Lay irrigation and/or drainage pipes

### Livestock

Unit code	Unit title
AHCLSK202A	Care for health and welfare of livestock
AHCLSK203A	Carry out birthing duties
AHCLSK204A	Carry out regular livestock observation
AHCLSK205A	Handle livestock using basic techniques
AHCLSK206A	Identify and mark livestock
AHCLSK207A	Load and unload livestock
AHCLSK208A	Monitor livestock to parturition
AHCLSK209A	Monitor water supplies
AHCLSK210A	Muster and move livestock
AHCLSK211A	Provide feed for livestock

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM201A	Operate two wheel motorbikes
AHCMOM202A	Operate tractors

AHCMOM203A	Operate basic machinery and equipment
AHCMOM204A	Undertake operational maintenance of machinery
AHCMOM205A	Operate vehicles
AHCMOM212A	Operate quad bikes
FPICOT2234B	Operate 4x4 vehicle

### Pest management

Unit code	Unit title
AHCPMG201A	Treat weeds
AHCPMG202A	Treat plant pests, diseases and disorders

### Tools and equipment

Unit code	Unit title
MEM18001C	Use hand tools
MEM18002B	Use power tools/hand held operations

### Work

Unit code	Unit title
AHCWRK201A	Observe and report on weather
AHCWRK203A	Operate in isolated and remote situations
AHCWRK204A	Work effectively in the industry
AHCWRK205A	Participate in workplace communications
AHCWRK206A	Observe enterprise quality assurance procedures
AHCWRK207A	Collect and record production data
TLID1001A	Shift materials safely using manual handling methods

**ELECTIVE GROUP B****Artificial insemination**

<b>Unit code</b>	<b>Unit title</b>
AHCAIS201A	Assist with artificial insemination procedures

**Beekeeping**

<b>Unit code</b>	<b>Unit title</b>
AHCBEK201A	Support beekeeping work
AHCBEK202A	Use a bee smoker
AHCBEK203A	Open and reassemble a beehive
AHCBEK204A	Construct and repair beehives

**Broadacre cropping**

<b>Unit code</b>	<b>Unit title</b>
AHCBAC204A	Prepare grain storages
AHCBAC205A	Operate cane haulage vehicle

**Dairy**

<b>Unit code</b>	<b>Unit title</b>
AHCDRY201A	Milk livestock

**Drainage**

<b>Unit code</b>	<b>Unit title</b>
AHCDRG201A	Maintain drainage systems

**Horse breeding**

Unit code	Unit title
AHCHBR201A	Monitor horse health and welfare
AHCHBR202A	Handle young horses
AHCHBR203A	Provide daily care for horses
AHCHBR204A	Assist with mating procedures and parturition of horses

### Irrigation

Unit code	Unit title
AHCIRG202A	Assist with the operation of pressurised irrigation
AHCIRG205A	Maintain gravity-fed irrigation systems
AHCIRG206A	Maintain pressurised irrigation systems

### Livestock

Unit code	Unit title
AHCLSK201A	Assist with feeding in a production system
AHCLSK212A	Ride horses to carry out stock work
AHCLSK213A	Clean out production sheds
AHCLSK214A	Maintain production growing environments
AHCLSK215A	Carry out alpaca handling and husbandry operations

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM206A	Conduct grader operations
AHCMOM207A	Conduct front-end loader operations
AHCMOM208A	Conduct excavator operations
AHCMOM209A	Conduct dozer operations

AHCMOM210A	Conduct scraper operations
TLILIC2001A	Licence to operate a forklift truck
TLID2202A	Conduct weighbridge operations

### Pork production

Unit code	Unit title
AHCPRK201A	Care for health and welfare of pigs
AHCPRK202A	Care for weaner and grower pigs
AHCPRK203A	Move and handle pigs

### Poultry

Unit code	Unit title
AHCPLY201A	Collect store and handle eggs from breeder flocks
AHCPLY202A	Maintain health and welfare of poultry
AHCPLY203A	Set up shed for placement of day-old chickens
AHCPLY204A	Collect and pack eggs for human consumption

### Production horticulture

Unit code	Unit title
AHCPHT201A	Plant horticultural crops
AHCPHT202A	Carry out canopy maintenance
AHCPHT203A	Support horticultural crop harvesting
AHCPHT205A	Carry out postharvest operations

### Shearing

Unit code	Unit title
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AHCSHG201A	Crutch sheep
AHCSHG202A	Assist in preparing for shearing and crutching
AHCSHG203A	Shear sheep to novice level
AHCSHG204A	Shear sheep to improver level
AHCSHG205A	Grind combs and cutters for machine shearing
AHCSHG206A	Prepare handpiece and downtube for machine shearing
AHCSHG207A	Shear goats
AHCSHG208A	Shear alpacas
AHCSHG209A	Support alpaca shearing operations

### Soil and water conservation

Unit code	Unit title
AHCSAW201A	Conduct erosion and sediment control activities

### Soils and media

Unit code	Unit title
AHCSOL201A	Determine basic properties of soil and/or growing media

### Vertebrate pests

Unit code	Unit title
AHCVPT201A	Clear features that harbour pest animals
AHCVPT202A	Muster pest animals
AHCVPT203A	Use firearms to humanely destroy animals

### Water

Unit code	Unit title
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AHCWAT201A	Set up, operate and maintain water delivery systems for compost
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### Wool

Unit code	Unit title
AHCWOL201A	Pen sheep
AHCWOL202A	Perform board duties
AHCWOL203A	Carry out wool pressing
AHCWOL204A	Undertake basic skirting of alpaca fleece

## AHC20210 Certificate II in Poultry Production Operations

### Modification History

Release	TP Version	Comments
3	AHC10v5	Replaced imported elective unit <i>TLID2010A Operate a forklift</i> with <i>TLILIC2001A Licence to operate a forklift truck</i> in response to changes in national licencing regulations
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This qualification provides an entry level occupational outcome in poultry production. The poultry industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Poultry Production.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

#### Job roles



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

Broiler farm employee

Egg farm poultry hand

Free range egg/broiler farm worker

Breeder farm worker

Hatchery worker

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

Planning and organising	<ul style="list-style-type: none"> <li>Collecting analysing and organising information</li> <li>Being appropriately resourceful</li> <li>Taking initiative and making decisions within workplace role</li> <li>Determining or applying required resources</li> <li>Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using basic technology skills</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of fifteen (15) units made up of six (6) core units and nine (9) elective units.

**ELECTIVE UNITS**

- a minimum of six (6) units must come from the elective unit list
- a maximum of three (3) units must come from the elective unit list or from units aligned to Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the poultry industry.

**CORE UNITS****Occupational Health and Safety**

Unit code	Unit title
AHCOHS201A	Participate in OHS processes

**Poultry**

Unit code	Unit title
AHCPLY202A	Maintain health and welfare of poultry

**Livestock**

<b>Unit code</b>	<b>Unit title</b>
AHCLSK209A	Monitor water supplies
AHCLSK213A	Clean out production sheds

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK206A	Observe enterprise quality assurance procedures

**Biosecurity**

<b>Unit code</b>	<b>Unit title</b>
AHCBIO202A	Follow site quarantine procedures

**ELECTIVE UNITS****Chemicals**

<b>Unit code</b>	<b>Unit title</b>
AHCCHM201A	Apply chemicals under supervision

**Livestock**

<b>Unit code</b>	<b>Unit title</b>
AHCLSK201A	Assist with feeding in a production system
AHCLSK214A	Maintain production growing environments

**Poultry**

<b>Unit code</b>	<b>Unit title</b>
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AHCPLY201A	Collect store and handle eggs from breeder flocks
AHCPLY202A	Maintain health and welfare of poultry
AHCPLY203A	Set up shed for placement of day-old chickens
AHCPLY204A	Collect and pack eggs for human consumption
AHCPLY302A	Brood poultry
AHCPLY303A	Identify and sex birds
AHCPLY304A	Incubate eggs
AHCPLY305A	Beak trim chickens

### Broad acre cropping

Unit code	Unit title
AHCBAC204A	Prepare grain storages

### Food

Unit code	Unit title
FDFOP2003A	Clean equipment in place
FDFOP2004A	Clean and sanitize equipment
FDFTEC3001A	Participate in a HACCP team* <i>FDFFS2001A Implement the food safety program and procedures</i>

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM202A	Operate tractors
AHCMOM204A	Undertake operational maintenance of machinery
AHCMOM212A	Operate quad bikes

TLILIC2001A	Licence to operate a forklift truck
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**Work**

Unit code	Unit title
AHCWRK201A	Observe and report on weather
AHCWRK203A	Operate in isolated and remote situations
AHCWRK204A	Work effectively in the industry
AHCWRK205A	Participate in workplace communications
AHCWRK206A	Observe enterprise quality assurance procedures
AHCWRK207A	Collect and record production data
AHCWRK209A	Participate in environmentally sustainable work practices
TLID1001A	Shift materials safely using manual handling methods

## AHC20310 Certificate II in Production Horticulture

### Modification History

Release	TP Version	Comments
4	AHC10v5	Added 24 elective units to cover grape growing (viticulture)  Replaced imported elective unit <i>TLID2010A Operate a forklift</i> with <i>TLILIC2001A Licence to operate a forklift truck</i> in response to changes in national licencing regulations  Equivalent imported units updated
3	AHC10v4	Equivalent imported units updated
2	AHC10v3	Elective bank groupings modified to provide greater flexibility
1	AHC10	Initial release

### Description

This qualification provides an occupational outcome in production horticulture.

The qualification enables individuals to select a tree cropping, vegetable or berry production, grape growing or mushroom production context as a job focus, or a mixture in the case of mixed enterprises.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, AHC30610 Certificate III in Production Horticulture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Licensing considerations

There are no specific licences that relate to this qualification.

### Job roles

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

- Farm, vineyard or orchard hand
- Farm, vineyard or orchard worker
- Farm, vineyard or orchard labourer

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Undertaking learning as required for work</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of two (2) core units and thirteen (13) elective units.

### ELECTIVE UNITS

- a minimum of three (3) units must come from elective group A
- a minimum of seven (7) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units packaged in Certificates II or III in AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must be relevant to job outcomes in the production horticulture industry.

### CORE UNIT

#### Occupational Health and Safety

Unit code	Unit title
AHCOHS201A	Participate in OHS processes

#### Work

Unit code	Unit title
AHCWRK209A	Participate in environmentally sustainable work practices

### ELECTIVE UNITS GROUP A



**Biosecurity**

Unit code	Unit title
AHCBIO202A	Follow site quarantine procedures

**Chemicals**

Unit code	Unit title
AHCCHM201A	Apply chemicals under supervision

**Machinery operation and maintenance**

Unit code	Unit title
AHCMOM203A	Operate basic machinery and equipment

**Production horticulture**

Unit code	Unit title
AHCPHT201A	Plant horticultural crops
AHCPHT203A	Support horticultural crop harvesting
AHCPHT205A	Carry out post-harvest operations

**Pest management**

Unit code	Unit title
AHCPMG201A	Treat weeds
AHCPMG202A	Treat plant pests, diseases and disorders

**Soils and media**

Unit code	Unit title
AHCSOL201A	Determine basic properties of soil and/or growing media

**ELECTIVE UNITS GROUP B****Food**

<b>Unit code</b>	<b>Unit title</b>
FDFOP2012A	Maintain food safety when loading, unloading and transporting food
FDFOP2016A	Work in a food handling area for non-food handlers

**Infrastructure**

<b>Unit code</b>	<b>Unit title</b>
AHCINF203A	Maintain properties and structures

**Irrigation**

<b>Unit code</b>	<b>Unit title</b>
AHCIRG204A	Lay irrigation and/or drainage pipes
AHCIRG207A	Carry out irrigation site preparation tasks
AHCIRG208A	Assist with the installation and maintenance of pumps and flow-control devices for irrigation
AHCIRG209A	Carry out installation tasks for low volume irrigation
AHCIRG210A	Carry out installation tasks for sprinkler irrigation
AHCIRG211A	Assist with low volume irrigation operations
AHCIRG212A	Assist with sprinkler irrigation operations
AHCIRG213A	Assist with surface irrigation operations
FDFWGG2013A	Deliver injection requirements

**Machinery operation and maintenance**

<b>Unit code</b>	<b>Unit title</b>
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AHCMOM201A	Operate two wheel motorbikes
AHCMOM202A	Operate tractors
AHCMOM204A	Undertake operational maintenance of machinery
AHCMOM205A	Operate vehicles
AHCMOM212A	Operate quad bikes
FPICOT2234B	Operate 4x4 vehicle
FDFWGG2015A	Support mechanical harvesting operations
FDFWGG2018A	Operate vineyard equipment
MEM18001C	Use hand tools
MEM18002B	Use power tools/hand held operations
TLILIC2001A	Licence to operate a forklift truck
TLID2022A	Conduct weighbridge operations

### Nursery

Unit code	Unit title
AHCNSY202A	Tend nursery plants
AHCNSY203A	Undertake propagation activities
FDFWGG2001A	Bench graft vines
FDFWGG2002A	Carry out potting operations
FDFWGG2005A	Maintain callusing environment
FDFWGG2006A	Obtain and process rootlings
FDFWGG2020A	Carry out hot water treatment
FDFWGG2021A	Operate nursery cold storage facilities
FDFWGG2022A	Take and process vine cuttings

### Production horticulture

Unit code	Unit title
AHCPHT202A	Carry out canopy maintenance
AHCPHT204A	Undertake field budding and grafting
AHCPHT206A	Handle and move mushroom boxes
AHCPHT207A	Perform mushroom substrate process tasks
AHCPHT208A	Water mushroom crops
AHCPHT209A	Produce trellis dried grapes
FDFWGG2003A	Hand prune vines
FDFWGG2008A	Train vines
FDFWGG2009A	Operate specialised canopy management equipment
FDFWGG2010A	Field graft vines
FDFWGG2016A	Install and maintain vine trellis

### Work

Unit code	Unit title
AHCWRK201A	Observe and report on weather
AHCWRK203A	Operate in isolated and remote situations
AHCWRK206A	Observe enterprise quality assurance procedures
AHCWRK207A	Collect and record production data
AHCWRK208A	Provide information on products and services
TLID1001A	Shift materials safely using manual handling methods

## AHC20410 Certificate II in Horticulture

### Modification History

Release	TP Version	Comments
3	AHC10v5	Equivalent imported units updated
2	AHC10v4	Equivalent imported units updated
1	AHC10	Initial release

### Description

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

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include any of the specialist qualifications at Certificate III.

#### Licensing considerations

There are no specific licences that relate to this qualification.

#### Job roles

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

- Horticulture worker
- Horticulture assistant.
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## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of two (2) core units and thirteen (13) elective units.

### ELECTIVE UNITS

- a minimum of three (3) units must come from elective group A
- a minimum of seven (7) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units aligned to Certificates II or III in AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must meet job outcomes relevant to horticulture.

### CORE UNITS

#### Occupational Health and Safety

Unit code	Unit title
AHCOHS201A	Participate in OHS processes

#### Work

Unit code	Unit title
AHCWRK209A	Participate in environmentally sustainable work practices

### ELECTIVE UNITS GROUP A

#### Plants

Unit code	Unit title
AHCPCM201A	Recognise plants
AHCPCM202A	Collect, prepare and preserve plant specimens

#### Arboriculture

Unit code	Unit title
AHCARB201A	Apply a range of treatments to trees
AHCARB202A	Fell small trees

AHCARB203A	Perform above ground pruning
AHCARB204A	Undertake standard climbing techniques
AHCARB205A	Operate and maintain chainsaws
AHCARB206A	Undertake stump removal
FPICOT2221B	Trim and cross cut felled trees
FPIFGM2208A	Fall trees manually (basic)
FPIFGM3204A	Fall trees manually (intermediate)
FPIHAR2206B	Operate a mobile chipper/mulcher

### Landscape

Unit code	Unit title
AHCLSC201A	Assist with landscape construction work
AHCLSC202A	Construct low-profile timber or modular retaining walls
AHCLSC203A	Install aggregate paths
AHCLSC204A	Lay paving
AHCLSC205A	Install tree protection devices

### Nursery

Unit code	Unit title
AHCNSY201A	Pot up plants
AHCNSY202A	Tend nursery plants
AHCNSY203A	Undertake propagation activities
AHCNSY204A	Maintain indoor plants

### Parks and gardens

Unit code	Unit title
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AHCPGD201A	Plant trees and shrubs
AHCPGD202A	Prepare and maintain plant displays
AHCPGD203A	Prune shrubs and small trees
AHCPGD204A	Transplant small trees
AHCPGD205A	Prepare a grave site
AHCPGD206A	Conduct visual inspection of park facilities

### Turf

Unit code	Unit title
AHCTRF201A	Assist with turf construction
AHCTRF202A	Prepare turf surfaces for play
AHCTRF203A	Renovate grassed areas
AHCTRF204A	Support turf establishment

### ELECTIVE UNITS GROUP B

#### Chemicals

Unit code	Unit title
AHCCHM201A	Apply chemicals under supervision

#### Infrastructure

Unit code	Unit title
AHCINF203A	Maintain properties and structures
AHCINF204A	Fabricate and repair metal or plastic structures

#### Irrigation

Unit code	Unit title
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AHCIRG202A	Assist with the operation of pressurised irrigation
AHCIRG203A	Install micro-irrigation systems
AHCIRG204A	Lay irrigation and/or drainage pipes
AHCIRG206A	Maintain pressurised irrigation systems

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM202A	Operate tractors
AHCMOM203A	Operate basic machinery and equipment
AHCMOM204A	Undertake operational maintenance of machinery
AHCMOM205A	Operate vehicles
AHCMOM211A	Operate side by side utility vehicles
AHCMOM212A	Operate quad bikes

### Merchandising and sales

Unit code	Unit title
SIRXADM001A	Apply retail office procedures
SIRXCCS201	Apply point-of-sale handling procedures
SIRXCCS202	Interact with customers
SIRXCLM001A	Organise and maintain work areas
SIRXFIN201	Balance and secure point-of-sale terminal
SIRXFIN002A	Perform retail finance duties
SIRXINV002A	Maintain and order stock
SIRXICT001A	Operate retail technology
SIRXMER201	Merchandise products
SIRXSLS201	Sell products and services

SIRXSLS002A	Advise on products and services
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### Pest management

Unit code	Unit title
AHCPMG201A	Treat weeds
AHCPMG202A	Treat plant pests, diseases and disorders

### Soils and media

Unit code	Unit title
AHCSOL201A	Determine basic properties of soil and/or growing media

### Tools and equipment

Unit code	Unit title
MEM18001C	Use hand tools
MEM18002B	Use power tools/hand held operations

### Work

Unit code	Unit title
AHCWRK204A	Work effectively in the industry
AHCWRK205A	Participate in workplace communications
AHCWRK206A	Observe enterprise quality assurance procedures
AHCWRK207A	Collect and record production data
AHCWRK208A	Provide information on products and services
AHCWRK209A	Participate in environmentally sustainable work practices
TLID1001A	Shift materials safely using manual handling methods

## AHC20510 Certificate II in Arboriculture

### Modification History

Release	TP Version	Comments
3	AHC10v5	Equivalent imported units updated
2	AHC10v4	Equivalent imported units updated
1	AHC10	Initial release

### Description

This qualification provides an occupational outcome in arboriculture. The arboriculture industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Arboriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

#### Job roles

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

Tree worker, ground worker

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Participating in ongoing learning</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of ten (10) core units and five (5) elective units.

### ELECTIVE UNITS

- a minimum of two (2) units must be selected from the elective unit list
- a maximum of three (3) units may be selected from units aligned to from Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the arboriculture industry.

### CORE UNITS

#### Occupational Health and Safety

Unit code	Unit title
CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry

#### Arboriculture

Unit code	Unit title
AHCARB202A	Fell small trees
AHCARB203A	Perform above ground pruning
AHCARB204A	Undertake standard climbing techniques
AHCARB206A	Undertake stump removal
AHCARB207A	Perform ground based rigging
FPICOT2221B	Trim and cross cut felled trees
FPIHAR2206B	Operate a mobile chipper/mulcher

#### First Aid

Unit code	Unit title
HLTFA201A	Provide basic emergency life support

**Work**

<b>Unit code</b>	<b>Unit title</b>
TLID1001A	Shift materials safely using manual handling methods

**ELECTIVE UNITS****Arboriculture**

<b>Unit code</b>	<b>Unit title</b>
AHCARB201A	Apply a range of treatments to trees

**Chemicals**

<b>Unit code</b>	<b>Unit title</b>
AHCCHM201A	Apply chemicals under supervision

**Landscape**

<b>Unit code</b>	<b>Unit title</b>
AHCLSC205A	Install tree protection devices

**Machinery operation and maintenance**

<b>Unit code</b>	<b>Unit title</b>
AHCMOM204A	Undertake operational maintenance of machinery
AHCMOM207A	Conduct front end loader operations
CPCCCM2010B	Work safely at heights
CPCCCM3001C	Operate elevated work platforms
RIIMPO318B	Conduct civil construction skid steer loader operations

**Pest management**

<b>Unit code</b>	<b>Unit title</b>
AHCPMG201A	Treat weeds
AHCPMG202A	Treat plant pests, diseases and disorders

**Plants**

<b>Unit code</b>	<b>Unit title</b>
AHCPCM201A	Recognise plants

**Soils and media**

<b>Unit code</b>	<b>Unit title</b>
AHCSOL201A	Determine basic properties of soil and/or growing media

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK206A	Observe enterprise quality assurance procedures
AHCWRK209A	Participate in environmentally sustainable work practices
CPCCCM3003A	Work safely around power sources, services and assets
RIIOHS205A	Control traffic with stop-slow bat



## AHC20610 Certificate II in Parks and Gardens

### Modification History

Not Applicable

### Description

This qualification provides an occupational outcome in parks and gardens. The parks and gardens industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Parks and Gardens.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

#### Job roles

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

Assistant gardener

Groundsperson

### Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of ten (10) core units and five (5) elective units.

### ELECTIVE UNITS

- a minimum of two (2) units must be selected from the elective unit list

- a maximum of three (3) units may be selected from units aligned to Certificate II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the parks and gardens industry.

## CORE UNITS

### Occupational Health and Safety

AHCOHS201A Participate in OHS processes

### Chemicals

AHCCHM201A Apply chemicals under supervision

### Irrigation

AHCIRG206A Maintain pressurised irrigation systems

### Machinery operation and maintenance

AHCMOM203A Operate basic machinery and equipment

### Parks and gardens

AHCPGD201A Plant trees and shrubs

AHCPGD206A Conduct visual inspection of park facilities

### Pest management

AHCPMG201A Treat weeds

### Plants

AHCPCM201A Recognise plants

### Soils and media

AHCSOL201A Determine basic properties of soil and/or growing media

### Turf

AHCTRF204A Support turf establishment

**ELECTIVE UNITS****Arboriculture**

AHCARB201A Apply a range of treatments to trees

**Irrigation**

AHCIRG203A Install micro-irrigation systems

AHCIRG204A Lay irrigation and/or drainage pipes

**Landscape**

AHCLSC201A Assist with landscape construction work

**Machinery operation and maintenance**

AHCMOM204A Undertake operational maintenance of machinery

AHCMOM211A Operate side by side utility vehicles

**Nursery**

AHCNSY203A Undertake propagation activities

**Parks and gardens**

AHCPGD202A Prepare and maintain plant displays

AHCPGD203A Prune shrubs and small trees

AHCPGD205A Prepare a grave site

**Pest management**

AHCPMG202A Treat plant pests, diseases and disorders

**Turf**

AHCTRF202A Prepare turf surfaces for play

AHCTRF203A Renovate grassed areas

**Work**

AHCWRK207A Collect and record production data

AHCWRK209A Participate in environmentally sustainable work practices



## AHC20710 Certificate II in Production Nursery

### Modification History

October 2011: Fixed typographical error in description.

### Description

This qualification provides an occupational outcome in the production nursery industry. The nursery industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Production Nursery or Certificate III in Retail Nursery.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

#### Job roles

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

Production nursery worker

### Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Participating in ongoing learning</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of seven (7) core units and eight (8) elective units.

### ELECTIVE UNITS

- a minimum of five (5) units must come from the elective unit list

- a maximum of three (3) units may be selected from units aligned to Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the nursery industry.

## CORE UNITS

### Occupational Health and Safety

AHCOHS201A Participate in OHS processes

### Chemicals

AHCCHM201A Apply chemicals under supervision

### Nursery

AHCNSY201A Pot up plants

AHCNSY202A Tend nursery plants

AHCNSY203A Undertake propagation activities

### Plants

AHCPCM201A Recognise plants

### Pest management

AHCPMG201A Treat weeds

## ELECTIVE UNITS

### Biosecurity

AHCBIO202A Follow site quarantine procedures

### Drainage

AHCDRG201A Maintain drainage systems

### First Aid

HLTFA201A Provide basic emergency life support



**Infrastructure**

AHCINF203A Maintain properties and structures

**Irrigation**

**AHCIRG202A Assist with the operation of pressurised irrigation**

AHCIRG206A Maintain pressurised irrigation systems

**Parks and gardens**

AHCPGD203A Prune shrubs and small trees

**Pest management**

AHCPMG202A Treat plant pests, diseases and disorders

**Machinery operation and maintenance**

AHCMOM202A Operate tractors

AHCMOM203A Operate basic machinery and equipment

AHCMOM211A Operate side by side utility vehicles

**Nursery**

AHCNSY204A Maintain indoor plants

**Soils and media**

AHCSOL201A Determine basic properties of soil and/or growing media

**Work**

AHCWRK204A Work effectively in the industry

AHCWRK209A Participate in environmentally sustainable work practices

## AHC20810 Certificate II in Retail Nursery

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This qualification provides an occupational outcome in retail nursery industry. The nursery industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Retail Nursery or Certificate III in Production Nursery.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

#### Job roles

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

Garden centre sales assistant

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Participating in ongoing learning</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of seven (7) core units and eight (8) elective units.

**ELECTIVE UNITS**

- a minimum of five (5) units must come from the elective unit list
- a maximum of three (3) units may be selected from units aligned to Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the nursery industry.

**CORE UNITS**

## Occupational Health and Safety

Unit code	Unit title
AHCOHS201A	Participate in OHS processes

## Plants

Unit code	Unit title
AHCPCM201A	Recognise plants

## Nursery

Unit code	Unit title
AHCNSY202A	Tend nursery plants
AHCNSY204A	Maintain indoor plants

## Merchandising and sales

Unit code	Unit title
SIRXCCS201	Apply point-of-sale handling procedures
SIRXSLS201	Sell products and services

## Soils and media

Unit code	Unit title
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AHCSOL201A	Determine basic properties of soil and/or growing media
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## ELECTIVE UNITS

### Biosecurity

Unit code	Unit title
AHCBIO202A	Follow site quarantine procedures

### Chemicals

Unit code	Unit title
AHCCHM201A	Apply chemicals under supervision

### Drainage

Unit code	Unit title
AHCDRG201A	Maintain drainage systems

### First Aid

Unit code	Unit title
HLTFA201A	Provide basic emergency life support

### Irrigation

Unit code	Unit title
AHCIRG202A	Assist with the operation of pressurised irrigation
AHCIRG206A	Maintain pressurised irrigation systems

### Machinery operation and maintenance

Unit code	Unit title
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AHCMOM203A	Operate basic machinery and equipment
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### Merchandising and sales

Unit code	Unit title
SIRXICT001A	Operate retail technology
SIRXADM001A	Apply retail office procedures

### Nursery

Unit code	Unit title
AHCNSY201A	Pot up plants
AHCNSY203A	Undertake propagation activities

### Pests management

Unit code	Unit title
AHCPMG202A	Treat plant pests, diseases and disorders

### Work

Unit code	Unit title
AHCWRK204A	Work effectively in the industry
AHCWRK209A	Participate in environmentally sustainable work practices

# AHC20910 Certificate II in Sports Turf Management

## Modification History

Not Applicable

## Description

This qualification provides an occupational outcome in green-keeping. The sports turf industry expects this qualification to be achieved to meet job outcomes at this level.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Sports Turf Management.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Licensing considerations

There are no specific licences that relate to this qualification.

### Job roles

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

Groundsperson

Assistant green keeper

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of ten (10) core units and five (5) elective units.

### ELECTIVE UNITS



- a maximum of five (5) units may be selected from units aligned to Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the turf industry.

## CORE UNITS

### Occupational Health and Safety

AHCOHS201A Participate in OHS processes

### Chemicals

AHCCHM201A Apply chemicals under supervision

### Irrigation

AHCIRG206A Maintain pressurised irrigation systems

### Machinery operation and maintenance

AHCMOM203A Operate basic machinery and equipment

### Pest management

AHCPMG201A Treat weeds

AHCPMG202A Treat plant pests, diseases and disorders

### Parks and gardens

AHCPGD201A Plant trees and shrubs

### Turf

AHCTRF202A Prepare turf surfaces for play

AHCTRF204A Support turf establishment

### Work

AHCWRK209A Participate in environmentally sustainable work practices

## AHC21010 Certificate II in Conservation and Land Management

### Modification History

Release	TP Version	Comments
3	AHC10v5	Replaced imported elective unit <i>TLID2010A Operate a forklift</i> with <i>TLILIC2001A Licence to operate a forklift truck</i> in response to changes in national licencing regulations  Equivalent imported units updated
2	AHC10v4	Equivalent imported units updated  Added missing prerequisite unit to Packaging Rules
1	AHC10	Initial release

### Description

This qualification provides an occupational outcome in conservation and land management. The work would be carried out under general guidance and supervision.

The qualification enables individuals to select an indigenous land management, conservation earthworks, lands, parks and wildlife or natural area management context as a job focus or a mix of these.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Conservation and Land Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Conservation worker

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team members</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Make decisions within area of responsibility</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning in a range of settings including informal learning</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using technology to organise data</li> <li>Applying OHS knowledge when using technology</li> </ul>
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AHC020409

**Packaging Rules****Packaging Rules**

Completion of fifteen (15) units made up of two (2) core units and thirteen (13) elective units.

**ELECTIVE UNITS**

- a minimum of four (4) units must be selected from elective group A
- a minimum of six (6) units must be selected from elective groups A or B
- a maximum of three (3) units may be selected from units aligned to Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in conservation and land management.

**CORE UNITS**

## Occupational Health and Safety

Unit code	Unit title
AHCOHS201A	Participate in OHS processes

## Work

Unit code	Unit title
AHCWRK209A	Participate in environmentally sustainable work practices

**ELECTIVE UNITS GROUP A****Fauna**

Unit code	Unit title
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AHCFAU201A	Recognise fauna
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### Fire

Unit code	Unit title
AHCFIR201A	Assist with prescribed burning
PUAFIR204B	Respond to wildfire* <i>PUAFIR201B Prevent injury</i>

### Indigenous land management

Unit code	Unit title
AHCILM201A	Maintain cultural places
AHCILM202A	Observe and report plants and/or animals
AHCILM203A	Record information about country

### Natural area restoration

Unit code	Unit title
AHCNAR201A	Carry out natural area restoration works
AHCNAR202A	Maintain wildlife habitat refuges
FPIFGM2201B	Collect seed

### Lands, parks and wildlife

Unit code	Unit title
PUALAW001B	Protect and preserve incident scene

### Parks and gardens

Unit code	Unit title
AHCPGD201A	Plant trees and shrubs

AHCPGD206A	Conduct visual inspection of park facilities
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### Pest management

Unit code	Unit title
AHCPMG201A	Treat weeds
AHCPMG202A	Treat plant pests, diseases and disorders

### Plants

Unit code	Unit title
AHCPCM201A	Recognise plants
AHCPCM202A	Collect, prepare and preserve plant specimens

### Soil and water conservation

Unit code	Unit title
AHCSAW201A	Conduct erosion and sediment control activities

### Vertebrate pests

Unit code	Unit title
AHCVPT201A	Clear features that harbour pest animals
AHCVPT202A	Muster pest animals
AHCVPT203A	Use firearms to humanely destroy animals
AHCVPT306A	Apply animal trapping techniques

### Work

Unit code	Unit title
AHCWRK202A	Observe environmental work practices

AHCWRK203A	Operate in isolated and remote situations
AHCWRK204A	Work effectively in the industry
AHCWRK205A	Participate in workplace communications
SITXCCS201	Provide visitor information

## ELECTIVE UNITS GROUP B

### Arboriculture

Unit code	Unit title
AHCARB202A	Fell small trees
AHCARB205A	Operate and maintain chainsaws

### Biosecurity

Unit code	Unit title
AHCBIO201A	Inspect and clean machinery for plant, animal and soil material

### Business

Unit code	Unit title
BSBWOR204A	Use business technology
BSBINM201A	Process and maintain workplace information

### Chemicals

Unit code	Unit title
AHCCHM201A	Apply chemicals under supervision

### First aid

Unit code	Unit title
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HLTFA201A	Provide basic emergency life support
HLTFA301C	Apply first aid
HLTFA302C	Provide first aid in remote situation

### Infrastructure

Unit code	Unit title
AHCINF201A	Carry out basic electric fencing operations
AHCINF202A	Install, maintain and repair fencing
AHCINF203A	Maintain properties and structures

### Landscape

Unit code	Unit title
AHCLSC201A	Assist with landscape construction work
AHCLSC203A	Install aggregate paths
AHCLSC205A	Install tree protection devices

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM201A	Operate two wheel motorbikes
AHCMOM202A	Operate tractors
AHCMOM203A	Operate basic machinery and equipment
AHCMOM204A	Undertake operational maintenance of machinery
AHCMOM205A	Operate vehicles
AHCMOM206A	Conduct grader operations
AHCMOM207A	Conduct front-end loader operations
AHCMOM208A	Conduct excavator operations



AHCMOM209A	Conduct dozer operations
AHCMOM210A	Conduct scraper operations
FPICOT2234B	Operate 4x4 vehicle
TLILIC2001A	Licence to operate a forklift truck

### Nursery

Unit code	Unit title
AHCNSY202A	Tend nursery plants
AHCNSY203A	Undertake propagation activities

### Soils and media

Unit code	Unit title
AHCSOL201A	Determine basic properties of soil and/or growing media

### Work

Unit code	Unit title
AHCWRK201A	Observe and report on weather
AHCWRK206A	Observe enterprise quality assurance procedures
AHCWRK207A	Collect and record production data
AHCWRK208A	Provide information on products and services
TLID1001A	Shift materials safely using manual handling methods

# AHC21112 Certificate II in Irrigation

## Modification History

June 2012: This qualification supersedes but is not equivalent to AHC21110.

## Description

This Qualification allows individuals to develop skills and knowledge to work as field and support staff within the irrigation industry.

## Application

This Qualification describes the job roles of supervised entry-level workers in the irrigation industry. It covers the employment areas of irrigation installation and irrigation operations. Supervised entry-level workers in the irrigation retail sector can complete a retail Qualification with electives chosen from the units in this Qualification.

## Additional Qualification advice

This Qualification is suitable for VET in schools programs.

## Pathways Information

### Pathways into the Qualification

This Qualification may be accessed by direct entry.

### Pathways from the Qualification

Further training pathways from this Qualification include, but are not limited to, AHC32412 Certificate III in Irrigation.

## Licensing/Regulatory Information

There is no direct link between this Qualification and licensing, legislative and/or regulatory requirements. However, an individual Unit of Competency may specify relevant licensing, legislative and/or regulatory requirements.

## Entry Requirements

There are no entry requirements for this Qualification.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding instructions and directions</li> <li>• Speaking clearly and directly to supervisor, customers and other workers</li> <li>• Reading and interpreting simple workplace related documentation</li> <li>• Writing to convey simple information</li> <li>• Applying numeracy skills to perform work role.</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Dealing with conflict in a constructive way</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team.</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical solutions to deal with simple problems</li> <li>• Identifying problems and assessing the importance level</li> <li>• Solving problems individually or in teams</li> <li>• Using numeracy skills to solve simple problems.</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Learning to work in a new situation</li> <li>• Dealing with simple problems</li> <li>• Referring problems onto supervisor for direction.</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting and recording information</li> <li>• Using basic business systems for routine tasks</li> <li>• Carrying out directions with a demonstrated systematic approach</li> <li>• Working within clear project deliverables and timelines</li> <li>• Monitoring time against directed tasks and priorities.</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements.</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Interacting with technology through practical tasks</li> <li>• Setting up equipment.</li> </ul>

## Packaging Rules

Complete **twelve (12)** Units of Competency comprised of:

- Two (2) Core Units
- Ten (10) Elective Units

### Core Units of Competency

Unit code	Unit title
AHCOHS201A	Participate in OHS processes
AHCWRK209A	Participate in environmentally sustainable work practices

### Elective Units

- Select a minimum of **four** (4) Units from Group A.
- Select a minimum of **four** (4) additional Units from Group A or B.
- Select a minimum of **two** (2) additional Units from Group A, Group B and/or this or any other endorsed Training Package or accredited course packaged at Certificate II or III
- Selected Units must be relevant to job outcomes in the irrigation industry.

### Group A

Unit code	Unit title
AHCIRG204A	Lay irrigation and/or drainage pipes
AHCIRG207A	Carry out irrigation site preparation tasks
AHCIRG208A	Assist with the installation and maintenance of pumps and flow-control devices for irrigation
AHCIRG209A	Carry out installation tasks for low volume irrigation
AHCIRG210A	Carry out installation tasks for sprinkler irrigation
AHCIRG211A	Assist with low volume irrigation operations and maintenance
AHCIRG212A	Assist with sprinkler irrigation operations and maintenance
AHCIRG213A	Assist with surface irrigation operations and maintenance
AHCSOL201A	Determine basic properties of soil and/or growing media
NWP210B	Perform basic water quality tests
NWP222A	Operate basic flow control and regulating devices in irrigation systems
NWP251B	Construct open earthen channels or drains

**Group B**

<b>Unit code</b>	<b>Unit title</b>
AHCDRG201A	Maintain drainage systems
AHCIRG214A	Install micro-irrigation systems for landscaping
AHCMOM203A	Operate basic machinery and equipment
AHCWRK204A	Work effectively in the industry
AHCWRK205A	Participate in workplace communications
AHCWRK208A	Provide information on products and services
CPCPCM2007A	Carry out levelling * <i>CPCPCM2003A Carry out OHS requirements</i> <i>CPCPCM2004A Read plans and calculate plumbing quantities</i>
NWP203B	Plan and organise personal work activities
NWP209B	Use maps, plans, drawings and specifications
NWP215B	Install and replace basic volumetric metering equipment
NWP226B	Prepare and restore work site
NWP252B	Construct and install irrigation delivery and stormwater drainage assets
TLID1001A	Shift materials safely using manual handling methods

# AHC21210 Certificate II in Rural Operations

## Modification History

Not Applicable

## Description

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

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

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Agriculture, Certificate III in Production Horticulture and Certificate III in Horticulture.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Licensing considerations

There are no specific licences that relate to this qualification.

### Job roles

Multifunctional job roles that suit regional areas of Australia.

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Determining or applying required resources</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of two (2) core units and thirteen (13) elective units.

### ELECTIVE UNITS

- a minimum of seven (7) units must come from Certificate II in the AHC10 endorsed training package
- a maximum of six (6) units may be selected from units aligned to Certificates II or III from up to three (3) other currently endorsed training packages or accredited courses. Selected units must be relevant to job outcomes in AgriFood industries.

### CORE UNITS

#### Occupational Health and Safety

AHCOHS201A      Participate in OHS processes

#### Work

AHCWRK209A      Participate in environmentally sustainable work practices



## AHC21310 Certificate II in Shearing

### Modification History

Not Applicable

### Description

This qualification provides an entry level occupational outcome in shearing. It recognises the work of an improver shearer who is able to shear sheep to an acceptable industry standard. The shearing industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Shearing and Certificate III in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

#### Job roles

Possible job titles relevant to this qualification include:

Shearer - improver level

### Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Sharing information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Determining or applying required resources</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of nine (9) units made up of eight (8) core units and one (1) elective unit.

### **ELECTIVE UNITS**

- a maximum of one (1) unit may be selected from units aligned to Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the shearing industry.

### **CORE UNITS**

#### **Occupational Health and Safety**

AHCOHS201A Participate in OHS processes

#### **Shearing**

AHCSHG201A Crutch sheep

AHCSHG203A Shear sheep to novice level

AHCSHG204A Shear sheep to improver level

AHCSHG205A Grind combs and cutters for machine shearing

AHCSHG206A Prepare handpiece and downtube for machine shearing

#### **Work**

AHCWRK204A Work effectively in the industry

AHCWRK209A Participate in environmentally sustainable work practices

## AHC21410 Certificate II in Wool Handling

### Modification History

Not Applicable

### Description

This qualification provides an entry level occupational outcome in wool handling. The wool industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Advanced Wool Handling, Certificate III in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

#### Job roles

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

Wool handler

### Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Sharing information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Determining or applying required resources</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of eight (8) units made up of seven (7) core units and one (1) elective unit.

### **ELECTIVE UNITS**

- a maximum of one (1) unit may be selected from Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the wool handling industry.

### **CORE UNITS**

#### **Occupational Health and Safety**

AHCOHS201A Participate in OHS processes

#### **Shearing**

AHCSHG202A Assist in preparing for shearing and crutching

#### **Wool**

AHCWOL201A Pen sheep

AHCWOL202A Perform board duties

AHCWOL203A Carry out wool pressing

#### **Work**

AHCWRK204A Work effectively in the industry

AHCWRK202A Observe environmental work practices

## AHC21510 Certificate II in Floriculture

### Modification History

Release	TP Version	Comments
3	AHC10v5	Replaced imported elective unit <i>TLID2010A Operate a forklift</i> with <i>TLILIC2001A Licence to operate a forklift truck</i> in response to changes in national licencing regulations  Equivalent imported units updated
2	AHC10v4	Equivalent imported units updated
1	AHC10	Initial release

### Description

This qualification provides an occupational outcome in floriculture. The floriculture industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Floriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

## Job roles

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

Flower grower

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Undertaking learning as required for work</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>



## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of one (1) core unit and fourteen elective units.

### ELECTIVE UNITS

- a minimum of three (3) units must come from elective group A
- a minimum of eight (8) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units aligned to Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course.  
Selected units must be relevant to job outcomes in the flower growing industry.

### CORE UNIT

#### Occupational Health and Safety

Unit code	Unit title
AHCOHS201A	Participate in OHS processes

### ELECTIVE UNITS GROUP A

#### Plants

Unit code	Unit title
AHCPCM201A	Recognise plants

#### Nursery

Unit code	Unit title
AHCNSY201A	Pot up plants
AHCNSY202A	Tend nursery plants
AHCNSY203A	Undertake propagation activities

**Production horticulture**

Unit code	Unit title
AHCPHT201A	Plant horticultural crops
AHCPHT203A	Support horticultural crop harvesting
AHCPHT204A	Undertake field budding and grafting
AHCPHT205A	Carry out postharvest operations

**Soils and media**

Unit code	Unit title
AHCSOL201A	Determine basic properties of soil and/or growing media

**ELECTIVE UNITS GROUP B****Biosecurity**

Unit code	Unit title
AHCBIO202A	Follow site quarantine procedures

**Chemicals**

Unit code	Unit title
AHCCHM201A	Apply chemicals under supervision

**Drainage**

Unit code	Unit title
AHCDRG201A	Maintain drainage systems

**Infrastructure**

Unit code	Unit title
AHCINF203A	Maintain properties and structures

### Irrigation

Unit code	Unit title
AHCIRG202A	Assist with the operation of pressurised irrigation
AHCIRG206A	Maintain pressurised irrigation systems

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM201A	Operate two wheel motorbikes
AHCMOM202A	Operate tractors
AHCMOM203A	Operate basic machinery and equipment
AHCMOM204A	Undertake operational maintenance of machinery
AHCMOM205A	Operate vehicles
AHCMOM211A	Operate side by side utility vehicles
FPICOT2234B	Operate 4x4 vehicle
TLILIC2001A	Licence to operate a forklift truck

### Nursery

Unit code	Unit title
AHCNSY204A	Maintain indoor plants

### Pest management

Unit code	Unit title
AHCPMG201A	Treat weeds

AHCPMG202A	Treat plant pests, diseases and disorders
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**Work**

Unit code	Unit title
AHCWRK206A	Observe enterprise quality assurance procedures
AHCWRK207A	Collect and record production data
AHCWRK208A	Provide information on products and services
AHCWRK209A	Participate in environmentally sustainable work practices
TLID1001A	Shift materials safely using manual handling methods

## AHC21610 Certificate II in Landscaping

### Modification History

Not Applicable

### Description

This qualification provides an occupational outcome in landscaping. The landscaping industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate III in Landscape Construction.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

#### Job roles

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

Landscape labourer, landscape trades assistant

### Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of eight (8) core units and seven (7) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units must come from the elective unit list

- a maximum of three (3) units may be selected from the elective unit list or from units aligned to Certificates II or III in AHC10 or from any other currently endorsed training package or accredited course. Selected units must meet job outcomes relevant to landscaping.

## CORE UNITS

### Occupational Health and Safety

AHCOHS201A Participate in OHS processes

### Landscape

AHCLSC201A Assist with landscape construction work

AHCLSC202A Construct low-profile timber or modular retaining walls

AHCLSC203A Install aggregate paths

AHCLSC204A Lay paving

### Machinery operation and maintenance

AHCMOM203A Operate basic machinery and equipment

### Parks and gardens

AHCPGD201A Plant trees and shrubs

### Plants

AHCPCM201A Recognise plants

## ELECTIVE UNITS

### Arboriculture

AHCARB201A Apply a range of treatments to trees

AHCARB205A Operate and maintain chainsaws

### Chemicals

AHCCHM201A Apply chemicals under supervision

### Infrastructure

AHCINF203A Maintain properties and structures

AHCINF204A Fabricate and repair metal or plastic structures

### **Irrigation**

AHCIRG202A Assist with the operation of pressurised irrigation

AHCIRG203A Install micro-irrigation systems

AHCIRG204A Lay irrigation and/or drainage pipes

AHCIRG206A Maintain pressurised irrigation systems

### **Landscape**

AHCLSC205A Install tree protection devices

### **Machinery operation and maintenance**

AHCMOM202A Operate tractors

AHCMOM204A Undertake operational maintenance of machinery

AHCMOM205A Operate vehicles

### **Parks and gardens**

AHCPGD202A Prepare and maintain plant displays

AHCPGD203A Prune shrubs and small trees

AHCPGD204A Transplant small trees

### **Pest management**

AHCPMG201A Treat weeds

AHCPMG202A Treat plant pests, diseases and disorders

### **Soils and media**

AHCSOL201A Determine basic properties of soil and/or growing media

### **Turf**

AHCTRF201A Assist with turf construction

AHCTRF202A Prepare turf surfaces for play

AHCTRF203A Renovate grassed areas

AHCTRF204A Support turf establishment



**Work**

AHCWRK204A	Work effectively in the industry
AHCWRK205A	Participate in workplace communications
AHCWRK206A	Observe enterprise quality assurance procedures
AHCWRK208A	Provide information on products and services
AHCWRK209A	Participate in environmentally sustainable work practices

## AHC30110 Certificate III in Agriculture

### Modification History

Release	TP Version	Comments
6	AHC10v6	Added elective <i>AHCLSK335A Conduct dropped ovary technique procedures for spaying cattle</i>
5	AHC10v5	Added electives <i>MEM05049B Perform routine gas tungsten arc welding</i> and <i>MEM05050B Perform routine gas metal arc welding</i>  Removed elective <i>TLID2010A Operate a forklift</i> in response to new national licencing regulations  Equivalent imported units updated
4	AHC10v4	Equivalent imported units updated  Added missing prerequisite unit to Packaging Rules
3	AHC10v3	Corrected unit <i>AHCPCM303A</i> name in unit grid
2	AHC10v2.1	Elective bank groupings in AHC30110 were modified to provide greater flexibility
1	AHC10	Initial release

### Description

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

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, AHC40110 Certificate IV in Agriculture.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

- Farm or station hand
- Farm or station worker.
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### Licensing/Regulatory Information

There is no direct link between this qualification and licensing, legislative and/or regulatory requirements. However, an individual unit of competency may specify relevant licensing, legislative and/or regulatory requirements.

### Entry Requirements

#### Entry requirements

There are no entry requirements for this qualification.

### Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

AHC030309

## Packaging Rules

### Packaging Rules

Completion of sixteen (16) units made up of two (2) core units and fourteen (14) elective units.

### ELECTIVE UNITS

- a minimum of five (5) units must come from elective group A
- a minimum of five (5) units must come from elective groups A or B
- a maximum of four (4) units may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must be relevant to job outcomes in agriculture.

### CORE UNITS

#### Occupational health and safety

Unit code	Unit title

AHCOHS301A	Contribute to OHS processes
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**Work**

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

**ELECTIVE UNITS GROUP A****Agribusiness**

Unit code	Unit title
AHCAGB301A	Keep records for a primary production business

**Biosecurity**

Unit code	Unit title
AHCBIO301A	Work effectively in an emergency disease or plant pest response
AHCBIO302A	Identify and report unusual disease or plant pest signs
AHCBIO303A	Carry out emergency disease or plant pest control procedures at infected premises
AHCBIO304A	Carry out movement and security procedures
AHCBIO305A	Monitor and review biosecurity measures

**Broadacre cropping**

Unit code	Unit title
AHCBAC301A	Conserve forage
AHCBAC302A	Establish pastures and crops for livestock production
AHCBAC303A	Prepare to receive grains/seeds

AHCBAC304A	Test grains/seeds on receipt
AHCBAC305A	Undertake preparation of land for agricultural crop production
AHCBAC306A	Establish agricultural crops
AHCBAC307A	Maintain agricultural crops
AHCBAC308A	Undertake agricultural crop harvesting activities

### Business

Unit code	Unit title
AHCBUS301A	Use hand held e-business tools
BSBFIA301A	Maintain financial records
BSBINM201A	Process and maintain workplace information
BSBITU203A	Communicate electronically
BSBITU306A	Design and produce business documents
BSBWOR204A	Use business technology

### Chemicals

Unit code	Unit title
AHCCHM301A	Conduct fumigation in enclosed spaces
AHCCHM302A	Fumigate soil using chemicals
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals
AHCCHM305A	Conduct manual fumigation of vertebrate and invertebrate pests

### First aid

Unit code	Unit title
HLTFA301C	Apply first aid

HLTFA302C	Provide first aid in remote situation
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### Infrastructure

Unit code	Unit title
AHCINF301A	Implement property improvement, construction and repair
AHCINF302A	Plan and construct an electric fence
AHCINF303A	Plan and construct conventional fencing

### Irrigation

Unit code	Unit title
AHCIRG301A	Implement a maintenance program for an irrigation system
AHCIRG304A	Operate gravity fed irrigation systems
AHCIRG305A	Operate pressurised irrigation systems
AHCIRG306A	Troubleshoot irrigation systems

### Livestock

Unit code	Unit title
AHCLSK301A	Administer medication to livestock
AHCLSK305A	Maintain livestock water supplies
AHCLSK308A	Identify and draft livestock
AHCLSK309A	Implement animal health control programs
AHCLSK311A	Implement feeding plans for livestock
AHCLSK314A	Prepare animals for parturition
AHCLSK318A	Rear newborn and young livestock
AHCLSK323A	Maintain and monitor feed stocks
AHCLSK324A	Care for and train working dogs

AHCLSK325A	Castrate livestock
AHCLSK331A	Comply with industry animal welfare requirements

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM301A	Coordinate machinery and equipment maintenance and repair
AHCMOM302A	Perform machinery maintenance
AHCMOM304A	Operate machinery and equipment
AHCMOM305A	Operate specialised machinery and equipment
AHCMOM306A	Ground spread fertiliser and soil ameliorant
AHCMOM308A	Operate broadacre and row crop harvest machinery and equipment
AHCMOM309A	Operate broadacre sowing machinery and equipment
AHCMOM312A	Operate row crop planting and seeding machinery and equipment

### Merchandising and sales

Unit code	Unit title
AHCMER301A	Process customer complaints

### Pest management

Unit code	Unit title
AHCPMG301A	Control weeds
AHCPMG302A	Control plant pests, diseases and disorders

### Work

Unit code	Unit title
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AHCWRK301A	Collect samples for a rural production or horticulture monitoring program
AHCWRK302A	Monitor weather conditions
AHCWRK303A	Respond to emergencies
AHCWRK305A	Coordinate work site activities
AHCWRK306A	Comply with industry quality assurance requirements
AHCWRK308A	Handle bulk materials in storage area
AHCWRK311A	Conduct site inspections

## ELECTIVE UNITS GROUP B

### Artificial insemination

Unit code	Unit title
AHCAIS301A	Collect semen
AHCAIS302A	Process and store semen
AHCAIS303A	Artificially inseminate livestock

### Drainage

Unit code	Unit title
AHCDRG301A	Install drainage systems

### Fire

Unit code	Unit title
CPPFES2005A	Demonstrate first attack fire fighting equipment
PUAFIR204B	Respond to wildfire* <i>PUAFIR201B Prevent injury</i>

**Horse breeding**

<b>Unit code</b>	<b>Unit title</b>
AHCHBR302A	Carry out basic hoof care procedures
AHCHBR303A	Carry out mare mating or artificial insemination procedures
AHCHBR304A	Educate, ride and care for horses and equipment
AHCHBR305A	Handle and care for stallions
AHCHBR306A	Prevent and treat equine injury and disease
AHCHBR307A	Assess suitability of horses for stock work

**Hydroponics**

<b>Unit code</b>	<b>Unit title</b>
AHCHYD301A	Implement a maintenance program for hydroponic systems
AHCHYD302A	Install hydroponic systems

**Livestock**

<b>Unit code</b>	<b>Unit title</b>
AHCLSK302A	Mate and monitor reproduction of alpacas
AHCLSK303A	Carry out feedlot operations
AHCLSK304A	Carry out post-mortem examination of livestock
AHCLSK306A	Coordinate and monitor production performance
AHCLSK307A	Euthanase livestock
AHCLSK310A	Implement feeding plans for intensive production
AHCLSK312A	Coordinate artificial insemination and fertility management of livestock
AHCLSK313A	Monitor livestock production growing environments
AHCLSK315A	Prepare for and implement natural mating of livestock

AHCLSK316A	Prepare livestock for competition
AHCLSK317A	Plan to exhibit livestock
AHCLSK319A	Slaughter livestock
AHCLSK320A	Coordinate and monitor livestock transport
AHCLSK321A	Service and repair bores and windmills
AHCLSK322A	Transport farm produce or bulk materials
AHCLSK326A	Mix and mill standard stockfeed
AHCLSK327A	Collect, store and administer colostrum
AHCLSK328A	Remove and facilitate reuse of effluent and manure from an intensive production system
AHCLSK329A	Implement procedures for calving
AHCLSK330A	Implement procedures for foaling down mares
AHCLSK332A	Monitor animals in intensive production systems
AHCLSK333A	Monitor pen condition and ration suitability
AHCLSK335A	Conduct dropped ovary technique procedures for spaying cattle

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM202A	Operate tractors
AHCMOM206A	Conduct grader operations
AHCMOM207A	Conduct front-end loader operations
AHCMOM307A	Operate a cane harvester
AHCMOM310A	Operate land-forming machinery and equipment
AHCMOM311A	Operate precision control technology
AHCMOM313A	Operate mobile irrigation machinery and equipment
AHCMOM314A	Transport machinery

AHCMOM315A	Operate chemical application machinery and equipment
RIIMPO319A	Conduct backhoe/loader operations
RIIMPO324A	Conduct civil construction grader operations
RIIMPO318B	Conduct civil construction skid steer loader operations
TLILIC2001A	Licence to operate a forklift truck

### Plants

Unit code	Unit title
AHCPCM301A	Implement a plant nutrition program
AHCPCM302A	Provide information on plants and their culture
AHCPCM303A	Identify plant specimens
AHCPGD402A	Plan a plant establishment program

### Production horticulture

Unit code	Unit title
AHCPHT301A	Carry out a crop regulation program
AHCPHT302A	Coordinate horticultural crop harvesting
AHCPHT303A	Implement a post-harvest program
AHCPHT304A	Harvest horticultural crops mechanically
AHCPHT305A	Regulate crops
AHCPHT306A	Establish horticultural crops

### Shearing

Unit code	Unit title
AHCSHG301A	Prepare livestock for shearing
AHCSHG302A	Prepare combs and cutters for machine shearing

AHCSHG306A	Carry out post-shearing procedures
AHCSHG307A	Plan and prepare for alpaca shearing

### Soils and media

Unit code	Unit title
AHCSOL401A	Sample soils and interpret results

### Tools and equipment

Unit code	Unit title
AHCTEQ301A	Install and terminate extra low voltage wiring systems
MEM05004C	Perform routine oxy acetylene welding
MEM05007C	Perform manual heating and thermal cutting
MEM05049B	Perform routine gas tungsten arc welding
MEM05050B	Perform routine gas metal arc welding
MEM05012C	Perform routine manual metal arc welding
MEM05015D	Weld using manual metal arc welding process* <i>MEM05012C Perform routine manual metal arc welding</i> <i>MEM05051A Select welding processes</i> <i>MEM05052A Apply safe welding practices</i> <i>MEM12023A Perform engineering measurements</i> <i>MEM18001C Use hand tools</i> <i>MEM18002B Use power tools/hand held operations</i>
MEM05017D	Weld using gas metal arc welding process* <i>MEM05050B Perform routine gas metal arc welding</i> <i>MEM05051A Select welding processes</i> <i>MEM05052A Apply safe welding practices</i> <i>MEM12023A Perform engineering measurements</i> <i>MEM18001C Use hand tools</i>

	<i>MEM18002B Use power tools/hand held operations</i>
MEM05019D	<p>Weld using gas tungsten arc welding process*</p> <p><i>MEM05049B Perform routine gas tungsten arc welding</i></p> <p><i>MEM05051A Select welding processes</i></p> <p><i>MEM05052A Apply safe welding practices</i></p> <p><i>MEM12023A Perform engineering measurements</i></p> <p><i>MEM18001C Use hand tools</i></p> <p><i>MEM18002B Use power tools/hand held operations</i></p>

### Vertebrate pests

Unit code	Unit title
AHCVPT302A	Implement vertebrate pest control program

### Wool

Unit code	Unit title
AHCWOL304A	Prepare fleece wool for classing
AHCWOL308A	Prepare facilities for shearing and crutching
AHCWOL310A	Press wool for a clip
AHCWOL311A	Perform shed duties
AHCWOL312A	Class goat fibre
AHCWOL313A	Class alpaca fleece

## AHC30210 Certificate III in Agriculture (Dairy Production)

### Modification History

Release	TP Version	Comments
2	AHC10v5	Added electives <i>AHCAIS303A Artificially inseminate livestock</i> , <i>AHCLSK305A Maintain livestock water supplies</i> and <i>AHCPCM301A Implement a plant nutrition program</i>
1	AHC10	Initial release

### Description

This qualification provides a vocational outcome in dairying. The dairy industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Dairy farmhand

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>



## Packaging Rules

### Packaging Rules

Completion of seventeen (17) units made up of eleven (11) core units and six (6) elective units.

### ELECTIVE UNITS

- a minimum of three (3) units must come from the elective unit list
- a maximum of three (3) units from the elective units or from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in dairying.

### CORE UNITS

#### Broadacre cropping

Unit code	Unit title
AHCBAC302A	Establish pastures and crops for livestock production

#### Chemicals

Unit code	Unit title
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

#### Dairy

Unit code	Unit title
AHCDRY301A	Coordinate milking operations

#### Infrastructure

Unit code	Unit title
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AHCINF302A	Plan and construct an electric fence
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### Livestock

Unit code	Unit title
AHCLSK309A	Implement animal health control programs
AHCLSK311A	Implement feeding plans for livestock
AHCLSK318A	Rear newborn and young livestock
AHCLSK329A	Implement procedures for calving

### Occupational Health and Safety

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

### Work

Unit code	Unit title
AHCWRK303A	Respond to emergencies

### ELECTIVE UNITS

#### Artificial insemination

Unit code	Unit title
AHCAIS303A	Artificially inseminate livestock

#### Broadacre cropping

Unit code	Unit title
AHCBAC301A	Conserve forage
AHCBAC305A	Undertake preparation of land for agricultural crop production

AHCBAC306A	Establish agricultural crops
AHCBAC307A	Maintain agricultural crops
AHCBAC308A	Undertake agricultural crop harvesting activities

### Dairy

Unit code	Unit title
AHCDRY302A	Operate a dairy recycling system

### Infrastructure

Unit code	Unit title
AHCINF301A	Implement property improvement, construction and repair
AHCINF303A	Plan and construct conventional fencing

### Irrigation

Unit code	Unit title
AHCIRG301A	Implement a maintenance program for an irrigation system
AHCIRG304A	Operate gravity fed irrigation systems
AHCIRG305A	Operate pressurised irrigation systems

### Livestock

Unit code	Unit title
AHCLSK301A	Administer medication to livestock
AHCLSK305A	Maintain livestock water supplies
AHCLSK308A	Identify and draft livestock
AHCLSK312A	Coordinate artificial insemination and fertility management of livestock

AHCLSK315A	Prepare for and implement natural mating of livestock
AHCLSK320A	Coordinate and monitor livestock transport
AHCLSK321A	Service and repair bores and windmills
AHCLSK322A	Transport farm produce or bulk materials
AHCLSK323A	Maintain and monitor feed stocks
AHCLSK325A	Castrate livestock
AHCLSK326A	Mix and mill standard stockfeed
AHCLSK327A	Collect, store and administer colostrum
AHCLSK328A	Remove and facilitate reuse of effluent and manure from an intensive production system
AHCLSK331A	Comply with industry animal welfare requirements

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM305A	Operate specialised machinery and equipment

### Plants

Unit code	Unit title
AHCPCM301A	Implement a plant nutrition program

### Work

Unit code	Unit title
AHCWRK301A	Collect samples for a rural production or horticulture monitoring program
AHCWRK302A	Monitor weather conditions
AHCWRK305A	Coordinate work site activities
AHCWRK306A	Comply with industry quality assurance requirements

AHCWRK310A	Provide on-job training support
AHCWRK313A	Implement and monitor environmentally sustainable work practices

## AHC30310 Certificate III in Horse Breeding

### Modification History

Not Applicable

### Description

This qualification provides a vocational outcome in horse breeding. The horse breeding industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Stud farm worker

### Licensing/Regulatory Information

Not Applicable

### Entry Requirements

#### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of one (1) core unit and fourteen (14) elective units.

## ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of seven (7) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the horse breeding industry.

## CORE UNIT

### Occupational health and safety

AHCOHS301A      Contribute to OHS processes

## ELECTIVE UNITS GROUP A

### Horse breeding

AHCHBR302A      Carry out basic hoof care procedures  
AHCHBR303A      Carry out mare mating or artificial insemination procedures  
AHCHBR304A      Educate, ride and care for horses and equipment  
AHCHBR305A      Handle and care for stallions  
AHCHBR306A      Prevent and treat equine injury and disease  
AHCHBR307A      Assess suitability of horses for stock work  
AHCHBR308A      Maintain horses in a healthy state and safe environment  
AHCHBR309A      Determine nutritional requirements for standardbreds or thoroughbreds  
AHCHBR401A      Carry out stud stable management duties  
AHCHBR402A      Supervise raising young horses

### Livestock

AHCLSK330A      Implement procedures for foaling down mares  
AHCLSK417A      Manage horses for stock work

## ELECTIVE UNITS GROUP B

### Broadacre cropping

AHCBAC301A      Conserve forage



AHCBAC302A Establish pastures and crops for livestock production

### **Chemicals**

AHCCHM303A Prepare and apply chemicals

AHCCHM304A Transport, handle and store chemicals

### **Infrastructure**

AHCINF301A Implement property improvement, construction and repair

AHCINF302A Plan and construct an electric fence

AHCINF303A Plan and construct conventional fencing

### **Livestock**

AHCLSK305A Maintain livestock water supplies

AHCLSK311A Implement feeding plans for livestock

AHCLSK315A Prepare for and implement natural mating of livestock

AHCLSK320A Coordinate and monitor livestock transport

AHCLSK323A Maintain and monitor feed stocks

### **Machinery operation and maintenance**

AHCMOM202A Operate tractors

AHCMOM212A Operate quad bikes

### **Work**

AHCWRK302A Monitor weather conditions

AHCWRK303A Respond to emergencies

AHCWRK305A Coordinate work site activities

AHCWRK306A Comply with industry quality assurance requirements

AHCWRK308A Handle bulk materials in storage area

AHCWRK310A Provide on-job training support

AHCWRK313A Implement and monitor environmentally sustainable work practices

## AHC30410 Certificate III in Pork Production

### Modification History

Not Applicable

### Description

This qualification provides a vocational outcome in the pork production industry. The pork industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry or on completion of the Pork Industry Stockperson Skill Set.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Pork Production.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

#### Licensing

Legislation in some states mandates that stockpersons must be competent in euthanasing animals. The unit AHCLSK307A Euthanase animals should be included in courses where this is required in the certificate outcome.

#### Job roles

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

Stockperson or animal attendant

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>



## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of one (1) core unit and fourteen (14) elective units.

### ELECTIVE UNITS

- a minimum of six (6) units must come from elective group A
- a minimum of five (5) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in pork production.

### CORE UNITS

#### Occupational health and safety

AHCOHS301A      Contribute to OHS processes

### ELECTIVE UNITS GROUP A

#### Artificial insemination

AHCAIS302A Process and store semen

#### Livestock

AHCLSK301A      Administer medication to livestock  
 AHCLSK304A      Carry out post-mortem examination of livestock  
 AHCLSK307A      Euthanase livestock  
 AHCLSK308A      Identify and draft livestock  
 AHCLSK309A      Implement animal health control programs  
 AHCLSK310A      Implement feeding plans for intensive production  
 AHCLSK313A      Monitor livestock production growing environments

AHCLSK314A	Prepare animals for parturition
AHCLSK318A	Rear newborn and young livestock
AHCLSK323A	Maintain and monitor feed stocks
AHCLSK327A	Collect, store and administer colostrum
AHCLSK328A	Remove and facilitate reuse of effluent and manure from an intensive production system
AHCLSK331A	Comply with industry animal welfare requirements

### **Pork production**

AHCPRK301A	Pregnancy test pigs
AHCPRK302A	Treat rectal prolapse in pigs

### **Work**

AHCWRK305A	Coordinate work site activities
AHCWRK313A	Implement and monitor environmentally sustainable work practices

## **ELECTIVE UNITS GROUP B**

### **Pork production**

AHCPRK202A	Care for weaner and grower pigs
AHCPRK303A	Artificially inseminate pigs
AHCPRK304A	Mate pigs and monitor dry sow performance

### **Livestock**

AHCLSK303A	Carry out feedlot operations
AHCLSK305A	Maintain livestock water supplies
AHCLSK306A	Coordinate and monitor production performance
AHCLSK311A	Implement feeding plans for livestock
AHCLSK315A	Prepare for and implement natural mating of livestock
AHCLSK316A	Prepare livestock for competition
AHCLSK319A	Slaughter livestock
AHCLSK320A	Coordinate and monitor livestock transport
AHCLSK322A	Transport farm produce or bulk materials
AHCLSK325A	Castrate livestock

AHCLSK326A Mix and mill standard stockfeed

**Vertebrate Pests**

AHCVPT302A Implement vertebrate pest control program

## AHC30510 Certificate III in Poultry Production

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This qualification provides a vocational outcome in the poultry production. The poultry industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Poultry Production.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Owner/manager broiler farm

Egg farm supervisor

Free range/broiler egg farm supervisor

Hatchery supervisor

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>



## Packaging Rules

### Packaging Rules

Completion of seventeen (17) units made up of nine (9) core units and eight (8) elective units.

### ELECTIVE UNITS

- a minimum of five (5) units must come from the elective unit list
- a maximum of three (3) units may be selected from the elective unit list or from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the poultry industry.

### CORE UNITS

#### Occupational health and safety

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

#### Work

Unit code	Unit title
AHCWRK306A	Comply with industry quality assurance requirements
AHCWRK313A	Implement and monitor environmentally sustainable work practices

#### Livestock

Unit code	Unit title
AHCLSK304A	Carry out post-mortem examination of livestock
AHCLSK307A	Euthanase livestock
AHCLSK309A	Implement animal health control programs

**Food**

Unit code	Unit title
FDFTEC3001A	Participate in a HACCP team* <i>FDFFS2001 Implement the food safety program and procedures</i>

**Agribusiness**

Unit code	Unit title
AHCAGB301A	Keep records for a primary production business

**Biosecurity**

Unit code	Unit title
AHCBIO302A	Identify and report unusual disease or plant pest signs

**ELECTIVE UNITS****Chemicals**

Unit code	Unit title
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

**Livestock**

Unit code	Unit title
AHCLSK301A	Administer medication to livestock
AHCLSK306A	Coordinate and monitor production performance
AHCLSK310A	Implement feeding plans for intensive production
AHCLSK313A	Monitor livestock production growing environments

AHCLSK323A	Maintain and monitor feed stocks
AHCLSK328A	Remove and facilitate reuse of effluent and manure from an intensive production system

### Poultry

Unit code	Unit title
AHCPLY301A	Artificially inseminate birds
AHCPLY302A	Brood poultry
AHCPLY303A	Identify and sex birds
AHCPLY304A	Incubate eggs
AHCPLY305A	Beak trim chickens
AHCPLY306A	Clean and fumigate intensive production sheds

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM301A	Coordinate machinery and equipment maintenance and repair
AHCMOM304A	Operate machinery and equipment

### Work

Unit code	Unit title
AHCWRK310A	Provide on-job training support

## AHC30610 Certificate III in Production Horticulture

### Modification History

Release	TP Version	Comments
3	AHC10v5	Added six elective units to cover grape growing (viticulture)
2	AHC10v3	Elective bank groupings modified to provide greater flexibility
1	AHC10	Initial release

### Description

This qualification provides a vocational outcome in production horticulture. The qualification enables individuals to select a tree cropping, vegetable or berry production, grape growing or mushroom production context as a job focus, or a mixture in the case of mixed enterprises.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Production Horticulture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

- vegetable farm worker

- orchard or vineyard farm worker
- mushroom farm worker
- plantation worker

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using basic technology skills</li> <li>Applying OHS knowledge when using technology</li> </ul>
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**Packaging Rules****Packaging Rules**

Completion of fifteen (15) units made up of one (1) core unit and fourteen (14) elective units.

**ELECTIVE UNITS**

- a minimum of four (4) units must come from elective group A
- a minimum of seven (7) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units packaged in Certificates II, III IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the production horticulture industry.

**CORE UNIT****Occupational health and safety**

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

**ELECTIVE UNITS GROUP A****Biosecurity**

Unit code	Unit title
AHCBIO302A	Identify and report unusual disease or plant pest signs
AHCBIO305A	Monitor and review biosecurity measures

**Chemicals**

Unit code	Unit title
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

### Irrigation

Unit code	Unit title
AHCIRG305A	Operate pressurised irrigation systems

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM304A	Operate machinery and equipment

### Pest management

Unit code	Unit title
AHCPMG301A	Control weeds
AHCPMG302A	Control plant pests, diseases and disorders

### Production horticulture

Unit code	Unit title
AHCPHT302A	Coordinate horticultural crop harvesting
AHCPHT303A	Implement a post-harvest program
AHCPHT304A	Harvest horticultural crops mechanically
AHCPHT306A	Establish horticultural crops

### Work

Unit code	Unit title
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AHCWRK313A	Implement and monitor environmentally sustainable work practices
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## ELECTIVE UNITS GROUP B

### Biosecurity

Unit code	Unit title
AHCBIO301A	Work effectively in an emergency disease or plant pest response
AHCBIO303A	Carry out emergency disease or plant pest control procedures at infected premises
AHCBIO304A	Carry out movement and security procedures

### Chemicals

Unit code	Unit title
AHCCHM301A	Conduct fumigation in enclosed spaces
AHCCHM302A	Fumigate soil using chemicals

### Drainage

Unit code	Unit title
AHCDRG301A	Install drainage systems
AHCDRG302A	Measure drainage system performance
AHCDRG303A	Troubleshoot drainage systems

### Hydroponics

Unit code	Unit title
AHCHYD301A	Implement a maintenance program for hydroponic systems
AHCHYD302A	Install hydroponic systems



**Irrigation**

Unit code	Unit title
AHCIRG301A	Implement a maintenance program for an irrigation system
AHCIRG302A	Install irrigation systems
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG306A	Troubleshoot irrigation systems

**Machinery operation and maintenance**

Unit code	Unit title
AHCMOM301A	Coordinate machinery and equipment maintenance and repair
AHCMOM302A	Perform machinery maintenance
AHCMOM305A	Operate specialised machinery and equipment
AHCMOM315A	Operate chemical application machinery and equipment
FDFWGG3008A	Operate a mechanical grape harvester
FDFWGG3013A	Operate spreading and seeding equipment

**Nursery**

Unit code	Unit title
FDFWGG3004A	Coordinate nursery activities
FDFWGG3005A	Perform field nursery activities
FDFWGG3009A	Monitor and maintain nursery plants
FDFWGG3011A	Perform shed nursery activities

**Pest management**

Unit code	Unit title
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AHCPMG303A	Maintain biological cultures
AHCPMG304A	Release biological agents

### Production horticulture

Unit code	Unit title
AHCPHT301A	Carry out a crop regulation program
AHCPHT305A	Regulate crops
AHCPHT307A	Prepare raw materials and compost the feedstocks
AHCPHT308A	Prepare value added compost-based products
AHCPHT309A	Supervise mushroom substrate preparation
FDFWGG3002A	Coordinate canopy management activities
FDFWGG3006A	Coordinate hand pruning activities

### Work

Unit code	Unit title
AHCWRK302A	Monitor weather conditions
AHCWRK303A	Respond to emergencies
AHCWRK305A	Coordinate work site activities
AHCWRK306A	Comply with industry quality assurance requirements
AHCWRK308A	Handle bulk materials in storage area

## AHC30710 Certificate III in Horticulture

### Modification History

Release	TP Version	Comments
3	AHC10v5	Added elective <i>AHCWRK311A Conduct site inspection</i>
2	AHC10v3	Corrected unit AHCPCM303A name in unit grid
1	AHC10	Initial release

### Description

This qualification provides a general vocational outcome in amenity horticulture. It is not a suitable pathway for horticultural trades.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include any of the specialist qualifications at Certificate IV.

#### Job roles

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

- Horticulturist
- Gardener.
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### Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Participating in ongoing learning</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of sixteen (16) units made up of two (2) core units and fourteen (14) elective units.

### ELECTIVE UNITS

- a minimum of eight (8) units must come from elective group A
- a minimum of three (3) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must meet job outcomes relevant to horticulture.

### CORE UNITS

#### Occupational Health and Safety

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

#### Work

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

### ELECTIVE UNITS GROUP A

#### Arboriculture

Unit code	Unit title
AHCARB301A	Implement a tree maintenance program
AHCARB302A	Conduct tree inspections
AHCARB303A	Implement a tree pruning program
AHCARB304A	Fell trees with advanced techniques

AHCARB305A	Remove trees in confined spaces
AHCARB306A	Undertake aerial rescue
AHCARB307A	Undertake complex tree climbing
AHCARB308A	Install cable and bracing
AHCARB309A	Implement a tree protection program
FPIFGM3205A	Fall trees manually (advanced)

### Landscape

Unit code	Unit title
AHCLSC301A	Set out site for construction works
AHCLSC302A	Construct landscape features using concrete
AHCLSC303A	Construct brick and or block structures and features
AHCLSC304A	Erect timber structures and features
AHCLSC305A	Construct stone structures and features
AHCLSC306A	Implement a paving project
AHCLSC307A	Implement a retaining wall project
AHCLSC308A	Install metal structures and features
AHCLSC309A	Install water features
AHCLSC310A	Implement a tree transplanting program

### Nursery

Unit code	Unit title
AHCNSY301A	Maintain nursery plants
AHCNSY302A	Receive and dispatch nursery products
AHCNSY303A	Install and maintain plant displays
AHCNSY304A	Deliver and promote sales of plants

AHCNSY305A	Prepare specialised plants
AHCNSY306A	Implement a propagation plan
AHCNSY307A	Operate fertigation equipment

### Parks and gardens

Unit code	Unit title
AHCPGD301A	Implement a plant establishment program
AHCPGD302A	Plan and maintain plant displays
AHCPGD303A	Perform specialist amenity pruning
AHCPGD304A	Implement a landscape maintenance program
AHCPGD305A	Conduct operational inspection of park facilities
AHCPGD306A	Implement a maintenance program for an aquatic environment

### Pest management

Unit code	Unit title
AHCPMG301A	Control weeds
AHCPMG302A	Control plant pests, diseases and disorders

### Plants

Unit code	Unit title
AHCPCM301A	Implement a plant nutrition program
AHCPCM302A	Provide information on plants and their culture
AHCPCM303A	Identify plant specimens

### Soils and media

Unit code	Unit title
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AHCSOL301A	Prepare growing media
AHCSOL302A	Construct a soil profile

### Turf

Unit code	Unit title
AHCTRF301A	Construct turf playing surfaces
AHCTRF302A	Establish turf
AHCTRF303A	Implement a grassed area maintenance program
AHCTRF304A	Monitor turf health
AHCTRF305A	Renovate sports turf

### ELECTIVE UNITS GROUP B

#### Biosecurity

Unit code	Unit title
AHCBIO301A	Work effectively in an emergency disease or plant pest response
AHCBIO302A	Identify and report unusual disease or plant pest signs
AHCBIO303A	Carry out emergency disease or plant pest control procedures at infected premises
AHCBIO304A	Carry out movement and security procedures
AHCBIO305A	Monitor and review biosecurity measures

#### Chemicals

Unit code	Unit title
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals



**Irrigation**

<b>Unit code</b>	<b>Unit title</b>
AHCIRG301A	Implement a maintenance program for an irrigation system
AHCIRG302A	Install irrigation systems
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG305A	Operate pressurised irrigation systems
AHCIRG306A	Troubleshoot irrigation systems

**Machinery operation and maintenance**

<b>Unit code</b>	<b>Unit title</b>
AHCMOM304A	Operate machinery and equipment

**Water**

<b>Unit code</b>	<b>Unit title</b>
AHCWAT301A	Monitor and operate water treatment processes

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK305A	Coordinate work site activities
AHCWRK311A	Conduct site inspection
RIOHS302A	Implement traffic management plan

## AHC30810 Certificate III in Arboriculture

### Modification History

Release	TP Version	Comments
4	AHC10v5	Equivalent imported units updated
3	AHC10v4	Equivalent imported units updated
2	AHC10v3	Corrected Unit AHCPCM303A name in unit grid
1	AHC10	Initial release

### Description

This qualification provides a general vocational outcome in arboriculture. The arboriculture industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Arboriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Arborist

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning new skills and techniques</li> <li>• Participating in ongoing learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of 15 units made up of two (2) core units and thirteen (13) elective units.

### ELECTIVE UNITS

- a minimum of seven (7) units must come from elective group A
- a minimum of four (4) units must come from elective groups A or B
- a maximum of two (2) units may be selected from units aligned to Certificates II, III, IV or Diploma in AHC10 or from any other endorsed training package. Selected units must be relevant to job outcomes in the arboriculture industry.

### CORE UNITS

#### Occupational Health and Safety

CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry

#### Arboriculture

AHCARB310A Perform aerial rigging

### ELECTIVE UNITS GROUP A

#### Arboriculture

AHCARB301A Implement a tree maintenance program

AHCARB302A Conduct tree inspections

AHCARB303A Implement a tree pruning program

AHCARB304A Fell trees with advanced techniques

AHCARB305A Remove trees in confined spaces

AHCARB306A Undertake aerial rescue

AHCARB307A Undertake complex tree climbing

FPICOT2221B Trim and cross cut felled trees

### ELECTIVE UNITS GROUP B

**Arboriculture**

AHCARB308A	Install cable and bracing
FPIFGM3204A	Fall trees manually (intermediate)
FPIFGM3205A	Fall trees manually (advanced)

**Chemicals**

AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

**First Aid**

HLTFA201A	Provide basic emergency life support
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**Machinery operation and maintenance**

AHCMOM207A	Conduct front end loader operations
CPCCCM2010B	Work safely at heights
CPCCCM3001C	Operate elevated work platforms
RIIMPO318B	Conduct civil construction skid steer loader operations
TLILIC2005A	Licence to operate a boom-type elevating work platform (boom length 11 meters or more)

**Plants**

AHCPCM303A	Identify plant specimens
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**Work**

AHCWRK305A	Coordinate work site activities
AHCWRK313A	Implement and monitor environmentally sustainable work practices
AHCWRK311A	Conduct site inspections
CPCCCM3003A	Work safely around power sources, services and assets
CPCCDO3001A	Perform dogging
RIIOHS302A	Implement traffic management plan

## **AHC30910 Certificate III in Landscape Construction**

### **Modification History**

Not Applicable

### **Description**

This qualification provides a general vocational outcome in landscape construction. The landscaping industry expects this qualification to be achieved to meet job outcomes at this level.

### **Pathways Information**

#### **Qualification pathways**

#### **Pathways into the qualification**

This qualification may be accessed by direct entry.

#### **Pathways from the qualification**

Further training pathways from this qualification include, but are not limited to, Certificate IV in Horticulture or Diploma of Landscape Design.

#### **Australian Apprenticeships**

This qualification is suitable for an Australian Apprenticeship.

#### **Job roles**

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

Landscaper

### **Licensing/Regulatory Information**

Not Applicable

### **Entry Requirements**

#### **Entry requirements**

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation.</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Participating in ongoing learning</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of twelve (12) core units and three (3) elective units.

## ELECTIVE UNITS

- a maximum of three (3) units may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the landscape construction industry.

## CORE UNITS

### Occupational Health and Safety

AHCOHS301A      Contribute to OHS processes

### Landscape

AHCLSC301A      Set out site for construction works  
AHCLSC302A      Construct landscape features using concrete  
AHCLSC303A      Construct brick and/or block structures and features  
AHCLSC305A      Construct stone structures and features  
AHCLSC306A      Implement a paving project  
AHCLSC307A      Implement a retaining wall project

### Business

AHCBUS402A      Cost a project

### Drainage

AHCDRG301A      Install drainage systems

### Plants

AHPCPM302A      Provide information on plants and their culture

### Parks and gardens

AHCPGD301A      Implement a plant establishment program

### Soils and media

AHCSOL302A      Construct a soil profile



## AHC31010 Certificate III in Parks and Gardens

### Modification History

June 2012. Corrected Unit AHCCPM303A name in Unit grid.

### Description

This qualification provides a vocational outcome in parks and gardens. The parks and gardens industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Parks and Gardens.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Municipal/city gardener

Horticulturist

### Licensing/Regulatory Information

Not Applicable

### Entry Requirements

#### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Participating in ongoing learning</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of sixteen (16) units made up of ten (10) core units and six (6) elective units.

**ELECTIVE UNITS**

- a minimum of three (3) units must come from the elective unit list
- a maximum of three (3) units may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the parks and gardens industry.

**CORE UNITS****Occupational health and safety**

AHCOHS301A      Contribute to OHS processes

**Arboriculture**

AHCARB302A      Conduct tree inspections

**Parks and gardens**

AHCPGD305A      Conduct operational inspection of park facilities

**Pest management**

AHCPMG301A      Control weeds

AHCPMG302A      Control plant pests, diseases and disorders

**Plants**

AHCPCM301A      Implement a plant nutrition program

**Soils and media**

AHCSOL301A      Prepare growing media

AHCSOL302A      Construct a soil profile

**Turf**

AHCTRF302A      Establish turf

**Work**

AHCWRK313A      Implement and monitor environmentally sustainable work practices

**ELECTIVE UNITS**

**Arboriculture**

AHCARB301A	Implement a tree maintenance program
AHCARB308A	Install cable and bracing
AHCARB309A	Implement a tree protection program
FPIFGM3205A	Fall trees manually (advanced)

**Chemicals**

AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

**Irrigation**

AHCIRG301A	Implement a maintenance program for an irrigation system
AHCIRG302A	Install irrigation systems
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG305A	Operate pressurised irrigation systems
AHCIRG306A	Troubleshoot irrigation systems

**Landscape**

AHCLSC301A	Set out site for construction works
AHCLSC302A	Construct landscape features using concrete
AHCLSC303A	Construct brick and or block structures and features
AHCLSC304A	Erect timber structures and features
AHCLSC305A	Construct stone structures and features
AHCLSC306A	Implement a paving project
AHCLSC307A	Implement a retaining wall project
AHCLSC308A	Install metal structures and features
AHCLSC309A	Install water features
AHCLSC310A	Implement a tree transplanting program

**Machinery operation and maintenance**

AHCMOM304A	Operate machinery and equipment
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**Natural area restoration**

- AHCNAR301A Maintain natural areas  
AHCNAR303A Implement revegetation works

**Parks and gardens**

- AHCPGD301A Implement a plant establishment program  
AHCPGD302A Plan and maintain plant displays  
AHCPGD303A Perform specialist amenity pruning  
AHCPGD304A Implement a landscape maintenance program  
AHCPGD306A Implement a maintenance program for an aquatic environment

**Plants**

- AHCPCM302A Provide information on plants and their culture  
AHCPCM303A Identify plant specimens

**Turf**

- AHCTRF301A Construct turf playing surfaces  
AHCTRF303A Implement a grassed area maintenance program  
AHCTRF304A Monitor turf health  
AHCTRF305A Renovate sports turf

## AHC31110 Certificate III in Production Nursery

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

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

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Production Nursery or Certificate IV in Retail Nursery.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Nursery worker

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Participating in ongoing learning</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of sixteen (16) units made up of thirteen (13) core units and three (3) elective units.

### ELECTIVE UNITS

- a minimum of two (2) units must come from the elective unit list.
- a maximum of one (1) unit may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the nursery industry.

### CORE UNITS

#### Occupational Health and Safety

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

#### Biosecurity

Unit code	Unit title
AHCBIO301A	Work effectively in an emergency disease or plant pest response

#### Chemicals

Unit code	Unit title
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

#### Irrigation

Unit code	Unit title
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AHCIRG306A	Troubleshoot irrigation systems
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### Pest management

Unit code	Unit title
AHCPMG301A	Control weeds
AHCPMG302A	Control plant pests, diseases and disorders

### Plants

Unit code	Unit title
AHCPCM301A	Implement a plant nutrition program
AHCPCM302A	Provide information on plants and their culture

### Nursery

Unit code	Unit title
AHCNSY301A	Maintain nursery plants
AHCNSY302A	Receive and dispatch nursery products

### Soils and media

Unit code	Unit title
AHCSOL301A	Prepare growing media
AHCSOL401A	Sample soils and interpret results

## ELECTIVE UNITS

### Biosecurity

Unit code	Unit title
AHCBIO302A	Identify and report unusual disease or plant pest signs
AHCBIO303A	Carry out emergency disease or plant pest control procedures at

	infected premises
AHCBIO304A	Carry out movement and security procedures
AHCBIO305A	Monitor and review biosecurity measures

### Business

Unit code	Unit title
AHCBUS404A	Operate within a budget framework

### Chemicals

Unit code	Unit title
AHCCHM302A	Fumigate soil using chemicals

### Hydroponics

Unit code	Unit title
AHCHYD301A	Implement a maintenance program for hydroponic systems
AHCHYD302A	Install hydroponic systems

### Irrigation

Unit code	Unit title
AHCIRG301A	Implement a maintenance program for an irrigation system
AHCIRG302A	Install irrigation systems
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG305A	Operate pressurised irrigation systems

### Machinery operation and maintenance

Unit code	Unit title
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AHCMOM304A	Operate machinery and equipment
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### Merchandising and sales

Unit code	Unit title
AHCMER301A	Process customer complaints
AHCMER303A	Sell products and services
SIRXINV002A	Maintain and order stock
SIRXMER201	Merchandise products
SIRXMER202	Plan, create and maintain displays
SIRXSLS002A	Advise on products and services

### Nursery

Unit code	Unit title
AHCNSY303A	Install and maintain plant displays
AHCNSY304A	Deliver and promote sales of plants
AHCNSY305A	Prepare specialised plants
AHCNSY306A	Implement a propagation plan
AHCNSY307A	Operate fertigation equipment

### Water

Unit code	Unit title
AHCWAT301A	Monitor and operate water treatment processes

### Work

Unit code	Unit title
AHCWRK303A	Respond to emergencies

AHCWRK305A	Coordinate work site activities
AHCWRK313A	Implement and monitor environmentally sustainable work practices

## AHC31210 Certificate III in Retail Nursery

### Modification History

Release	TP Version	Comments
3	AHC10v4	Equivalent imported Units updated
2	AHC10v3	Corrected Unit AHCPCM303A name in Unit grid
1	AHC10	Initial release

### Description

This qualification provides a general vocational outcome for a retail nursery or garden centre sales assistant. The nursery industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Retail Nursery or Certificate IV in Production Nursery.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Nursery hand

Nursery worker

Retail sales assistant - nursery/greenlife.

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Participating in ongoing learning</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

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|--|--|
|  | <ul style="list-style-type: none"> <li>Applying OHS knowledge when using technology</li> </ul> |
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**Packaging Rules****Packaging Rules**

Completion of fifteen (15) units made up of ten (10) core units and five (5) elective units.

**ELECTIVE UNITS**

- a minimum of two (2) units must come from the elective unit list
- a maximum of three (3) units may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the nursery industry.

**CORE UNITS****Occupational Health and Safety**

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

**Plants**

Unit code	Unit title
AHCPCM302A	Provide information on plants and their culture
AHCPCM303A	Identify plant specimens

**Nursery**

Unit code	Unit title
AHCNSY301A	Maintain nursery plants
AHCNSY302A	Receive and dispatch nursery products

AHCNSY303A	Install and maintain plant displays
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### Merchandising and sales

Unit code	Unit title
SIRXCCS202	Interact with customers
SIRXMER303	Coordinate merchandise presentation

### Pest management

Unit code	Unit title
AHCPMG302A	Control plant pests, diseases and disorders

### Work

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

## ELECTIVE UNITS

### Chemicals

Unit code	Unit title
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

### Merchandising and sales

Unit code	Unit title
AHCMER301A	Process customer complaints
AHCMER302A	Provide advice on hardware products



AHCMER303A	Sell products and services
BSBCUS301B	Deliver and monitor a service to customers
BSBPRO301A	Recommend products and services
BSBSLS402A	Identify sales prospects
SIRXADM002A	Coordinate retail office
SIRXINV002A	Maintain and order stock
SIRXINV004A	Buy merchandise
SIRXMER201	Merchandise products
SIRXMER202	Plan, create and maintain displays
SIRXMER406	Monitor in-store visual merchandising display
SIRXRSK002A	Maintain store security
SIRXSLS002A	Advise on products and services
SIRXSLS303	Build relationships with customers

### Nursery

Unit code	Unit title
AHCNSY304A	Deliver and promote sales of plants

### Pest management

Unit code	Unit title
AHCPMG301A	Control weeds

### Plants

Unit code	Unit title
AHCPCM301A	Implement a plant nutrition program

**Soils and media**

<b>Unit code</b>	<b>Unit title</b>
AHCSOL401A	Sample soils and interpret results

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK303A	Respond to emergencies
AHCWRK305A	Coordinate work site activities

# AHC31310 Certificate III in Sports Turf Management

## Modification History

Not Applicable

## Description

This qualification provides a general vocational outcome in greenkeeping. The sports turf industry expects this qualification to be achieved to meet job outcomes at this level.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Sports Turf Management.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Greenkeeper

Groundsman

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Participating in ongoing learning</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of twelve (12) core units and three (3) elective units.

## ELECTIVE UNITS

- a maximum of three (3) units may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the turf industry.

## CORE UNITS

### Occupational Health and Safety

AHCOHS301A      Contribute to OHS processes

### Irrigation

AHCIRG302A      Install irrigation systems

### Machinery operation and maintenance

AHCMOM304A      Operate machinery and equipment

### Plants

AHCPCM301A      Implement a plant nutrition program

AHCPCM302A      Provide information on plants and their culture

### Pest management

AHCPMG301A      Control weeds

AHCPMG302A      Control plant pests, diseases and disorders

### Turf

AHCTRF301A      Construct turf playing surfaces

AHCTRF302A      Establish turf

AHCTRF303A      Implement a grassed area maintenance program

AHCTRF305A      Renovate sports turf

### Work

AHCWRK313A      Implement and monitor environmentally sustainable work practices

## AHC31410 Certificate III in Conservation and Land Management

### Modification History

Release	TP Version	Comments
4	AHC10v5	Superseded unit <i>AHCILM303A Work in an Indigenous community or organisation</i> replaced with <i>AHCILM305A Work with an Aboriginal Community or organisation</i> Equivalent imported units updated
3	AHC10v4	Equivalent imported units updated. Added missing prerequisite units to Packaging Rules
2	AHC10v3	Corrected unit AHCPCM303A name in unit grid
1	AHC10	Initial release

### Description

This qualification provides a general vocational outcome in the conservation and land management industry.

The qualification enables individuals to select an Indigenous land management, lands, parks and wildlife or natural area management context as a job focus or a mix of these.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, AHC40910 Certificate IV in Conservation and Land Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

## Job roles

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

- Indigenous lands worker
- National parks worker
- Revegetation worker
- Land rehabilitation worker.

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting, analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings, including informal learning</li> </ul>

Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>
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## Packaging Rules

### Packaging Rules

Completion of sixteen (16) units made up of two (2) core units and fourteen (14) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of six (6) units must come from elective groups A or B
- a maximum of four (4) units from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must be relevant to job outcomes in conservation and land management.

### CORE UNITS

#### Occupational Health and Safety

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

#### Work

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

### ELECTIVE UNITS GROUP A

#### Indigenous land management

Unit code	Unit title
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AHCILM301A	Propose appropriate uses of traditional customs
AHCILM302A	Provide appropriate information on cultural knowledge
AHCILM305A	Work with an Aboriginal community or organisation
SITTGDE101	Interpret aspects of local Australian Indigenous culture

### Natural area restoration

Unit code	Unit title
AHCNAR301A	Maintain natural areas
AHCNAR302A	Collect and preserve biological samples
AHCNAR303A	Implement revegetation works
AHCNAR304A	Undertake direct seeding
FPIFGM2201B	Collect seed

### Lands, parks and wildlife

Unit code	Unit title
AHCLPW301A	Supervise park visitor activities
AHCLPW303A	Construct access tracks
AHCLPW304A	Carry out inspection of designated area
AHCLPW305A	Perform diving for scientific purposes
AHCLPW306A	Undertake sampling and testing of water
PUAFIR204B	Respond to wildfire* <i>PUAFIR201B Prevent injury</i>
PUAFIR303B	Suppress wildfire* <i>PUAFIR204B Respond to wildfire</i>
SITTGDE301	Work as a guide

### Fauna

Unit code	Unit title
AHCFAU301A	Respond to wildlife emergencies

### Infrastructure

Unit code	Unit title
AHCINF303A	Plan and construct conventional fencing

### Pest management

Unit code	Unit title
AHCPMG301A	Control weeds
AHCPMG302A	Control plant pests, diseases and disorders
AHCPMG303A	Maintain biological cultures
AHCPMG304A	Release biological agents

### Vertebrate pest management

Unit code	Unit title
AHCVPT302A	Implement vertebrate pest control program
AHCVPT303A	Survey pest animals
AHCVPT304A	Conduct vertebrate pest activities from aircraft
AHCVPT305A	Tag and locate Judas animals
AHCVPT306A	Apply animal trapping techniques

### Work

Unit code	Unit title
AHCWRK311A	Conduct site inspections
FPICOT3202B	Navigate in remote or trackless areas

**ELECTIVE UNITS GROUP B****Biosecurity**

<b>Unit code</b>	<b>Unit title</b>
AHCBIO302A	Identify and report unusual disease or plant pest signs

**Business**

<b>Unit code</b>	<b>Unit title</b>
BSBITU306A	Design and produce business documents

**Chemicals**

<b>Unit code</b>	<b>Unit title</b>
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

**Infrastructure**

<b>Unit code</b>	<b>Unit title</b>
AHCINF301A	Implement property improvement, construction and repair

**Landscape**

<b>Unit code</b>	<b>Unit title</b>
AHCLSC301A	Set out site for construction works
AHCLSC304A	Erect timber structures and features

**Machinery operation and maintenance**

<b>Unit code</b>	<b>Unit title</b>
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AHCMOM301A	Coordinate machinery and equipment maintenance and repair
AHCMOM302A	Perform machinery maintenance
AHCMOM304A	Operate machinery and equipment
AHCMOM305A	Operate specialised machinery and equipment
AHCMOM314A	Transport machinery
AHCMOM315A	Operate chemical application machinery and equipment

### Parks and gardens

Unit code	Unit title
AHCPGD301A	Implement a plant establishment program
AHCPGD304A	Implement a landscape maintenance program
AHCPGD305A	Conduct operational inspection of park facilities
AHCPGD306A	Implement a maintenance program for an aquatic environment

### Plants

Unit code	Unit title
AHCPCM302A	Provide information on plants and their culture
AHCPCM303A	Identify plant specimens

### Seed processing

Unit code	Unit title
AHCSPO308A	Sample seed before and after processing

### Soil and water conservation

Unit code	Unit title
AHCSAW301A	Construct conservation earthworks

AHCSAW302A	Implement erosion and sediment control measures
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**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK203A	Operate in isolated and remote situations
AHCWRK303A	Respond to emergencies
AHCWRK304A	Respond to rescue incidents
AHCWRK305A	Coordinate work site activities
AHCWRK310A	Provide on-job training support
AHCWRK404A	Ensure compliance with pest legislation
CPPSIS4005A	Collect basic GPS data
PUAEMR026	Treat operational risk
PUAEMR027	Assess operational risk

## AHC31510 Certificate III in Indigenous Land Management

### Modification History

Release	TP Version	Comments
4	AHC10v5	Superseded unit <i>AHCILM303A Work in an Indigenous community or organisation</i> replaced with <i>AHCILM305A Work with an Aboriginal Community or organisation</i> Equivalent imported units updated
3	AHC10v4	Equivalent imported units updated Added missing prerequisite units to Packaging Rules
2	AHC10v3	Corrected Unit AHCPCM303A name in unit grid
1	AHC10	Initial release

### Description

This qualification provides a vocational outcome in the indigenous land management industry.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Conservation and Land Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

## Job roles

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

Indigenous lands worker

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of sixteen (16) units made up of two (2) core units and fourteen (14) elective units.

**ELECTIVE UNITS**

- a minimum of four (4) units must come from elective group A
- a minimum of seven (7) units must come from elective groups A or B
- a maximum of three (3) units from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in conservation and land management.

**CORE UNITS****Occupational health and safety**

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

**Work**

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

**ELECTIVE UNITS GROUP A**



**Indigenous land management**

Unit code	Unit title
AHCILM301A	Propose appropriate uses of traditional customs
AHCILM302A	Provide appropriate information on cultural knowledge
AHCILM305A	Work with an Aboriginal Community or organisation
AHCILM306A	Follow Aboriginal cultural protocols
SITTGDE101	Interpret aspects of local Australian Indigenous culture

**Fauna**

Unit code	Unit title
AHCFAU301A	Respond to wildlife emergencies
LGAREGS305A	Undertake animal or reptile control duties

**Lands, parks and wildlife**

Unit code	Unit title
SITTGDE301	Work as a guide

**Natural area restoration**

Unit code	Unit title
AHCNAR201A	Carry out natural area restoration works
AHCNAR301A	Maintain natural areas
AHCNAR303A	Implement revegetation works
FPIFGM2201B	Collect seed
FPIFGM3202B	Extract seed

**Pest management**

Unit code	Unit title
AHCPMG301A	Control weeds

## ELECTIVE UNITS GROUP B

### Business

Unit code	Unit title
BSBITU306A	Design and produce business documents

### Chemicals

Unit code	Unit title
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

### Infrastructure

Unit code	Unit title
AHCINF301A	Implement property improvement, construction and repair

### Landscaping

Unit code	Unit title
AHCLSC304A	Erect timber structures and features

### Lands, parks and wildlife

Unit code	Unit title
AHCLPW301A	Supervise park visitor activities
AHCLPW303A	Construct access tracks
AHCLPW304A	Carry out inspection of designated area

AHCLPW305A	Perform diving for scientific purposes
AHCLPW306A	Undertake sampling and testing of water
PUAFIR204B	Respond to wildfire* <i>PUAFIR201B Prevent injury</i>
PUAFIR303B	Suppress wildfire* <i>PUAFIR204B Respond to wildfire</i>

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM305A	Operate specialised machinery and equipment
AHCMOM315A	Operate chemical application machinery and equipment
FPICOT2234B	Operate 4x4 vehicle

### Plants

Unit code	Unit title
AHCPCM301A	Implement a plant nutrition program
AHCPCM302A	Provide information on plants and their culture
AHCPCM303A	Identify plant specimens

### Vertebrate pest management

Unit code	Unit title
AHCVPT302A	Implement vertebrate pest control program
AHCVPT303A	Survey pest animals
AHCVPT306A	Apply animal trapping techniques

### Work

Unit code	Unit title
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AHCWRK303A	Respond to emergencies
AHCWRK304A	Respond to rescue incidents
AHCWRK305A	Coordinate work site activities
CPPSIS4005A	Collect basic GPS data

## AHC31610 Certificate III in Lands, Parks and Wildlife

### Modification History

Release	TP Version	Comments
4	AHC10v5	Superseded unit <i>AHCILM303A Work in an Indigenous community or organisation</i> replaced with <i>AHCILM305A Work with an Aboriginal Community or organisation</i> Equivalent imported units updated
3	AHC10v4	Equivalent imported units updated. Added missing prerequisite units to Packaging Rules
2	AHC10v3	Corrected unit AHCPCM303A name in unit grid
1	AHC10	Initial release

### Description

This qualification provides a vocational outcome in the conservation and land management industry.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Conservation and Land Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

National parks worker

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

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Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of sixteen (16) units made up of two (2) core units and fourteen (14) elective units.

**ELECTIVE UNITS**

- a minimum of four (4) units must come from elective group A
- a minimum of seven (7) units must come from elective groups A or B
- a maximum of three (3) units from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in conservation and land management.

**CORE UNITS****Occupational Health and Safety**

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

**Work**

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

**ELECTIVE UNITS GROUP A**

**Lands, parks and wildlife**

Unit code	Unit title
AHCLPW301A	Supervise park visitor activities
AHCLPW303A	Construct access tracks
AHCLPW304A	Carry out inspection of designated area
AHCLPW305A	Perform diving for scientific purposes
AHCLPW306A	Undertake sampling and testing of water
PUAFIR204B	Respond to wildfire* <i>PUAFIR201B Prevent injury</i>
PUAFIR303B	Suppress wildfire* <i>PUAFIR204B Respond to wildfire</i>
SITTGDE301	Work as a guide

**Indigenous land management**

Unit code	Unit title
AHCILM305A	Work with an Aboriginal Community or organisation
SITTGDE101	Interpret aspects of local Australian Indigenous culture

**Pest management**

Unit code	Unit title
AHCPMG301A	Control weeds

**Plants**

Unit code	Unit title
AHCPCM302A	Provide information on plants and their culture
AHCPCM303A	Identify plant specimens



**ELECTIVE UNITS GROUP B****Biosecurity**

<b>Unit code</b>	<b>Unit title</b>
AHCBIO302A	Identify and report unusual disease or plant pest signs

**Fauna**

<b>Unit code</b>	<b>Unit title</b>
AHCFAU301A	Respond to wildlife emergencies
LGAREGS305A	Undertake animal or reptile control duties

**Natural area restoration**

<b>Unit code</b>	<b>Unit title</b>
AHCNAR301A	Maintain natural areas
AHCNAR302A	Collect and preserve biological samples
AHCNAR303A	Implement revegetation works
AHCNAR304A	Undertake direct seeding
FPIFGM3201B	Manage seed collection

**Pest management**

<b>Unit code</b>	<b>Unit title</b>
AHCPMG302A	Control plant pests, diseases and disorders
AHCPMG303A	Maintain biological cultures
AHCPMG304A	Release biological agents

**Chemicals**

<b>Unit code</b>	<b>Unit title</b>
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AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM315A	Operate chemical application machinery and equipment
FPICOT2234B	Operate 4x4 vehicle

### Soils and media

Unit code	Unit title
AHCSOL201A	Determine basic properties of soil and/or growing media
AHCSOL401A	Sample soils and interpret results

### Work

Unit code	Unit title
AHCWRK303A	Respond to emergencies
AHCWRK304A	Respond to rescue incidents
AHCWRK305A	Coordinate work site activities
AHCWRK310A	Provide on-job training support
AHCWRK311A	Conduct site inspections
AHCWRK404A	Ensure compliance with pest legislation
CPPSIS4005A	Collect basic GPS data

## AHC31710 Certificate III in Natural Area Restoration

### Modification History

Release	TP Version	Comments
3	AHC10v5	Equivalent imported units updated
2	AHC10v3	Corrected unit AHCPCM303A name in unit grid
1	AHC10	Initial release

### Description

This qualification provides a vocational outcome in the conservation and land management industry.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Conservation and Land Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Revegetation worker

Land rehabilitation worker

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of sixteen (16) units made up of two (2) core units and fourteen (14) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of seven (7) units must come from elective groups A or B
- a maximum of three (3) units from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in conservation and land management.

### CORE UNITS

#### Occupational Health and Safety

AHCOHS301A      Contribute to OHS processes

#### Work

AHCWRK313A      Implement and monitor environmentally sustainable work practices

### ELECTIVE UNITS GROUP A

#### Natural area restoration

AHCNAR201A      Carry out natural area restoration works

AHCNAR301A      Maintain natural areas

AHCNAR302A      Collect and preserve biological samples

AHCNAR303A      Implement revegetation works

AHCNAR304A      Undertake direct seeding

FPIFGM2201B      Collect seed

FPIFGM3202B      Extract seed

#### Pest management

AHCPMG301A      Control weeds

**Plants**

- AHCPCM302A Provide information on plants and their culture  
AHCPCM303A Identify plant specimens

**ELECTIVE UNITS GROUP B****Parks and gardens**

- AHCPGD301A Implement a plant establishment program

**Chemicals**

- AHCCHM303A Prepare and apply chemicals  
AHCCHM304A Transport, handle and store chemicals

**Machinery operation and maintenance**

- AHCMOM315A Operate chemical application machinery and equipment

**Soils and media**

- AHCSOL201A Determine basic properties of soil and/or growing media  
AHCSOL401A Sample soils and interpret results

**Soil and water conservation**

- AHCSAW301A Construct conservation earthworks  
AHCSAW302A Implement erosion and sediment control measures

**Work**

- AHCWRK303A Respond to emergencies  
AHCWRK304A Respond to rescue incidents  
AHCWRK305A Coordinate work site activities  
AHCWRK311A Conduct site inspections  
CPPSIS4005A Collect basic GPS data  
FPICOT3202B Navigate in remote or trackless areas

## AHC31810 Certificate III in Vertebrate Pest Management

### Modification History

Release	TP Version	Comments
2	AHC10v5	Equivalent imported units updated
1	AHC10	Initial release

### Description

This qualification provides a general vocational outcome in vertebrate pest management. The vertebrate pest management industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Conservation and Land Management or Diploma of Pest Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Feral animal control officer

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>



## Packaging Rules

### Packaging Rules

Completion of twelve (12) units made up of three (3) core units and nine (9) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of three (3) units must come from elective groups A or B
- a maximum of two (2) units may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in vertebrate pest management.

### CORE UNITS

#### Occupational Health and Safety

AHCOHS301A      Contribute to OHS processes

#### Chemicals

AHCCHM303A      Prepare and apply chemicals

#### Work

AHCWRK313A      Implement and monitor environmentally sustainable work practices

### ELECTIVE UNITS GROUP A

#### Chemicals

AHCCHM301A      Conduct fumigation in enclosed spaces

AHCCHM304A      Transport, handle and store chemicals

AHCCHM305A      Conduct manual fumigation of vertebrate and invertebrate pests

#### Vertebrate pests

AHCVPT201A      Clear features that harbour pest animals

AHCVPT202A      Muster pest animals

AHCVPT203A      Use firearms to humanely destroy animals

AHCVPT302A	Implement vertebrate pest control program
AHCVPT303A	Survey pest animals
AHCVPT304A	Conduct vertebrate pest activities from aircraft
AHCVPT305A	Tag and locate Judas animals
AHCVPT306A	Apply animal trapping techniques

## **ELECTIVE UNITS GROUP B**

### **Explosives**

AHCEXP301A	Handle and store explosives
AHCEXP302A	Identify and select explosive products
AHCEXP303A	Prepare and use explosives

### **Machinery operation and maintenance**

AHCMOM304A	Operate machinery and equipment
AHCMOM315A	Operate chemical application machinery and equipment
FPICOT2234B	Operate 4x4 vehicle

### **Work**

AHCWRK303A	Respond to emergencies
AHCWRK305A	Coordinate work site activities
AHCWRK310A	Provide on-job training support
CPPSIS4005A	Collect basic GPS data
FPICOT3202B	Navigate in remote or trackless areas

## AHC31910 Certificate III in Weed Management

### Modification History

Release	TP Version	Comments
3	AHC10v5	Equivalent imported units updated
2	AHC10v3	Corrected unit AHCPCM303A name in unit grid
1	AHC10	Initial release

### Description

This qualification provides a general vocational outcome in weed management. The weed management industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Conservation and Land Management or Diploma of Pest Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Pest Management Technician (Weed Control)

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of twelve (12) units made up of three (3) core units and nine (9) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of three (3) units must come from elective groups A or B
- a maximum of two (2) units may be selected from units aligned to from Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in weed management.

### CORE UNITS

#### Occupational Health and Safety

AHCOHS301A      Contribute to OHS processes

#### Chemicals

AHCCHM303A      Prepare and apply chemicals

#### Work

AHCWRK313A      Implement and monitor environmentally sustainable work practices

### ELECTIVE UNITS GROUP A

#### Biosecurity

AHCBIO201A      Inspect and clean machinery for plant, animal and soil material

AHCBIO302A      Identify and report unusual disease or plant pest signs

#### Pest management

AHCPMG301A      Control weeds

AHCPMG303A      Maintain biological cultures

AHCPMG304A      Release biological agents

**Chemicals**

- AHCCHM301A Conduct fumigation in enclosed spaces  
AHCCHM304A Transport, handle and store chemicals

**Machinery operation and maintenance**

- AHCMOM315A Operate chemical application machinery and equipment

**Plants**

- AHCPCM302A Provide information on plants and their culture  
AHCPCM303A Identify plant specimens

**Work**

- AHCWRK404A Ensure compliance with pest legislation

**ELECTIVE UNITS GROUP B****Machinery operation and maintenance**

- AHCMOM305A Operate specialised machinery and equipment  
FPICOT2234B Operate 4x4 vehicle

**Work**

- AHCWRK302A Monitor weather conditions  
AHCWRK303A Respond to emergencies  
AHCWRK305A Coordinate work site activities  
AHCWRK311A Conduct site inspections  
AHCWRK404A Ensure compliance with pest legislation  
CPPSIS4005A Collect basic GPS data

## AHC32010 Certificate III in Beekeeping

### Modification History

Release	TP Version	Comments
3	AHC10v5	Replaced imported elective unit <i>TLID2010A Operate a forklift</i> with <i>TLILIC2001A Licence to operate a forklift truck</i> in response to changes in national licencing regulations
2	AHC10v4	Equivalent imported units updated
1	AHC10	Initial release

### Description

This qualification provides a vocational outcome in bee keeping.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Bee keeper

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Sharing information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Accessing opportunities to develop technical and other work skills</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> </ul>



**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<ul style="list-style-type: none"> <li>• Applying OHS knowledge when using technology</li> <li>• Use load shifting technology</li> </ul>
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**Packaging Rules****Packaging Rules**

Completion of ten (10) units made up of five (5) core units and five (5) elective units.

**ELECTIVE UNITS**

- a minimum of three (3) units must come from the elective unit list
- a maximum of two (2) units must come from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the beekeeping industry.

**CORE UNITS****Occupational Health and Safety**

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

**Bee keeping**

Unit code	Unit title
AHCBEK301A	Manage honey bee swarms
AHCBEK304A	Remove a honey crop from a hive
AHCBEK305A	Extract honey

**Work**

Unit code	Unit title
AHCWRK306A	Comply with industry quality assurance requirements

**ELECTIVE UNITS****Bee keeping**

<b>Unit code</b>	<b>Unit title</b>
AHCBEK201A	Support beekeeping work
AHCBEK202A	Use a bee smoker
AHCBEK203A	Open and reassemble a beehive
AHCBEK204A	Construct and repair beehives
AHCBEK302A	Manipulate honey bee brood
AHCBEK303A	Re-queen a honey bee colony
AHCBEK306A	Manage pests and disease within a honey bee colony
AHCBEK401A	Collect and store propolis
AHCBEK402A	Perform queen bee artificial insemination
AHCBEK403A	Produce and harvest royal jelly
AHCBEK404A	Provide bee pollination services
AHCBEK405A	Select and establish an apiary site
AHCBEK406A	Trap and store pollen
AHCBEK407A	Rear queen bees

**Food safety**

<b>Unit code</b>	<b>Unit title</b>
FDFFS2001A	Implement the food safety program and procedures
FDFFS3001A	Monitor the implementation of quality and food safety programs* <i>FDFFS2001A Implement the food safety program and procedures</i>

FDFGPS2011A	Operate a creamed honey manufacture process
FDFOP2013A	Apply sampling procedures
FDFOP2003A	Clean equipment in place
FDFOP2004A	Clean and sanitise equipment
FDFOP2023A	Operate a packaging process
FDFTEC3001A	Participate in a HACCP team* <i>FDFFS2001A Implement the food safety program and procedures</i>

### Work

Unit code	Unit title
AHCWRK303A	Respond to emergencies
AHCWRK305A	Coordinate work site activities
AHCWRK308A	Handle bulk materials in storage area

### Machinery operation and maintenance

Unit code	Unit title
TLILIC2001A	Licence to operate a forklift truck

## AHC32111 Certificate III in Commercial Seed Processing

### Modification History

Release	TP Version	Comments
3	AHC10v5	Replaced imported elective unit <i>TLID2010A Operate a forklift</i> with <i>TLILIC2001A Licence to operate a forklift truck</i> in response to changes in national licencing regulations
2	AHC10v4	Equivalent imported units updated
1	AHC10	Initial release

### Description

This qualification provides a vocational outcome in commercial seed processing.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Commercial seed processor

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Reading and interpreting workplace related documentation.</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of nine (9) units made up of six (6) core units and three (3) elective units.

**ELECTIVE UNITS**

- a maximum of one (1) elective unit may be selected from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the commercial seed processing industry.

**CORE UNITS****Occupational Health and Safety**

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

**Seed processing**

Unit code	Unit title
AHCSPO301A	Operate a screen cleaner
AHCSPO302A	Operate an indent cylinder
AHCSPO303A	Operate a gravity table
AHCSPO307A	Handle, package and store commercial quantities of seed
AHCSPO308A	Sample seed before and after processing

**ELECTIVE UNITS****Agribusiness**

Unit code	Unit title
AHCAGB301A	Keep records for a primary production business

**Machinery operation and maintenance**

Unit code	Unit title
TLILIC2001A	Licence to operate a forklift truck

**Seed processing**

<b>Unit code</b>	<b>Unit title</b>
AHCSP0304A	Operate seed modification machinery
AHCSP0305A	Operate seed treatment machinery
AHCSP0306A	Operate specialised seed processing machinery

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK313A	Implement and monitor environmentally sustainable work practices

## AHC32210 Certificate III in Commercial Composting

### Modification History

Release	TP Version	Comments
2	AHC10v5	Equivalent imported units updated
1	AHC10	Initial release

### Description

This qualification provides a general vocational outcome in commercial composting.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Commercial compost facility worker

### Licensing/Regulatory Information

Not Applicable

### Entry Requirements

#### Entry requirements

There are no entry requirements for this qualification.



## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of ten (10) units made up of one (1) core unit and nine (9) elective units.

### ELECTIVE UNITS

- a minimum of five (5) units must come from elective group A
- a minimum of two (2) units must come from elective groups A or B.
- a maximum of two (2) units may be selected from units aligned to from Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the commercial composting industry.

## CORE UNIT

### Occupational Health and Safety

AHCOHS301A Contribute to OHS processes

## ELECTIVE UNITS GROUP A

### Composting

AHCCOM301A Operate compost processing plant, machinery and equipment

AHCCOM302A Dispatch materials and composted product

AHCCOM303A Operate a compost bagging process

RIIMPO304B Conduct wheel loader operations

AHCCOM401A Develop a composting recipe

AHCCOM402A Plan and schedule compost production

### Work

AHCWRK305A Coordinate work site activities

AHCWRK306A Comply with industry quality assurance requirements

AHCWRK308A Handle bulk materials in storage area

## ELECTIVE UNITS GROUP B

### Composting

AHCCOM201A Assess and receive raw materials for composting

AHCCOM202A Recognise and respond to fire emergencies on a composting site

AHCCOM203A Recognise raw materials, production processes and products on a composting site

AHCCOM501A Identify and secure raw materials supply for compost production

**Chemicals**

AHCCHM301A	Conduct fumigation in enclosed spaces
AHCCHM302A	Fumigate soil using chemicals
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

**Machinery operations and maintenance**

AHCMOM301A	Coordinate machinery and equipment maintenance and repair
AHCMOM302A	Perform machinery maintenance
AHCMOM304A	Operate machinery and equipment
AHCMOM305A	Operate specialised machinery and equipment
AHCMOM315A	Operate chemical application machinery and equipment

## AHC32310 Certificate III in Conservation Earthworks

### Modification History

Not Applicable

### Description

This qualification relates to those individuals constructing earthworks on rural properties and rural land. They perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Conservation and Land Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

Job roles of this occupation include undertaking dam construction and other soil and water conservation activities undertaken by earth moving plant operators.

### Licensing/Regulatory Information

Refer to Entry Requirements

### Entry Requirements

#### Entry requirements

There are no entry requirements for this qualification.

### Licensing and Registration

Some machinery may require licences or tickets to be operated in some states and territories.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Sharing information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role.</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Accessing opportunities to develop technical and other work skills</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• Applying OHS knowledge when using technology</li> <li>• Use load shifting technology</li> </ul>



## Packaging Rules

### Packaging Rules

Completion of ten (10) units made up of three (3) core units and seven (7) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units must come from the elective units list
- a maximum of three (3) units may be selected from units aligned to Certificates II, III or IV from within AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must be relevant to job outcomes in conservation earthworks.

### CORE UNITS

#### Occupational Health and Safety

AHCOHS301A      Contribute to OHS processes

#### Soil and water conservation

AHCSAW301A      Construct conservation earthworks

#### Machinery operation and maintenance

AHCMOM302A      Perform machinery maintenance

### ELECTIVE UNITS

#### Lands, parks and wildlife

AHCLPW303A      Construct access tracks

#### Soil and water conservation

AHCSAW302A Implement erosion and sediment control measures

### **Natural area restoration**

AHCNAR303A Implement revegetation works

### **Machinery operation and maintenance**

AHCMOM304A Operate machinery and equipment

AHCMOM314A Transport machinery

### **Work**

AHCWRK303A Respond to emergencies

AHCWRK305A Coordinate work site activities

AHCWRK311A Conduct site inspections

## AHC32412 Certificate III in Irrigation

### Modification History

June 2012: This qualification supersedes but is not equivalent to AHC32410.

### Description

This Qualification allows individuals to develop skills and knowledge to become installation or operations technicians within the irrigation industry.

### Application

This Qualification applies to skilled workers who carry out installation and operations job roles in the irrigation servicing, amenity horticulture and food and fibre production industries.

### Pathways Information

#### Pathways into the Qualification

This Qualification may be accessed by direct entry or by completion of AHC21112 Certificate II in Irrigation

#### Pathways from the Qualification

Further training pathways from this Qualification include, but are not limited to, AHC41112 Certificate IV in Irrigation.

#### Additional Qualification advice

This Qualification is suitable for an Australian Apprenticeship.

### Licensing/Regulatory Information

There is no direct link between this Qualification and licensing, legislative and/or regulatory requirements. However, an individual Unit of Competency may specify relevant licensing, legislative and/or regulatory requirements.

### Entry Requirements

There are no entry requirements for this Qualification.



## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include :
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks.</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members.</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account.</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Generating a range of options in response to workplace matters.</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities.</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility for individual work practices and team outcomes</li> <li>• Organising time and resources for work</li> <li>• Reflecting on skills gaps and training required.</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements.</li> </ul>

Technology	<ul style="list-style-type: none"> <li>Using measuring equipment for soil moisture monitoring</li> <li>Use of irrigation technology for operating, monitoring and troubleshooting irrigation systems.</li> </ul>
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## Packaging Rules

Complete **twelve (12)** Units of Competency comprised of:

- Two (2) Core Units
- Ten (10) Elective Units

### Core Units

Unit code	Unit title
AHCIRG308A	Monitor soils under irrigation
AHCOHS301A	Contribute to OHS processes

### Elective Units

- Select a minimum of **four (4)** Units from Group A.
- Select a minimum of **four (4)** additional Units from Group A or B.
- Select a minimum of **two (2)** additional Units from Group A, Group B and/or this or any other endorsed Training Package or accredited course packaged at Certificate III or IV.
- Selected Units must be relevant to job outcomes in the irrigation industry.

### Group A

Unit code	Unit title
AHCDRG301A	Install drainage systems
AHCIRG309A	Interpret and apply instructions to install pumps
AHCIRG310A	Operate and maintain irrigation pumping systems
AHCIRG311A	Install low volume irrigation components
AHCIRG312A	Install sprinkler irrigation components
AHCIRG313A	Install moving sprinkler irrigation components

AHCIRG314A	Install surface irrigation structures and equipment
AHCIRG315A	Interpret irrigation plans and drawings
AHCIRG316A	Implement a low volume irrigation maintenance program
AHCIRG317A	Implement a sprinkler irrigation maintenance program
AHCIRG318A	Implement a moving sprinkler irrigation maintenance program
AHCIRG319A	Implement a surface irrigation maintenance program
AHCIRG320A	Maintain and repair irrigation drainage systems
AHCIRG321A	Operate low volume irrigation systems
AHCIRG322A	Operate sprinkler irrigation systems
AHCIRG323A	Operate moving sprinkler irrigation systems
AHCIRG324A	Operate surface irrigation systems
AHCIRG325A	Operate irrigation technology
AHCIRG326A	Operate irrigation injection equipment
AHCIRG327A	Implement an irrigation schedule
AHCTEQ301A	Install and terminate extra low voltage wiring systems
AHCWRK305A	Co-ordinate worksite activities
AHCWRK313A	Implement and monitor environmentally sustainable work practices

### Group B

Unit code	Unit title
AHCDRG302A	Measure drainage system performance
AHCDRG303A	Troubleshoot drainage systems
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG306A	Troubleshoot irrigation systems

AHCIRG307A	Recommend irrigation products and services
AHCLPW306A	Undertake sampling and testing of water
CPCPIG2011A	Design domestic urban irrigation systems
CPCPWT3007A	Connect irrigation systems from drinking water supply * <i>CPCPCM2003A Carry out OHS requirements</i>
NWP302A	Install meters for non-potable, non-urban water supplies
NWP304A	Maintain meters for non-potable, non-urban water supplies
NWP305B	Monitor and conduct minor maintenance of complex flow-control and metering devices
NWP316B	Monitor and schedule water deliveries
NWP362B	Monitor, operate and control reclaimed water irrigation

## AHC32513 Certificate III in Aboriginal-sites Work

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Description

The qualification enables individuals to complete a core set of Aboriginal cultural competencies under recognised, appropriate cultural supervision and then to undertake work associated with inspecting, documenting and maintaining Aboriginal cultural and heritage sites.

The qualification is designed to reflect the role of individuals who work on Country and who perform a range of skilled tasks in relation to Aboriginal cultural landscapes which include discrete Aboriginal cultural sites. The qualification provides for Aboriginal-sites workers using discretion and judgement, and who have the ability to select, adapt and transfer skills to different situations.

### Pathways Information

#### Job Roles

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

- Rangers (Federal National Parks)
- Sites Officers (Aboriginal Land Councils)
- Aboriginal Development Officers (Catchment Management Authorities)
- Mining and Environmental Assessment Officers
- Cultural Heritage Officers and consultants
- Culture and Heritage Officers (National Parks)
- Field Workers (NSW National Parks and Wildlife)
- Aboriginal Tour Guides

#### Pathways into the qualification

Preferred pathways for candidates considering this qualification include:

- some vocational experience working on Country or in Aboriginal cultural keeping places with Traditional Owners, Cultural managers, Aboriginal Land Councils, or Aboriginal communities but with no formal qualifications

OR

- completion of the Recognise Aboriginal Cultural Sites Skill Set, or attendance and participation in Indigenous Leadership programs or other relevant non-accredited training

### **Australian Apprenticeships**

This qualification is suitable for an Australian Apprenticeship.

### **Pathways from the qualification**

Further pathways from this qualification include, but are not limited to, the Report on Aboriginal-Cultural Sites Skill Set.

### **Additional qualification advice**

This qualification applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in some of the core cultural units. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with delivery and assessment requirements.

**Note:** The delivery and assessment against core cultural units must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.

There are eleven units of competency which require

- delivery and assessment in accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, and
- an appropriate cultural authority's involvement and participation in the training and assessment task. [This may be a Traditional Owner and/or Cultural Manager and/or Cultural Knowledge holder and/or Custodian.]

It is essential that this requirement be respected and implemented in the delivery and assessment of these units to ensure cultural integrity in the qualification is maintained and to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.

There are further details in the Evidence Guide for these units.

## **Licensing/Regulatory Information**

There is no direct link between this qualification and licensing, legislative and/or regulatory requirements.

## Entry Requirements

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

## Employability Skills Summary

The following table contains a summary of the Employability Skills required for an Aboriginal-sites worker. The Employability Skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• completing documentation on Sites recording</li> <li>• discussing aspects of Sites work trends with colleagues</li> <li>• presenting information sessions to customers/visitors</li> <li>• seeking feedback on services from clients/visitors</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• sharing information with colleagues</li> <li>• showing sensitivity to cultural and social differences when communicating with others</li> <li>• working with others on Sites monitoring and maintenance</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• interpreting and applying cultural understanding to propose culturally appropriate solutions for contextual problems/issues</li> <li>• considering how current industry information could be used to improve work practices</li> <li>• responding to complaints</li> <li>• responding to equipment failures</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• presenting information to the public in an entertaining and informative way</li> <li>• responding effectively to a range of customer service situations</li> <li>• contributing to innovative and positive means of sharing culture</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• checking condition of Sites and landscapes at regular intervals</li> <li>• maintaining Sites work records</li> <li>• planning the sequence and methods for delivering an information session</li> <li>• reviewing sources of information on the Aboriginal-sites work industry</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• comprehending cultural identity and worldviews</li> </ul>

	<ul style="list-style-type: none"> <li>• following workplace procedures including OHS</li> <li>• maintaining personal presentation standards</li> <li>• operating effectively within scope of individual responsibility</li> <li>• demonstrating an understanding of Cultural protocols and respecting the protocols and lore of the Community.</li> <li>• navigating Community systems and protocols to ensure transparent and professional/cultural respected outcomes.</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• comprehending cultural identity and place in Community</li> <li>• delivering information sessions to visitors and obtaining feedback on the sessions</li> <li>• identifying and using professional development opportunities</li> <li>• participating in ongoing cultural networks and relationships</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• operating Sites location and recording equipment</li> <li>• using audiovisual aids</li> <li>• using database applications</li> <li>• using the internet for research</li> </ul>

## Packaging Rules

Completion of fifteen (15) units of competency made up of nine (9) core units and six (6) elective units.

Units with an asterisk (\*) have one or more pre-requisite units.

### Core Units of Competency

Unit code	Unit title
AHCASW301A	Protect places of Aboriginal cultural significance* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCASW302A	Relate Aboriginal culture to sites work* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCASW303A	Identify and record Aboriginal-sites, objects and cultural landscapes* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCASW308A	Apply cultural significance to Aboriginal-sites and landscapes* <i>AHCASW302A Relate Aboriginal culture to sites work</i> <i>AHCILM306A Follow Aboriginal cultural protocols</i>



AHCASW310A	Move and store Aboriginal-sites cultural material* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCASW311A	Apply relevant legislation in Aboriginal-sites work
AHCASW312A	Maintain an Aboriginal cultural site* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCILM306A	Follow Aboriginal cultural protocols
BSBWHS302A	Apply knowledge of WHS legislation in the workplace

### Elective Units of Competency

The workplace context for this qualification will vary, and this context must guide the selection of elective units.

- select four (4) units from Group A
- select two (2) additional units from Group A, Group B or units packaged in Certificates II, III or IV in AHC10 or any other currently endorsed Training Package or accredited course

Selected units must be relevant to job outcomes in Aboriginal-sites work.

### Group A

Unit code	Unit title
AHCASW305A	Work with Aboriginal ceremonial secret sacred materials* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCASW306A	Use technology in Aboriginal-sites work* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCASW307A	Map Aboriginal cultural landscapes* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCASW309A	Interpret Aboriginal cultural landscape* <i>AHCASW302A Relate Aboriginal culture to sites work</i> <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCILM305A	Work with an Aboriginal Community or organisation* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCILM307A	Implement Aboriginal cultural burning practices*

	<i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCILM510A	Plan for successful cultural practice at work* <i>AHCILM306A Follow Aboriginal cultural protocols</i>

**Group B**

<b>Unit code</b>	<b>Unit title</b>
AHCASW304A	Identify Indigenous culturally significant plants* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCASW501A	Survey and report on Aboriginal cultural sites* <i>AHCILM306A Follow Aboriginal cultural protocols</i>
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals
AHCFAU301A	Respond to wildlife emergencies
AHCILM201A	Maintain cultural places
AHCILM203A	Record information about Country
AHCILM301A	Propose appropriate uses of traditional customs
AHCILM302A	Provide appropriate information on cultural knowledge
AHCILM404A	Record and document Community history
AHCINF301A	Implement property improvement, construction and repair
AHCLPW301A	Supervise park visitor activities
AHCLPW303A	Construct access tracks
AHCLPW304A	Carry out inspection of designated area
AHCLPW305A	Perform diving for scientific purposes
AHCLPW306A	Undertake sampling and testing of water
AHCLSC304A	Erect timber structures and features
AHCMOM305A	Operate specialised machinery and equipment

AHCMOM315A	Operate chemical application machinery and equipment
AHCNAR201A	Carry out natural area restoration works
AHCNAR301A	Maintain natural areas
AHCNAR303A	Implement revegetation works
AHCPCM301A	Implement a plant nutrition program
AHCPCM302A	Provide information on plants and their culture
AHCPCM303A	Identify plant specimens
AHCPMG301A	Control weeds
AHCVPT302A	Implement vertebrate pest control program
AHCVPT303A	Survey pest animals
AHCVPT306A	Apply animal trapping techniques
AHCWRK303A	Respond to emergencies
AHCWRK304A	Respond to rescue incidents
AHCWRK305A	Coordinate work site activities
BSBITU306A	Design and produce business documents
CPPSIS4005A	Collect basic GPS data
CULATS501A	Work with Aboriginal and Torres Strait Islander cultural material
CULCNM303A	Move and store collection material
CULCNM503A	Manage the development of collections
CULCNM602A	Develop and monitor procedures for the movement and storage of collection material
CULMS002B	Research and evaluate Aboriginal or Torres Strait Islander cultural material
CULMS010B	Contribute to the preservation of cultural material
FPICOT2234B	Operate 4x4 vehicle
FPIFGM2201B	Collect seed

FPIFGM3202B	Extract seed
LGAREGS305A	Undertake animal or reptile control duties
PUAFIR204B	Respond to wildfire
PUAFIR303B	Suppress wildfire
SITTGDE101	Interpret aspects of local Australian Indigenous culture
SITTGDE301	Work as a guide
SITTGDE306	Research and share general information on Australian Indigenous cultures
SITTGDE307	Prepare specialised interpretive content on flora, fauna and landscape
SITTGDE309	Prepare specialised interpretive content on cultural and heritage environments
SITTPPD402	Develop interpretive activities
SITXCOM301	Address protocol requirements

## **AHC32610 Certificate III in Rural Machinery Operations**

### **Modification History**

Not Applicable

### **Description**

This qualification provides a general vocational outcome in agricultural plant operations.

### **Pathways Information**

#### **Qualification pathways**

#### **Pathways into the qualification**

This qualification may be accessed by direct entry.

#### **Pathways from the qualification**

Further training pathways from this qualification include, but are not limited to, Certificate IV in Agriculture.

#### **Australian Apprenticeships**

This qualification is suitable for an Australian Apprenticeship.

#### **Job roles**

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

Agricultural plant operator/contractor

### **Licensing/Regulatory Information**

Refer to Entry Requirements

### **Entry Requirements**

#### **Entry requirements**

There are no entry requirements for this qualification.

## Licensing and Registration

Some machinery may require licences or tickets to be operated in some states and territories.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Reading and interpreting workplace related documentation.</li> <li>• Writing to audience needs</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Sharing information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role.</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> <li>• Use load shifting technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of five (5) core units and ten (10) elective units.

### ELECTIVE UNITS

- a minimum of six (6) units must come from the elective units list
- a maximum of four (4) units may be selected from the elective list or from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in machinery operations.

### CORE UNITS

#### Occupational Health and Safety

AHCOHS301A      Contribute to OHS processes

#### Machinery operation and maintenance

AHCMOM301A      Coordinate machinery and equipment maintenance and repair

AHCMOM302A      Perform machinery maintenance

AHCMOM304A      Operate machinery and equipment

AHCMOM305A      Operate specialised machinery and equipment

### ELECTIVE UNITS

#### Machinery operation and maintenance

AHCMOM306A      Ground spread fertiliser and soil ameliorant

AHCMOM307A      Operate a cane harvester

AHCMOM308A      Operate broadacre and row crop harvest machinery and equipment

AHCMOM309A      Operate broadacre sowing machinery and equipment

AHCMOM310A      Operate land-forming machinery and equipment

AHCMOM311A      Operate precision control technology

AHCMOM312A      Operate row crop planting and seeding machinery and equipment

- AHCMOM313A Operate mobile irrigation machinery and equipment  
AHCMOM314A Transport machinery

**Tools and equipment**

- MEM05004C Perform routine oxy acetylene welding  
MEM05007C Perform manual heating and thermal cutting  
MEM05012C Perform routine manual metal arc welding

**Work**

- AHCWRK303A Respond to emergencies  
AHCWRK304A Respond to rescue incidents  
AHCWRK305A Coordinate work site activities



## AHC32710 Certificate III in Rural Merchandising

### Modification History

Release	TP Version	Comments
3	AHC10v5	Replaced imported elective unit <i>TLID2010A Operate a forklift</i> with <i>TLILIC2001A Licence to operate a forklift truck</i> in response to changes in national licencing regulations
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This qualification provides a vocational outcome in rural merchandising.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Rural merchandiser

Rural sales assistant

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation.</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> <li>• Sharing information</li> <li>• Empathising</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions</li> <li>• Initiating innovative solutions</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Taking initiative and making decisions within workplace role.</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques.</li> <li>• Learning in a range of settings including informal learning</li> <li>• Participating in ongoing learning</li> <li>• Learning in order to accommodate change</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of twelve (12) units made up of seven (7) core units and five (5) elective units.

### ELECTIVE UNITS

- three (3) units must come from the elective units list
- two (2) units may be selected from the elective units list or from units aligned to Certificates II, III or IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in rural merchandising.

### CORE UNITS

### Occupational Health and Safety

Unit code	Unit title
AHCOHS401A	Maintain OHS processes

### Merchandising and sales

Unit code	Unit title
AHCMER303A	Sell products and services
BSBCUS301B	Deliver and monitor a service to customers
BSBPRO301A	Recommend products and services
BSBSLS402A	Identify sales prospects
SIRXSLS303	Build relationships with customers

### Work

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

## ELECTIVE UNITS

### Merchandising and sales

Unit code	Unit title
AHCMER301A	Process customer complaints
AHCMER302A	Provide advice on hardware products
AHCMER401A	Coordinate customer service and networking activities
AHCMER402A	Provide advice and sell machinery
AHCMER403A	Provide advice and sell farm chemicals
AHCMER404A	Provide advice on agronomic products
AHCMER405A	Provide advice on livestock products

BSBSMB403A	Market the small business
SIRXADM002A	Coordinate retail office
SIRXINV002A	Maintain and order stock
SIRXINV004A	Buy merchandise
SIRXINV005A	Control inventory
SIRXMER004A	Manage merchandise and store presentation
SIRXMER201	Merchandise products
SIRXMER202	Plan, create and maintain displays
SIRXMER303	Coordinate merchandise presentation
SIRXMER406	Monitor in-store visual merchandising display
SIRXMPR001A	Profile a retail market
SIRXRSK002A	Maintain store security
SIRXSLS002A	Advise on products and services

### Business

Unit code	Unit title
AHCBUS301A	Use hand held e-business tools

### Machinery operation and maintenance

Unit code	Unit title
TLILIC2001A	Licence to operate a forklift truck

### Work

Unit code	Unit title
AHCWRK306A	Comply with industry quality assurance requirements
AHCWRK307A	Develop and apply fertiliser and soil ameliorant product

	knowledge
AHCWRK308A	Handle bulk materials in storage area

# AHC32810 Certificate III in Rural Operations

## Modification History

Not Applicable

## Description

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

Depending on the units selected individuals will be able to seek employment not only in rural industries but also other industry sectors, such as local government, tourism, hospitality, transport, construction, information technology and metals.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Agriculture Certificate IV in Production Horticulture or Certificate IV in Horticulture.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Licensing considerations

There are no specific licences that relate to this qualification.

### Job roles

Multifunctional job roles that suit regional areas of Australia.

## Licensing/Regulatory Information

Refer to Pathways Information

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>



## Packaging Rules

### Packaging Rules

Completion of sixteen (16) units made up of two (2) core units and fourteen elective units.

### ELECTIVE UNITS

- a minimum of seven (7) units from Certificate III in the AHC10 endorsed training package
- a maximum of seven (7) units must come from units aligned to Certificates II, III or IV from up to three (3) other currently endorsed training packages or accredited courses. Selected units must be relevant to job outcomes in AgriFood industries.

### CORE UNITS

#### Occupational Health and Safety

AHCOHS301A      Contribute to OHS processes

#### Work

AHCWRK313A      Implement and monitor environmentally sustainable work practices

## AHC32910 Certificate III in Shearing

### Modification History

Not Applicable

### Description

This qualification relates to shearing at the professional level. This requires a high standard of workmanship at a rate of at least 120 sheep per day. The shearing industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

Certificate II in Shearing.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Shearing or Certificate IV in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

Job titles relevant to this qualification include:

Shearer - professional level

### Licensing/Regulatory Information

Not Applicable

### Entry Requirements

#### Entry requirements

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

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques.</li> <li>• Learning in a range of settings including informal learning</li> <li>• Participating in ongoing learning</li> <li>• Learning in order to accommodate change</li> <li>• Learning new skills and techniques</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of seven (7) core units.

**CORE UNITS****Occupational Health and Safety**

AHCOHS301A      Contribute to OHS processes

**Shearing**

AHCSHG204A      Shear sheep to improver level

AHCSHG302A      Prepare combs and cutters for machine shearing

AHCSHG303A      Maintain and service shearing handpieces

AHCSHG304A      Shear sheep to professional level

AHCSHG305A      Maintain consistent shearing performance

**Work**

AHCWRK305A      Coordinate work site activities

## AHC33010 Certificate III in Wool Clip Preparation

### Modification History

Release	TP Version	Comments
3	AHC10v4	Equivalent imported Units updated
2	AHC10v3	Corrected typographical errors and removed reference to Certificate II in Wool Clip from Pathways and Entry Requirements
1	AHC10	Initial release

### Description

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

### Licensing and Registration

This qualification is the minimum mandatory requirement for persons wishing to apply to the Australian Wool Exchange Ltd for registration as an Owner Wool Classer.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

Certificate II in Wool Handling.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Wool Classing or Certificate IV in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

Job titles relevant to this qualification include:

Owner Classer

## Licensing/Regulatory Information

Refer to Description

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification. Credit for this qualification may come from completion of Certificate II in Wool Handling.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Sharing information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Taking initiative and making decisions within workplace role.</li> <li>• Determining or applying required resources</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Learning in a range of settings including informal learning</li> <li>• Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

- Use load shifting technology

**Packaging Rules****Packaging Rules**

Completion of twelve (12) core units.

**CORE UNITS****Occupational Health and Safety**

Unit code	Unit title
AHCOHS401A	Maintain occupational health and safety (OHS) processes

**First Aid**

Unit code	Unit title
HLTFA301C	Apply first aid

**Wool**

Unit code	Unit title
AHCWOL301A	Appraise wool using industry descriptions
AHCWOL303A	Prepare wool based on its characteristics
AHCWOL304A	Prepare fleece wool for classing
AHCWOL305A	Prepare skirtings and oddments
AHCWOL306A	Supervise clip preparation
AHCWOL307A	Document a wool clip
AHCWOL308A	Prepare facilities for shearing and crutching

AHCWOL405A	Class fleece wool
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### Shearing

Unit code	Unit title
AHCSHG407A	Oversee and instruct shed staff

### Work

Unit code	Unit title
AHCWRK306A	Comply with industry quality assurance requirements



## AHC33110 Certificate III in Advanced Wool Handling

### Modification History

June 2012. Corrected typographical error in Pathways and Entry Requirements. Removal of reference to Certificate II in Wool Clip Preparation.

### Description

This qualification focuses on a specialist wool handling role and allows individuals who are already working in the wool handling industry to develop further skills and knowledge in order to fulfil specialist roles in the organisation. The wool industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

Certificate II in Wool Handling

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Wool Classing or Certificate IV in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Shearing shed hands

Wool handlers

### Licensing/Regulatory Information

Not Applicable

## Entry Requirements

There are no entry requirements for this qualification. Credit for this qualification may come from completion of Certificate II in Wool Handling

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>Interpreting the needs of internal/external customers</li> <li>Sharing information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>Working as an individual and a team member</li> <li>Working with diverse individuals and groups</li> <li>Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>Showing interdependence and initiative in identifying problems</li> <li>Solving problems individually or in teams</li> <li>Applying a range of strategies in problem solving</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>Adapting to new situations</li> <li>Being creative in response to workplace challenges</li> <li>Identifying opportunities that might not be obvious to others</li> <li>Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Collecting analysing and organising information</li> <li>Using basic business systems for planning and organising</li> <li>Being appropriately resourceful</li> <li>Taking initiative and making decisions within workplace role.</li> <li>Participating in continuous improvement and planning processes</li> <li>Working within or establishing clear project goals and deliverables</li> <li>Determining or applying required resources</li> <li>Allocating people and other resources to tasks and workplace requirements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Learning in a range of settings including informal learning</li> <li>Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using basic technology skills</li> <li>Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of eight (8) core units.

### CORE UNITS

#### Occupational Health and Safety

AHCOHS301A      Contribute to OHS processes

#### Wool

AHCWOL201A      Pen sheep

AHCWOL304A      Prepare fleece wool for classing

AHCWOL305A      Prepare skirtings and oddments

AHCWOL308A      Prepare facilities for shearing and crutching

AHCWOL310A      Press wool for a clip

AHCWOL311A      Perform shed duties

#### Work

AHCWRK306A      Comply with industry quality assurance requirements

## AHC33210 Certificate III in Floriculture

### Modification History

Not Applicable

### Description

This qualification provides a vocational outcome in floriculture. The floriculture industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Certificate IV in Production Horticulture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Flower farm worker

### Licensing/Regulatory Information

Not Applicable

### Entry Requirements

#### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fifteen (15) units made up of one (1) core unit and fourteen (14) elective units.

## ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of seven (7) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units aligned to Certificates II, III IV in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the flower growing industry.

## CORE UNIT

### Occupational health and safety

AHCOHS301A      Contribute to OHS processes

## ELECTIVE UNITS GROUP A

### Plants

AHCPCM301A      Implement a plant nutrition program  
AHCPCM302A      Provide information on plants and their culture

### Soils and media

AHCSOL301A      Prepare growing media  
AHCSOL401A      Sample soils and interpret results

### Nursery

AHCNSY301A      Maintain nursery plants  
AHCNSY302A      Receive and dispatch nursery products

## ELECTIVE UNITS GROUP B

### Biosecurity

AHCBIO302A      Identify and report unusual disease or plant pest signs

### Chemicals

AHCCHM301A      Conduct fumigation in enclosed spaces  
AHCCHM302A      Fumigate soil using chemicals

- AHCCHM303A Prepare and apply chemicals  
AHCCHM304A Transport, handle and store chemicals

### **Drainage**

- AHCDRG301A Install drainage systems  
AHCDRG302A Measure drainage system performance  
AHCDRG303A Troubleshoot drainage systems

### **Hydroponics**

- AHCHYD301A Implement a maintenance program for hydroponic systems  
AHCHYD302A Install hydroponic systems

### **Irrigation**

- AHCIRG301A Implement a maintenance program for an irrigation system  
AHCIRG302A Install irrigation systems  
AHCIRG303A Measure irrigation delivery system performance  
AHCIRG305A Operate pressurised irrigation systems  
AHCIRG306A Troubleshoot irrigation systems

### **Machinery operation and maintenance**

- AHCMOM301A Coordinate machinery and equipment maintenance and repair  
AHCMOM302A Perform machinery maintenance  
AHCMOM304A Operate machinery and equipment  
AHCMOM305A Operate specialised machinery and equipment  
AHCMOM315A Operate chemical application machinery and equipment

### **Nursery**

- AHCNSY303A Install and maintain plant displays  
AHCNSY304A Deliver and promote sales of plants  
AHCNSY305A Prepare specialised plants  
AHCNSY306A Implement a propagation plan  
AHCNSY307A Operate fertigation equipment

### **Pest management**

AHCPMG301A	Control weeds
AHCPMG302A	Control plant pests, diseases and disorders
AHCPMG303A	Maintain biological cultures
AHCPMG304A	Release biological agents

### **Production horticulture**

AHCPHT301A	Carry out a crop regulation program
AHCPHT302A	Coordinate horticultural crop harvesting
AHCPHT303A	Implement a post-harvest program
AHCPHT305A	Regulate crops
AHCPHT306A	Establish horticultural crops

### **Water**

AHCWAT301A	Monitor and operate water treatment processes
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### **Work**

AHCWRK302A	Monitor weather conditions
AHCWRK303A	Respond to emergencies
AHCWRK305A	Coordinate work site activities
AHCWRK306A	Comply with industry quality assurance requirements
AHCWRK308A	Handle bulk materials in storage area
AHCWRK313A	Implement and monitor environmentally sustainable work practices



## AHC33311 Certificate III in Feedlot Operations

### Modification History

Release	TP Version	Comments
3	AHC10v4	Equivalent imported Units updated
2	AHC10v2.1	Fixed typographical errors in Qualification codes in Description
1	AHC10	Initial release

### Description

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

The testamur issued for this qualification is to be titled AHC33311 Certificate III in Feedlot Operations. An additional descriptor should be added by the RTO to reflect unit selection. For example:

- AHC33311 Certificate III in Feedlot Operations (Feedlot Maintenance)
- AHC33311 Certificate III in Feedlot Operations (Feeding and Milling)
- AHC33311 Certificate III in Feedlot Operations (Pen Riding).
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### Pathways Information

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, AHC40110 Certificate IV in Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Licensing considerations

There are no specific licences that relate to this qualification.

### Job roles

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

- Feedlot maintenance worker
- Intensive production enterprise feed mill worker
- Pen rider
- 

### Licensing/Regulatory Information

Refer to Pathways Information

### Entry Requirements

Not Applicable

### Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace documentation</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Sharing information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Applying own knowledge as part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Generating a range of options in response to workplace matters</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Taking initiative and making decisions within workplace role</li> <li>Determining or applying required resources</li> <li>Managing time and priorities</li> <li>Adapting resource allocations to cope with contingencies</li> <li>Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Listening and understanding</li> <li>Assessing opportunities to develop technical and other work skills</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Working as an individual and a team member</li> <li>Applying own role as part of team</li> <li>Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of seventeen (17) units comprising six (6) core and eleven (11) electives.

### ELECTIVE UNITS

- a minimum of eight (8) elective units must be chosen from **one** of the following streams:
  - Group A: Feedlot Maintenance
  - Group B: Feeding and Milling
  - Group C: Pen Riding
- a maximum of three (3) units may be selected from units aligned to Certificates II, III or IV in this Training Package or from any other currently endorsed Training Package or accredited course. Selected units must be relevant to job outcomes in the feedlot industry.

### CORE UNITS

#### Occupational Health and Safety

Unit code	Unit title
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AHCOHS301A	Contribute to OHS processes
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### Biosecurity

Unit code	Unit title
AHCBIO302A	Identify and report unusual disease or plant pest signs

### Chemicals

Unit code	Unit title
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

### Work

Unit code	Unit title
AHCWRK209A	Participate in environmentally sustainable work practices
AHCWRK306A	Comply with industry quality assurance requirements

## ELECTIVE UNITS

### GROUP A: FEEDLOT MAINTENANCE

For a Feedlot Maintenance specialisation select a minimum of eight (8) units from the following group.

#### Occupational health and safety

Unit code	Unit title
RIOHS202A	Enter and work in confined spaces

#### Infrastructure

Unit code	Unit title
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AHCINF204A	Fabricate and repair metal or plastic structures
AHCINF301A	Implement property improvement, construction and repair

### Livestock

Unit code	Unit title
AHCLSK213A	Clean out production sheds
AHCLSK328A	Remove and facilitate reuse of effluent and manure from an intensive production system

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM207A	Conduct front end loader operations
AHCMOM301A	Coordinate machinery and equipment maintenance and repair
AHCMOM305A	Operate specialised machinery and equipment

### Pest management

Unit code	Unit title
AHCPMG301A	Control weeds

### Production Horticulture

Unit code	Unit title
AHCPHT307A	Prepare raw materials and compost the feedstocks

### Work

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

**GROUP B: FEEDING AND MILLING**

For a Feeding and Milling specialisation a minimum of eight (8) units from the following group.

**Occupational health and safety**

Unit code	Unit title
RIIOHS202A	Enter and work in confined spaces

**Livestock**

Unit code	Unit title
AHCLSK310A	Implement feeding plans for intensive production
AHCLSK326A	Mix and mill standard stockfeed
AHCLSK333A	Monitor pen condition and ration suitability
FDAGR3002A	Demonstrate knowledge of animal nutrition principles

**Machinery operation and maintenance**

Unit code	Unit title
AHCMOM205A	Operate vehicles
AHCMOM207A	Conduct front end loader operations
AHCMOM302A	Perform machinery maintenance
AHCMOM305A	Operate specialised machinery and equipment
FDROP2038A	Operate a grinding process

**Broad acre cropping**

Unit code	Unit title
AHCBAC204A	Prepare grain storages

AHCBAC303A	Prepare to receive grains/seeds
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### Pest management

Unit code	Unit title
AHCPMG301A	Control weeds

### Work

Unit code	Unit title
AHCWRK308A	Handle bulk materials in storage area

## GROUP C: PEN RIDING

For a Pen Rider specialisation select a minimum of eight (8) units from the following group.

### Livestock

Unit code	Unit title
AHCLSK301A	Administer medication to livestock
AHCLSK304A	Carry out post-mortem examination of livestock
AHCLSK307A	Euthanase livestock
AHCLSK308A	Identify and draft livestock
AHCLSK309A	Implement animal health control programs
AHCLSK310A	Implement feeding plans for intensive production
AHCLSK332A	Monitor animals in intensive production systems
AHCLSK333A	Monitor pen condition and ration suitability

### Machinery operation and maintenance

Unit code	Unit title
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AHCMOM205A	Operate vehicles
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## AHC33412 Certificate III in Seed Production

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Description

This Qualification provides a general vocational outcome in seed production.

### Pathways Information

#### Pathways into the Qualification

This Qualification may be accessed by direct entry.

#### Pathways from the Qualification

Further training pathways from this Qualification include, but are not limited to, AHC41412 Certificate IV in Seed Production.

#### Additional Qualification advice

This Qualification is suitable for an Australian Apprenticeship.

### Licensing/Regulatory Information

There is no direct link between this Qualification and licensing, legislative and/or regulatory requirements. However, an individual Unit of Competency may specify relevant licensing, legislative and/or regulatory requirements.

### Entry Requirements

There are no entry requirements for this Qualification.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this Qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

Complete sixteen (16) Units of Competency comprised of **six (6)** core Units and **ten (10)** elective Units.

### Core Units of Competency

### Seed production

Unit code	Unit title
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AHCSDP301A	Undertake preparation of land for seed crops
AHCSDP302A	Establish seed crops
AHCSDP303A	Maintain seed crops
AHCSDP304A	Harvest seed crops

### Occupational health and safety

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes

### Work

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

### Elective Units of Competency

- Select **seven (7)** Units from the Elective list below.
- Select **three (3)** Units from the list below and/or this or any other endorsed Training Package or accredited course at Certificate II, III or IV.

Selected Units must be relevant to job outcomes in seed production.

### Agribusiness

Unit code	Unit title
AHCAGB301A	Keep records for a primary production business

### Biosecurity

Unit code	Unit title
AHCBIO303A	Carry out emergency disease or plant pest control procedures at infected premises

**Chemicals**

<b>Unit code</b>	<b>Unit title</b>
AHCCHM303A	Prepare and apply chemicals
AHCCHM304A	Transport, handle and store chemicals

**First aid**

<b>Unit code</b>	<b>Unit title</b>
HLTFA301C	Apply first aid
HLTFA302C	Provide first aid in remote situation

**Infrastructure**

<b>Unit code</b>	<b>Unit title</b>
AHCINF301A	Implement property improvement, construction and repair
AHCINF302A	Plan and construct an electric fence
AHCINF303A	Plan and construct conventional fencing

**Irrigation**

<b>Unit code</b>	<b>Unit title</b>
AHCIRG301A	Implement a maintenance program for an irrigation system
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG308A	Monitor soils under irrigation
AHCIRG312A	Install sprinkler irrigation components
AHCIRG313A	Install moving sprinkler irrigation components
AHCIRG314A	Install surface irrigation structures and components
AHCIRG317A	Implement a sprinkler irrigation maintenance program

AHCIRG318A	Implement a moving sprinkler irrigation maintenance program
AHCIRG319A	Implement a surface irrigation maintenance program
AHCIRG322A	Operate sprinkler irrigation systems
AHCIRG323A	Operate moving sprinkler irrigation systems
AHCIRG324A	Operate surface irrigation systems
AHCIRG325A	Operate irrigation technology
AHCIRG327A	Implement an irrigation schedule

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM202A	Operate tractors
AHCMOM301A	Coordinate machinery and equipment maintenance and repair
AHCMOM302A	Perform machinery maintenance
AHCMOM304A	Operate machinery and equipment
AHCMOM305A	Operate specialised machinery and equipment
AHCMOM306A	Ground spread fertiliser and soil ameliorant
AHCMOM308A	Operate broadacre and row crop harvest machinery and equipment
AHCMOM309A	Operate broadacre sowing machinery and equipment
AHCMOM312A	Operate row crop planting and seeding machinery and equipment
AHCMOM313A	Operate mobile irrigation machinery and equipment
AHCMOM314A	Transport machinery
AHCMOM315A	Operate chemical application machinery and equipment
TLILIC2001A	Licence to operate a forklift truck

### Pest management

Unit code	Unit title
AHCPMG301A	Control weeds
AHCPMG302A	Control plant pests, diseases and disorders

### Plants

Unit code	Unit title
AHCPCM301A	Implement a plant nutrition program
AHCPCM303A	Identify plant specimens

### Soils and media

Unit code	Unit title
FDFWGG3010A	Implement a soil management program

### Tools and equipment

Unit code	Unit title
MEM05004C	Perform routine oxy acetylene welding
MEM05007C	Perform manual heating and thermal cutting
MEM05012C	Perform routine manual metal arc welding

### Vertebrate pests

Unit code	Unit title
AHCVPT302A	Implement vertebrate pest control program

### Work

Unit code	Unit title
AHCWRK301A	Collect samples for a rural production or horticulture monitoring program

AHCWRK302A	Monitor weather conditions
AHCWRK303A	Respond to emergencies
AHCWRK305A	Coordinate work site activities
AHCWRK306A	Comply with industry quality assurance requirements
AHCWRK308A	Handle bulk materials in storage area

## AHC33512 Certificate III in Seed Testing

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Description

This Qualification provides a vocational outcome in seed testing and analysis.

### Pathways Information

#### Pathways into the Qualification

This Qualification may be accessed by direct entry.

#### Pathways from the Qualification

Further training pathways from this qualification include, but are not limited to, AHC41512 Certificate IV in Seed Testing.

#### Additional Qualification advice

This Qualification is suitable for an Australian Apprenticeship.

### Licensing/Regulatory Information

There is no direct link between this Qualification and licensing, legislative and/or regulatory requirements. However, an individual Unit of Competency may specify relevant licensing, legislative and/or regulatory requirements.

### Entry Requirements

There are no entry requirements for this Qualification, however applicants should be working under supervision in a seed testing laboratory.



## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include :
Communication	<ul style="list-style-type: none"> <li>• Confirm relevant industry and workplace requirements</li> <li>• Understand personal and team requirements of relevant industry and workplace standards, regulations and policies</li> <li>• Complete standard documentation</li> <li>• Use communication technologies efficiently</li> <li>• Provide relevant work-related information to others</li> <li>• Ensure records are accurate and legible</li> <li>• Establish effective working relationships with colleagues</li> <li>• Undertake interactive workplace communication</li> <li>• Support team communication practices</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Explain and implement work team reporting requirements</li> <li>• Provide support to team members</li> <li>• Monitor work team tasks in accordance with regulatory and workplace requirements</li> <li>• Demonstrate and encourage others in working cooperatively with people of different ages, gender, race or religion</li> <li>• Undertake appropriate and effective communication with team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Identify risks and implement risk control measures for machinery and equipment</li> <li>• Identify and address problems and faults</li> <li>• Provide problem solving support to team members</li> <li>• Evaluate skill requirements of work tasks</li> <li>• Use problem solving techniques to determine work requirements</li> <li>• Assess processes and outcomes against quality criteria</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Contribute to and promote continuous improvement processes</li> <li>• Seek and provide feedback on procedures and processes</li> <li>• Collect and assess data and information on work processes</li> <li>• Identify non-conformances to standards and take appropriate action</li> <li>• Rectify problems promptly and appropriately</li> <li>• Monitor and adjust activity in response to operational variations</li> <li>• Identify, assess and act on existing and potential risks</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Determine work requirements in order to meet output targets</li> <li>• Identify priorities and variables that impact on work planning</li> </ul>

	<ul style="list-style-type: none"> <li>Plan work tasks for self and others as required</li> <li>Allocate tasks to operators and monitor outcomes</li> <li>Implement contingency plan promptly when incidents occur</li> <li>Ensure work tools are ready and available for operations</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Manage own work to meet performance criteria</li> <li>Monitor information in work area</li> <li>Conduct regular housekeeping activities during shift to keep work area clean and tidy at all times</li> <li>Maintain currency of relevant work-related information</li> <li>Monitor own work against quality standards and identify areas for improvement</li> <li>Understand own work activities and responsibilities</li> <li>Identify and apply safety procedures, including the use of protective equipment</li> <li>Manage work load priorities and timelines</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Recognise limits of own expertise and seek skill development if required</li> <li>Assess competencies in meeting job requirements</li> <li>Ask questions to expand own knowledge</li> <li>Maintain skill and knowledge currency</li> <li>Participate in meetings to inform work practices</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Use work machines and equipment in correct operational mode</li> <li>Monitor machine operation</li> <li>Perform minor maintenance on machinery</li> <li>Work with technology safely and according to workplace standards</li> </ul>

## Packaging Rules

Complete **eighteen (18)** Units of Competency comprised of **nine (9)** core Units and **nine (9)** elective Units.

### Core Units of Competency

Unit code	Unit title
AHCOHS301A	Contribute to OHS processes
AHCSDT301A	Prepare a working sample

AHCSDT302A	Identify seeds
AHCSDT304A	Perform a seed purity analysis
AHCSDT305A	Perform a seed moisture test
AHCSDT306A	Perform a seed germination test
AHCSDT307A	Perform a "Determination of Other Seeds by Number" test
AHCWRK306A	Comply with industry quality assurance requirements
AHCWRK313A	Implement and monitor environmentally sustainable work practices

### Elective Units of Competency

- Select **five (5)** Units from the Elective list below.
- Select **four (4)** Units from the list below and/or this or any other endorsed Training Package or accredited course at Certificate II, III or IV level.

Selected Units must be relevant to job outcomes in a seed testing laboratory.

Unit code	Unit title
AHCSDT303A	Perform a fluorescence test on seeds
AHCSDT405A	Handle & store quarantinable seeds
AHCWRK303A	Respond to emergencies
AHCWRK305A	Coordinate work site activities
MSL922001A	Record and present data
MSL933001A	Maintain the laboratory/field workplace fit for purpose
MSL933004A	Perform calibration checks on equipment and assist with its maintenance
MSL934003A	Maintain and control stocks
MSL973007A	Perform microscopic examination

TAEDEL301A	Provide work skill instruction
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## AHC40110 Certificate IV in Agriculture

### Modification History

Release	TP Version	Comments
3	AHC10v4	Equivalent imported Units updated Replaced AHCIRG403A Determine seasonal irrigation scheduling tasks with AHCIRG408A Schedule irrigations - Units have equivalent outcome
2	AHC10v3	Corrected Unit AHCPMG408A name in Unit grid
1	AHC10	Initial release

### Description

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

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Farm team leader

Farm supervisor

Shed supervisor

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Applying a range of strategies in problem solving</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> <li>• Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

Completion of twelve (12) units made up of one (1) core unit and eleven (11) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units from elective group A
- a minimum of five (5) units from elective groups A or B
- a maximum of two (2) units from units aligned to Certificates III, IV or Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in agriculture.

### CORE UNIT

#### Occupational health and safety

Unit code	Unit title
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

### ELECTIVE UNITS GROUP A

#### Broadacre cropping

Unit code	Unit title
AHCBAC401A	Manage pastures for livestock production
AHCBAC402A	Plan a pasture establishment program
AHCBAC403A	Supervise agricultural crop establishment
AHCBAC404A	Plan and implement agricultural crop maintenance
AHCBAC405A	Supervise agricultural crop harvesting
AHCBAC406A	Maintain grain quality in storage
AHCBAC407A	Save, prepare and store agricultural seed

#### Dairy

Unit code	Unit title
AHCDRY401A	Manage milking shed routines

### Livestock

Unit code	Unit title
AHCLSK312A	Coordinate artificial insemination and fertility management of livestock
AHCLSK317A	Plan to exhibit livestock
AHCLSK401A	Develop feeding plans for a production system
AHCLSK402A	Develop livestock feeding plans
AHCLSK403A	Escort livestock during export
AHCLSK404A	Implement and monitor animal welfare programs
AHCLSK405A	Implement intensive production systems
AHCLSK406A	Oversee animal marking operations
AHCLSK407A	Plan and monitor intensive production systems
AHCLSK408A	Pregnancy test animals
AHCLSK409A	Supervise animal health programs
AHCLSK410A	Supervise feedlot operations
AHCLSK411A	Supervise natural mating of livestock
AHCLSK412A	Arrange livestock purchases
AHCLSK413A	Design livestock handling facilities
AHCLSK414A	Arrange transport for farm produce or livestock
AHCLSK415A	Oversee alpaca farm activities
AHCLSK416A	Identify and select animals for breeding
AHCLSK417A	Manage horses for stock work



**Pork production**

<b>Unit code</b>	<b>Unit title</b>
AHCPRK401A	Implement a feeding strategy for pig production

**ELECTIVE UNITS GROUP B****Agribusiness**

<b>Unit code</b>	<b>Unit title</b>
AHCAGB401A	Implement and monitor a property improvement plan
AHCAGB402A	Analyse and interpret production data
BSBRK401A	Identify risk and apply risk management processes

**Artificial insemination**

<b>Unit code</b>	<b>Unit title</b>
AHCAIS401A	Supervise artificial breeding and/or embryo transfer programs

**Business**

<b>Unit code</b>	<b>Unit title</b>
AHCBUS401A	Administer finance, insurance and legal requirements
AHCBUS402A	Cost a project
AHCBUS403A	Support and review business structures and relationships
AHCBUS404A	Operate within a budget framework
AHCBUS405A	Participate in an e-business supply chain
BSBFIA402A	Report on financial activity
BSBSMB405B	Monitor and manage small business operations
BSBSMB406A	Manage small business finances
BSBWOR402A	Promote team effectiveness

BSBHRM402A	Recruit, select and induct staff
BSBINM401A	Implement workplace information system
BSBITU404A	Produce complex desktop published documents
BSBCM401A	Make a presentation

### Chemicals

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM402A	Plan and implement a chemical use program
AHCCHM403A	Prepare safe operating procedures for calibration of equipment

### Deer

Unit code	Unit title
AHCDER401A	Handle, store and grade deer velvet
AHCDER501A	Comply with deer industry national velvet accreditation requirements
AHCDER502A	Harvest deer velvet

### Horse breeding

Unit code	Unit title
AHCHBR305A	Handle and care for stallions
AHCHBR401A	Carry out stud stable management duties
AHCHBR402A	Supervise raising young horses

### Irrigation

Unit code	Unit title
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AHCIRG401A	Acquire resources for irrigation installation and construction
AHCIRG402A	Determine hydraulic parameters for an irrigation system
AHCIRG404A	Implement an irrigation-related environmental protection program
AHCIRG405A	Plan and coordinate gravity-fed irrigation systems
AHCIRG406A	Plan on-site irrigation system installation and construction work
AHCIRG407A	Supervise on-site irrigation installation and construction work
AHCIRG408A	Schedule irrigations

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM401A	Conduct major repair and overhaul of machinery and equipment
AHCMOM402A	Supervise maintenance of property machinery and equipment

### Merchandising and sales

Unit code	Unit title
AHCMER401A	Coordinate customer service and networking activities
AHCMER402A	Provide advice and sell machinery
AHCMER403A	Provide advice and sell farm chemicals
AHCMER404A	Provide advice on agronomic products
AHCMER405A	Provide advice on livestock products
AHCMER406A	Provide information on fertilisers and soil ameliorants

### Milk harvesting

Unit code	Unit title
AHCMKH401A	Carry out cleaning-time tests of milking machines

AHCMKH402A	Design and fabricate milking equipment installations
AHCMKH403A	Design and install on-farm milk cooling and storage
AHCMKH404A	Install milking equipment
AHCMKH405A	Performance test milking machines

### Organic production

Unit code	Unit title
AHCORG401A	Manage biodynamic production
AHCORG402A	Manage organic livestock production
AHCORG403A	Manage organic soil improvement

### Pest management

Unit code	Unit title
AHCPMG408A	Assess and monitor weed, pest and/or disease control programs

### Plants

Unit code	Unit title
AHCPCM402A	Develop a soil health and plant nutrition program

### Shearing

Unit code	Unit title
AHCSHG401A	Apply advanced shearing techniques
AHCSHG402A	Conduct equipment experting for machine shearing
AHCSHG403A	Account for shearing shed supplies
AHCSHG404A	Manage shearing and crutching operations
AHCSHG405A	Arrange employment for shearing operations

AHCSHG406A	Prepare shearing team wages
AHCSHG407A	Oversee and instruct shed staff

### Soils and media

Unit code	Unit title
AHCSOL401A	Sample soils and interpret results
AHCSOL402A	Develop a soil use map for a property
AHCSOL403A	Prepare acid sulphate soil management plans
AHCSOL404A	Supervise acid sulphate soil remediation and management projects

### Wool

Unit code	Unit title
AHCWOL401A	Determine wool classing strategies
AHCWOL402A	Use individual fleece measurements to prepare wool for sale
AHCWOL404A	Establish work routines and manage wool harvesting and preparation staff

### Work

Unit code	Unit title
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK402A	Provide information on issues and policies
AHCWRK403A	Supervise work routines and staff performance
PSPPM402B	Manage simple projects
MSL913002A	Plan and conduct laboratory/field work
SRXGRO002A	Deal with conflict
TAEDEL301A	Provide work skill instruction



## AHC40210 Certificate IV in Poultry Production

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This qualification allows individuals to develop post-trade skills and knowledge to become specialists within the poultry production industry. The poultry industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Consultant/service provider

Egg farm operations manager

Breeder farm operations manager

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Applying a range of strategies in problem solving</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> <li>• Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> </ul>



**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>Applying OHS knowledge when using technology</li> </ul> |
|--|--|

**Packaging Rules****Packaging Rules**

Completion of twelve (12) units made up of five (5) core units and seven (7) elective units.

**ELECTIVE UNITS**

- a minimum of five (5) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or from units aligned to Certificates III, IV or Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the poultry industry.

**CORE UNITS****Livestock**

Unit code	Unit title
AHCLSK401A	Develop feeding plans for a production system
AHCLSK404A	Implement and monitor animal welfare programs
AHCLSK405A	Implement intensive production systems
AHCLSK407A	Plan and monitor intensive production systems
AHCLSK409A	Supervise animal health programs

**ELECTIVE UNITS****Agribusiness**

Unit code	Unit title
AHCAGB402A	Analyse and interpret production data

**Biosecurity**

Unit code	Unit title
AHCBIO302A	Identify and report unusual disease or plant pest signs

**Business**

Unit code	Unit title
BSBINM401A	Implement workplace information system
BSBRES401A	Analyse and present research information

**Chemicals**

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM402A	Plan and implement a chemical use program

**Food**

Unit code	Unit title
FDFFS2001A	Implement the food safety program and procedures
FDFFS3001A	Monitor the implementation of quality and food safety programs* <i>FDFFS2001A Implement the food safety program and procedures</i>

**Merchandising and sales**

Unit code	Unit title
SIRXSLS303	Build relationships with customers

**Occupational health and safety**

<b>Unit code</b>	<b>Unit title</b>
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

**Poultry**

<b>Unit code</b>	<b>Unit title</b>
AHCPLY401A	Supervise free-range poultry operations

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK403A	Supervise work routines and staff performance

## AHC40310 Certificate IV in Production Horticulture

### Modification History

Release	TP Version	Comments
4	AHC10v5	Addition of an elective unit to cover grape growing (viticulture)
3	AHC10v4	Equivalent imported Units updated
2	AHC10v3	Elective bank groupings modified to provide greater flexibility
1	AHC10	Initial release

### Description

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

The qualification enables individuals to select a tree cropping, vegetable, berry or flower production, grape growing or mushroom production context as a job focus, or a mixture in the case of mixed enterprises.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, AHC50310 Diploma of Production Horticulture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

## Job roles

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

- Farm team leader
- Farm supervisor

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting, analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• Determining or applying required resources</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning new skills and techniques</li> <li>• Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of twelve (12) units made up of one (1) core unit and eleven (11) elective units.

### ELECTIVE UNITS

- a minimum of three (3) units must come from elective group A
- a minimum of five (5) units must come from elective groups A or B
- a maximum of three (3) units may be selected from units packaged in Certificates III, IV or Diploma in AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must be relevant to job outcomes in the production horticulture industry.

### CORE UNIT

#### Occupational Health and Safety

<b>Unit code</b>	<b>Unit title</b>
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

### ELECTIVE UNITS GROUP A

#### Chemicals

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM402A	Plan and implement a chemical use program

### Irrigation

Unit code	Unit title
AHCIRG408A	Schedule irrigations

### Plants

Unit code	Unit title
AHCPCM401A	Recommend plants and cultural practices
AHCPCM402A	Develop a soil health and plant nutrition program

### Production horticulture

Unit code	Unit title
AHCPHT402A	Develop a crop regulation program
AHCPHT404A	Implement and monitor a horticultural crop harvesting program

### Nursery

Unit code	Unit title
AHCNSY401A	Plan a growing-on program
AHCNSY402A	Plan a propagation program

### Soils and media

Unit code	Unit title
AHCSOL401A	Sample soils and interpret results

**ELECTIVE UNITS GROUP B****Business**

Unit code	Unit title
AHCBUS404A	Operate within a budget framework
AHCBUS405A	Participate in an e-business supply chain

**Food**

Unit code	Unit title
FDFTEC3001A	Participate in a HACCP team* <i>FDFFS2001A Implement the food safety program and procedures</i>
FDFFS3001A	Monitor the implementation of quality and food safety program* <i>FDFFS2001A Implement the food safety program and procedures</i>

**Irrigation**

Unit code	Unit title
AHCIRG402A	Determine hydraulic parameters for an irrigation system
AHCIRG404A	Implement an irrigation-related environmental protection program
AHCIRG405A	Plan and coordinate gravity fed irrigation systems

**Organic production**

Unit code	Unit title
AHCORG401A	Manage biodynamic production
AHCORG403A	Manage organic soil improvement



**Production horticulture**

<b>Unit code</b>	<b>Unit title</b>
AHCPHT401A	Assess olive oil for style and quality
AHCPHT403A	Develop harvesting and processing specifications to produce an olive oil
AHCPHT405A	Manage mushroom substrate preparation
AHCPHT406A	Control Phase II mushroom substrate process
AHCPHT407A	Manage mushroom crop development
AHCPHT408A	Oversee vineyard practices

**Soils and media**

<b>Unit code</b>	<b>Unit title</b>
AHCSOL402A	Develop a soil use map for a property

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK402A	Provide information on issues and policies
AHCWRK403A	Supervise work routines and staff performance

## AHC40410 Certificate IV in Horticulture

### Modification History

Release	TP Version	Comments
3	AHC10v4	Equivalent imported Units updated Replaced AHCIRG403A Determine seasonal irrigation scheduling tasks with AHCIRG408A Schedule irrigations - Units have equivalent outcome
2	AHC10v3	Corrected Unit AHCPMG408A name in Unit grid
1	AHC10	Initial release

### Description

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

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, AHC50410 Diploma of Horticulture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

- Senior horticulturist
- Horticulture team leader.
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## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting, analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings, including informal learning</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using advanced technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>
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**Packaging Rules****Packaging Rules**

Completion of twelve (12) units made up of one (1) core unit and eleven (11) elective units.

**ELECTIVE UNITS**

- a minimum of five (5) units must come from elective group A
- a minimum of two (2) units must come from elective groups A or B
- a maximum of four (4) units may be selected from units aligned to Certificates III, IV or Diploma in AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must meet job outcomes relevant to horticulture.

**CORE UNIT****Occupational Health and Safety**

Unit code	Unit title
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

**ELECTIVE UNITS GROUP A****Plants**

Unit code	Unit title
AHCPCM401A	Recommend plants and cultural practices
AHCPCM402A	Develop a soil health and plant nutrition program

**Landscape**

Unit code	Unit title
AHCLSC401A	Supervise landscape project works

### Organic production

Unit code	Unit title
AHCORG403A	Manage organic soil improvement

### Parks and gardens

Unit code	Unit title
AHCPGD401A	Design plant displays
AHCPGD402A	Plan a plant establishment program

### Pest management

Unit code	Unit title
AHCPMG408A	Assess and monitor weed, pest and/or disease control programs

### Soils and media

Unit code	Unit title
AHCSOL401A	Sample soils and interpret results

### Turf

Unit code	Unit title
AHCTRF401A	Develop a sports turf maintenance program
AHCTRF402A	Plan and implement sports turf renovation

## ELECTIVE UNITS GROUP B

**Business**

Unit code	Unit title
AHCBUS402A	Cost a project
AHCBUS404A	Operate within a budget framework
BSBSMB406A	Manage small business finances
BSBHRM402A	Recruit, select and induct staff
BSBITU404A	Produce complex desktop published documents
BSBRES401A	Analyse and present research information
TLIR4002A	Source goods/services and evaluate contractors

**Chemicals**

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM402A	Plan and implement a chemical use program
AHCCHM403A	Prepare safe operating procedures for calibration of equipment

**Design**

Unit code	Unit title
CUVCRS04A	Produce technical drawings
BSBDES403A	Develop and extend design skills and practice

**Irrigation**

Unit code	Unit title
AHCIRG401A	Acquire resources for irrigation installation and construction
AHCIRG402A	Determine hydraulic parameters for an irrigation system
AHCIRG404A	Implement an irrigation-related environmental protection

	program
AHCIRG405A	Plan and coordinate gravity-fed irrigation systems
AHCIRG406A	Plan on-site irrigation system installation and construction work
AHCIRG407A	Supervise on-site irrigation installation and construction work
AHCIRG408A	Schedule irrigations

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM401A	Conduct major repair and overhaul of machinery and equipment
AHCMOM402A	Supervise maintenance of property machinery and equipment

### Merchandising and sales

Unit code	Unit title
AHCMER401A	Coordinate customer service and networking activities
BSBREL402A	Build client relationships and business networks
SIRXINV004A	Buy merchandise

### Natural area restoration

Unit code	Unit title
AHCNAR401A	Supervise natural area restoration works
AHCNAR402A	Plan the implementation of revegetation works

### Nursery

Unit code	Unit title
AHCNSY401A	Plan a growing-on program
AHCNSY402A	Plan a propagation program

**Organic production**

<b>Unit code</b>	<b>Unit title</b>
AHCORG401A	Manage biodynamic production
AHCORG402A	Manage organic livestock production

**Pest management**

<b>Unit code</b>	<b>Unit title</b>
AHCPMG405A	Implement pest management action plans

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK402A	Provide information on issues and policies
AHCWRK403A	Supervise work routines and staff performance
AHCWRK404A	Ensure compliance with pest legislation
PSPPM402B	Manage simple projects



## AHC40510 Certificate IV in Parks and Gardens

### Modification History

Release	TP Version	Comments
3	AHC10v4	Equivalent imported Units updated
2	AHC10v3	Corrected Unit AHCPMG408A name in Unit grid
1	AHC10	Initial release

### Description

This qualification allows individuals to develop post-trade skills and knowledge to become a senior or head gardener. The parks and gardens industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Parks and Gardens.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Head gardener

Horticulture team leader

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of fourteen (14) units made up of eight (8) core units and six (6) elective units.

### ELECTIVE UNITS

- a minimum of three (3) units must come from the elective units list
- a maximum of three (3) units may be selected from units aligned to Certificate III, IV or Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the parks and gardens industry.

### CORE UNIT

#### Occupational Health and Safety

Unit code	Unit title
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

#### Business

Unit code	Unit title
AHCBUS402A	Cost a project
BSBITU404A	Produce complex desktop published documents

#### Parks and gardens

Unit code	Unit title
AHCPGD402A	Plan a plant establishment program

#### Plants

Unit code	Unit title
AHPCPM401A	Recommend plants and cultural practices

AHCPCM402A	Develop a soil health and plant nutrition program
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### Turf

Unit code	Unit title
AHCTRF401A	Develop a sports turf maintenance program

### Work

Unit code	Unit title
PSPPM402B	Manage simple projects

## ELECTIVE UNITS

### Business

Unit code	Unit title
BSBSMB406A	Manage small business finances
TLIR4002A	Source goods/services and evaluate contractors

### Chemicals

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM402A	Plan and implement a chemical use program
AHCCHM403A	Prepare safe operating procedures for calibration of equipment

### Design

Unit code	Unit title
BSBDES403A	Develop and extend design skills and practice

**Irrigation**

<b>Unit code</b>	<b>Unit title</b>
AHCIRG401A	Acquire resources for irrigation installation and construction
AHCIRG402A	Determine hydraulic parameters for an irrigation system
AHCIRG406A	Plan on-site irrigation system installation and construction work
AHCIRG407A	Supervise on-site irrigation installation and construction work

**Landscape**

<b>Unit code</b>	<b>Unit title</b>
AHCLSC401A	Supervise landscape project works

**Machinery operation and maintenance**

<b>Unit code</b>	<b>Unit title</b>
AHCMOM401A	Conduct major repair and overhaul of machinery and equipment
AHCMOM402A	Supervise maintenance of property machinery and equipment

**Nursery**

<b>Unit code</b>	<b>Unit title</b>
AHCNSY401A	Plan a growing-on program
AHCNSY402A	Plan a propagation program

**Parks and Gardens**

<b>Unit code</b>	<b>Unit title</b>
AHCPGD401A	Design plant displays

**Pest management**

<b>Unit code</b>	<b>Unit title</b>
AHCPMG408A	Assess and monitor weed, pest and/or disease control programs

### **Soils and media**

<b>Unit code</b>	<b>Unit title</b>
AHCSOL401A	Sample soils and interpret results

### **Turf**

<b>Unit code</b>	<b>Unit title</b>
AHCTRF402A	Plan and implement sports turf renovation

### **Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK402A	Provide information on issues and policies
AHCWRK403A	Supervise work routines and staff performance
AHCWRK404A	Ensure compliance with pest legislation

## AHC40610 Certificate IV in Production Nursery

### Modification History

Not Applicable

### Description

This qualification allows individuals to develop post-trade skills and knowledge to become specialists within the production nursery industry. The nursery industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Production Nursery Management or Diploma of Retail Nursery Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Senior nursery worker

Production nursery team leader

### Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>



## Packaging Rules

### Packaging Rules

Completion of fourteen (14) units made up of five (5) core units and nine (9) elective units.

### ELECTIVE UNITS

- a minimum of six (6) units must come from the elective units list
- a maximum of three (3) units may be selected from the elective units or from units aligned to Certificates III, IV or Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the nursery industry.

### CORE UNIT

#### Occupational Health and Safety

AHCOHS401A Maintain Occupational Health and Safety (OHS) processes

#### Plants

AHCPCM401A Recommend plants and cultural practices

AHCPCM402A Develop a soil health and plant nutrition program

#### Irrigation

AHCIRG408A Schedule irrigations

#### Nursery

AHCNSY401A Plan a growing-on program

### ELECTIVE UNITS

#### Agribusiness

BSBRSK401A Identify risk and apply risk management processes

#### Biosecurity

AHCBIO401A Supervise activities on infected premises

AHCBIO402A Carry out field surveillance for a specific emergency disease or plant pest

AHCBIO403A Plan and implement a biosecurity program

**Business**

- AHCBUS402A Cost a project
- AHCBUS404A Operate within a budget framework
- AHCBUS405A Participate in an e-business supply chain

**Chemicals**

- AHCCHM401A Minimise risks in the use of chemicals
- AHCCHM402A Plan and implement a chemical use program

**Machinery operation and maintenance**

- AHCMOM402A Supervise maintenance of property machinery and equipment

**Merchandising and sales**

- SIRXINV002A Maintain and order stock

**Nursery**

- AHCNSY402A Plan a propagation program

**Parks and gardens**

- AHCPGD401A Design plant displays

**Plants**

- AHCPCM501A Diagnose plant health problems

**Work**

- AHCWRK403A Supervise work routines and staff performance
- BSBSUS301A Implement and monitor environmentally sustainable work practices

## AHC40710 Certificate IV in Retail Nursery

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated Replaced AHCIRG403A Determine seasonal irrigation scheduling tasks with AHCIRG408A Schedule irrigations - Units have equivalent outcome
1	AHC10	Initial release

### Description

This qualification allows individuals to develop post-trade skills and knowledge to become specialists within the retail nursery industry. The nursery industry expects this qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Retail Nursery Management or Diploma of Production Nursery Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Retail nursery sales team leader

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>Applying OHS knowledge when using technology</li> </ul> |
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**Packaging Rules****Packaging Rules**

Completion of 12 units made up of six (6) core units and six (6) elective units.

**ELECTIVE UNITS**

- a minimum of three (3) units must come from the elective units list
- a maximum of three (3) units may be selected from the elective units or from units aligned to Certificate III, IV or Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the nursery industry.

**CORE UNITS****Occupational health and safety**

Unit code	Unit title
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

**Plants**

Unit code	Unit title
AHCPCM401A	Recommend plants and cultural practices

**Parks and gardens**

Unit code	Unit title
AHCPGD401A	Design plant displays

**Merchandising and sales**

Unit code	Unit title
AHCMER401A	Coordinate customer service and networking activities
SIRXINV002A	Maintain and order stock

### Work

Unit code	Unit title
AHCWRK403A	Supervise work routines and staff performance

## ELECTIVE UNITS

### Business

Unit code	Unit title
AHCBUS403A	Support and review business structures and relationships
AHCBUS404A	Operate within a budget framework
AHCBUS405A	Participate in an e-business supply chain
AHCBUS507A	Monitor and review business performance
BSBFIA402A	Report on financial activity
BSBHRM402A	Recruit, select and induct staff
BSBSMB406A	Manage small business finances
BSBWOR402A	Promote team effectiveness

### Chemicals

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM402A	Plan and implement a chemical use program

### Irrigation

Unit code	Unit title
AHCIRG401A	Acquire resources for irrigation installation and construction
AHCIRG408A	Schedule irrigations

### Machinery and equipment

Unit code	Unit title
AHCMOM402A	Supervise maintenance of property machinery and equipment

### Merchandising and sales

Unit code	Unit title
BSBREL402A	Build client relationships and business networks
SIRXINV004A	Buy merchandise
SIRXMER303	Coordinate merchandise presentation
SIRXMER406	Monitor in-store visual merchandising display
SIRXMER004A	Manage merchandise and store presentation
SIRXMPR001A	Profile a retail market
SIRXRSK404	Control store security

### Plants

Unit code	Unit title
AHCPCM402A	Develop a soil health and plant nutrition program

### Work

Unit code	Unit title
AHCWRK313A	Implement and monitor environmentally sustainable work practices

AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK403A	Supervise work routines and staff performance
BSBRSK401A	Identify risk and apply risk management processes



## AHC40812 Certificate IV in Sports Turf Management

### Modification History

Release	TP Version	Comments
2	AHC10v4	Fixed error in Unit code: AHCPCM401A Recommend plants and cultural practices
1	AHC10v3	Initial release. This Qualification supersedes and is equivalent to AHC40810

### Description

This Qualification allows individuals to develop post-trade skills and knowledge to become specialists within the turf industry. The sports turf industry expects this Qualification to be achieved to meet job outcomes at this level.

### Pathways Information

#### Pathways into the Qualification

This Qualification may be accessed by direct entry.

#### Pathways from the Qualification

Further training pathways from this Qualification include, but are not limited to, AHC51010 Diploma of Sports Turf Management.

#### Australian Apprenticeships

This Qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

- Assistant curator
- Assistant grounds manager
- Assistant Golf Course superintendent
- Head greenkeeper

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

Entrants must have completed the Certificate III in Sports Turf Management by course work or by Recognition of Prior Learning or an equivalent trade level Qualification in green keeping or turf management.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of **twelve (12)** Units made up of **five (5)** core Units and **seven (7)** elective Units.

### Core Units of Competency

#### Plants

Unit code	Unit title
AHCPCM402A	Develop a soil health and plant nutrition program

#### Irrigation

Unit code	Unit title
AHCIRG408A	Schedule irrigations

#### Turf

Unit code	Unit title
ACHTRF401A	Develop a sports turf maintenance program
AHCTRF402A	Plan and implement sports turf renovation

#### Work

Unit code	Unit title
AHCWRK511A	Develop workplace policy and procedures for sustainability

### Elective Units of Competency

- a minimum of **five (5)** units must come from the elective Units list
- **two (2)** Units may be selected from the elective Units or from Units packaged at Certificates III, IV or Diploma in AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must be relevant to job outcomes in the turf industry

#### Business

Unit code	Unit title
AHCBUS402A	Cost a project

### Chemicals

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM402A	Plan and implement a chemical use program

### Irrigation

Unit code	Unit title
AHCIRG407A	Supervise on-site irrigation installation and construction work

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM402A	Supervise maintenance of property machinery and equipment

### Occupational health and safety

Unit code	Unit title
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

### Pest management

Unit code	Unit title
AHCPMG408A	Assess and monitor weed, pest and/or disease control programs

### Plants

Unit code	Unit title
AHCPCM401A	Recommend plants and cultural practices

**Soils and media**

<b>Unit code</b>	<b>Unit title</b>
AHCSOL401A	Sample soils and interpret results

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK403A	Supervise work routines and staff performance

# AHC40910 Certificate IV in Conservation and Land Management

## Modification History

Release	TP Version	Comments
4	AHC10v5	Equivalent imported units updated
3	AHC10v4	Equivalent imported units updated. Added missing prerequisite unit to Packaging Rules
2	AHC10v3	Corrected unit AHCPMG408A name in unit grid
1	AHC10	Initial release

## Description

This qualification allows individuals to develop post-trade skills and knowledge to become specialists within the conservation and land management industry.

This qualification enables a selection of units from indigenous land management, natural area restoration, conservation earthworks or lands, parks and wildlife to create a general qualification as a job focus.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Conservation and Land Management.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Senior conservation worker

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<ul style="list-style-type: none"> <li>• Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using advanced technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of twelve (12) units made up of one (1) core unit and eleven (11) elective units.

**ELECTIVE UNITS**

- a minimum of seven (7) units must come from the elective units list
- a maximum of four (4) units may be selected from the elective units or from units aligned to Certificates III, IV or Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in conservation and land management.

**CORE UNIT****Occupational Health and Safety**

Unit code	Unit title
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

**ELECTIVE UNITS****Biosecurity**

Unit code	Unit title
AHCBIO402A	Carry out field surveillance for a specific emergency disease or plant pest

**Business**



Unit code	Unit title
AHCBUS402A	Cost a project
AHCBUS404A	Operate within a budget framework
BSBRES401A	Analyse and present research information
TLIR4002A	Source goods/services and evaluate contractors

### Chemicals

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM402A	Plan and implement a chemical use program

### Community coordination and facilitation

Unit code	Unit title
AHCCCF401A	Prepare project acquittal
AHCCCF402A	Report on project
AHCCCF403A	Obtain and manage sponsorship
AHCCCF404A	Contribute to association governance
AHCCCF405A	Develop community networks
AHCCCF406A	Facilitate ongoing group development
AHCCCF407A	Obtain resources from community and groups
AHCCCF408A	Promote community programs
AHCCCF409A	Participate in assessments of project submissions
AHCCCF410A	Support individuals in resource management change processes
AHCCCF411A	Develop approaches to include cultural and human diversity
AHCCCF412A	Coordinate board/committee elections
AHCCCF413A	Service committees

AHCCCF414A	Coordinate fund-raising activities
AHCCCF415A	Coordinate social events to support group purposes
AHCCCF416A	Present proposed courses of action to meeting
CHCCD404E	Develop and implement community programs
LGACOM502B	Devise and conduct community consultations

### Fire

Unit code	Unit title
PUAFIR303B	Suppress wildfire* <i>PUAFIR204B Respond to wildfire</i>
PUAFIR407B	Conduct prescribed burning
PUAOPE005B	Manage a multi team response
PUAOPE004B	Conduct briefings/debriefings

### Indigenous land management

Unit code	Unit title
AHCILM401A	Protect places of cultural significance
AHCILM402A	Report on place of potential cultural significance
AHCILM403A	Contribute to the proposal for a negotiated outcome for a given area of country
AHCILM404A	Record and document community history
AHCILM405A	Develop work practices to accommodate cultural identity
SITTGDE306	Research and share general information on Australian Indigenous cultures

### Landscape

Unit code	Unit title
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AHCLSC401A	Supervise landscape project works
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### Lands, parks and wildlife

Unit code	Unit title
AHCLPW401A	Process applications for changes in land use
AHCLPW402A	Implement land and sea management practices
AHCLPW403A	Inspect and monitor cultural places
AHCLPW404A	Produce maps for land management purposes
AHCLPW405A	Monitor biodiversity
PUACOM012B	Liaise with media at a local level
PUALAW001B	Protect and preserve incident scene
SITTGDE307	Prepare specialised interpretive content on flora, fauna and landscape
SITTGDE309	Prepare specialised interpretive content on cultural and heritage environments
SITTPPD402	Develop interpretive activities
SITXCCS201	Provide visitor information

### Machinery operations and maintenance

Unit code	Unit title
AHCMOM402A	Supervise maintenance of property machinery and equipment

### Natural area restoration

Unit code	Unit title
AHCNAR401A	Supervise natural area restoration works
AHCNAR402A	Plan the implementation of revegetation works
FPIFGM3201B	Manage seed collection

**Pest management**

<b>Unit code</b>	<b>Unit title</b>
AHCPMG401A	Define the pest problem in a local area
AHCPMG402A	Develop a pest management action plan within a local area
AHCPMG403A	Develop monitoring procedures for the local pest management strategy
AHCPMG404A	Coordinate the local pest management strategy
AHCPMG405A	Implement pest management action plans
AHCPMG406A	Investigate a reported pest treatment failure
AHCPMG407A	Monitor and evaluate the local pest management action plan
AHCPMG408A	Assess and monitor weed, pest and/or disease control programs

**Parks and gardens**

<b>Unit code</b>	<b>Unit title</b>
AHCPGD402A	Plan a plant establishment program

**Plants**

<b>Unit code</b>	<b>Unit title</b>
AHCPCM401A	Recommend plants and cultural practices

**Soil and water conservation**

<b>Unit code</b>	<b>Unit title</b>
AHCSAW401A	Set out conservation earthworks
AHCSAW402A	Supervise on-site implementation of conservation earthworks

**Soils and media**

<b>Unit code</b>	<b>Unit title</b>
AHCSOL401A	Sample soils and interpret results
AHCSOL403A	Prepare acid sulphate soil management plans
AHCSOL404A	Supervise acid sulphate soil remediation and management projects

### Work

<b>Unit code</b>	<b>Unit title</b>
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK402A	Provide information on issues and policies
AHCWRK403A	Supervise work routines and staff performance
AHCWRK404A	Ensure compliance with pest legislation
BSBWOR402A	Promote team effectiveness
LGAPLEM508A	Manipulate and analyse data within geographic information systems
MSL913002A	Plan and conduct laboratory/field work
PSPPM402B	Manage simple projects
PSPPOL404A	Support policy implementation
SRXGRO002A	Deal with conflict
TAEDEL301A	Provide work skill instruction

## AHC41010 Certificate IV in Agribusiness

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This qualification allows individuals to develop agribusiness skills and knowledge within the agriculture and production horticulture industry. They may undertake a range of complex and non-routine tasks related to the administration of an agribusiness. The range of technical skills and knowledge is proficient and leadership of others would be expected.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Agribusiness or Diploma of Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Agribusiness administrator

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>Showing interdependence and initiative in identifying problems</li> <li>Using numeracy skills to solve problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Collecting analysing and organising information</li> <li>Using basic business systems for planning and organising</li> <li>Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Participating in ongoing learning</li> <li>Managing own learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using basic technology skills</li> <li>Using technology to organise data</li> <li>Adapting to new technology skills requirements</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of twelve (12) units made up of one (1) core unit and eleven (11) elective units.

**ELECTIVE UNITS**

- a minimum of nine (9) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or from units aligned to Certificates III, IV or Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the rural business.

**CORE UNIT****Occupational Health and Safety**

Unit code	Unit title
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

**ELECTIVE UNITS****Agribusiness**

Unit code	Unit title
AHCAGB301A	Keep records for a primary production business
AHCAGB401A	Implement and monitor a property improvement plan
AHCAGB402A	Analyse and interpret production data
BSBRK401A	Identify risk and apply risk management processes

**Business**

Unit code	Unit title
AHCBUS401A	Administer finance, insurance and legal requirements
AHCBUS402A	Cost a project
AHCBUS403A	Support and review business structures and relationships
AHCBUS404A	Operate within a budget framework
AHCBUS405A	Participate in an e-business supply chain



BSBCMM401A	Make a presentation
BSBFIA402A	Report on financial activity
BSBHRM402A	Recruit, select and induct staff
BSBINM401A	Implement workplace information system
BSBITU404A	Produce complex desktop published documents
BSBRES401A	Analyse and present research information
BSBSMB405B	Monitor and manage small business operations
BSBSMB406A	Manage small business finances
BSBWOR402A	Promote team effectiveness

### Shearing

Unit code	Unit title
AHCSHG406A	Prepare shearing team wages

### Broad acre cropping

Unit code	Unit title
AHCBAC501A	Manage agricultural crop production

### Livestock

Unit code	Unit title
AHCLSK501A	Manage livestock production

### Occupational Health and Safety

Unit code	Unit title
AHCOHS401A	Maintain OHS processes

### Work

<b>Unit code</b>	<b>Unit title</b>
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK402A	Provide information on issues and policies
AHCWRK403A	Supervise work routines and staff performance
AHCWRK404A	Ensure compliance with pest legislation
BSBWOR402A	Promote team effectiveness
MSL913002A	Plan and conduct laboratory/field work
PSPPM402B	Manage simple projects
PSPPOL404A	Support policy implementation
SRXGRO002A	Deal with conflict
TAEDEL301A	Provide work skill instruction

# AHC41112 Certificate IV in Irrigation

## Modification History

June 2012: This qualification supersedes but is not equivalent to AHC41110.

## Description

This Qualification allows individuals to develop technical and supervisory skills and knowledge to become specialists within the irrigation industry.

## Application

This Qualification applies to irrigation installation site managers and managers of irrigation systems in the irrigation servicing, amenity horticulture and food and fibre production industries.

## Pathways Information

### Pathways into the Qualification

This Qualification may be accessed by direct entry or by completion of AHC32412 Certificate III in Irrigation

### Pathways from the Qualification

Further training pathways from this Qualification include, but are not limited to, AHC51610 Diploma of Irrigation Management.

### Additional Qualification advice

This Qualification is suitable for an Australian Apprenticeship.

## Licensing/Regulatory Information

There is no direct link between this Qualification and licensing, legislative and/or regulatory requirements. However, an individual Unit of Competency may specify relevant licensing, legislative and/or regulatory requirements.

## Entry Requirements

There are no entry requirements for this Qualification.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements.</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members.</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account.</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions.</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables.</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Determining or applying required resources</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies.</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> </ul>

	<ul style="list-style-type: none"> <li>• Applying technology as a management tool.</li> </ul>
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## Packaging Rules

Complete **twelve (12)** Units of Competency comprised of:

- One (1) Core Unit
- Eleven (11) Elective Units

### Core units

Unit code	Unit title
AHCOHS401A	Maintain OHS processes

### Elective units

- Select a minimum of **seven (7)** Units from Group A.
- Select a minimum of **two (2)** additional Units from Group A or B.
- Select a minimum of **two (2)** additional Units from Group A, Group B and/or this or any other endorsed Training Package or accredited course packaged at Certificate III, IV or Diploma.
- Selected Units must be relevant to job outcomes in the irrigation industry.

### Group A

Unit code	Unit title
AHCIRG402A	Determine hydraulic parameters for an irrigation system
AHCIRG404A	Implement an irrigation-related environmental protection program
AHCIRG408A	Schedule irrigations
AHCIRG410A	Select and manage pumping systems for irrigation
AHCIRG411A	Construct and install a low volume irrigation system
AHCIRG412A	Construct and install a sprinkler irrigation system
AHCIRG413A	Construct and install a moving sprinkler irrigation system
AHCIRG414A	Construct and install a surface irrigation system

AHCIRG415A	Interpret and apply irrigation designs
AHCIRG416A	Supervise low volume irrigation maintenance
AHCIRG417A	Supervise sprinkler irrigation maintenance
AHCIRG418A	Supervise moving sprinkler irrigation maintenance
AHCIRG419A	Supervise surface irrigation maintenance
AHCIRG420A	Manage a low volume irrigation system
AHCIRG421A	Manage a sprinkler irrigation system
AHCIRG422A	Manage a moving sprinkler irrigation system
AHCIRG423A	Manage a surface irrigation system
AHCIRG424A	Construct and install an irrigation drainage system
AHCIRG425A	Monitor and control irrigation drainage systems
AHCIRG426A	Evaluate water supply for irrigation
AHCIRG427A	Plan and supervise on-site irrigation system installation and construction work
AHCSOL401A	Sample soils and interpret the results

### Group B

Unit code	Unit title
AHCBUS402A	Cost a project
AHCBUS404A	Operate within a budget framework
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG428A	Provide irrigation sales and service
AHCTEQ301A	Install and terminate extra low voltage wiring systems
AHCWRK401A	Implement and monitor quality assurance processes
AHCWRK403A	Supervise work routines and staff performance

BSBHRM402A	Recruit, select and induct staff
BSBMGT402A	Implement operational plan
BSBSMB406A	Manage small business finances
BSBWOR402A	Promote team effectiveness
BSBWOR404B	Develop work priorities
NWP362B	Monitor, operate and control reclaimed water for irrigation
NWP401B	Coordinate and monitor the application of environmental plans and procedures
NWP410C	Coordinate and monitor asset construction and maintenance
NWP425B	Coordinate and monitor the operation of irrigation delivery systems
PSPPM402B	Manage simple projects

## AHC41210 Certificate IV in Shearing

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This qualification relates to shearing at the professional level. This requires a high standard of workmanship at a rate of at least 120 sheep per day.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

Certificate III in Shearing.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Professional shearer

Shearing coach

Shearing contractor

Shearing shed manager

Shearing team leader

### Licensing/Regulatory Information

Not Applicable



## Entry Requirements

### Entry requirements

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

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>Working as an individual and a team member</li> <li>Coaching, mentoring and giving feedback</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>Showing interdependence and initiative in identifying problems</li> <li>Solving problems individually or in teams</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>Adapting to new situations</li> <li>Identifying opportunities that might not be obvious to others</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Managing time and priorities</li> <li>Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Being open to learning, new ideas and techniques.</li> <li>Learning in a range of settings including informal learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using basic technology skills</li> <li>Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of eight (8) core units.

### CORE UNITS

**Occupational Health and Safety**

<b>Unit code</b>	<b>Unit title</b>
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

**Shearing**

<b>Unit code</b>	<b>Unit title</b>
AHCSHG303A	Maintain and service shearing handpieces
AHCSHG304A	Shear sheep to professional level
AHCSHG401A	Apply advanced shearing techniques
AHCSHG402A	Conduct equipment experting for machine shearing
AHCSHG403A	Account for shearing shed supplies

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK403A	Supervise work routines and staff performance
TAEDEL301A	Provide work skill instruction

## AHC41310 Certificate IV in Wool Classing

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This qualification is a specialist wool classing qualification for wool classers and enables them to apply for registration with AWEX Ltd. as a professional Australian wool classer.

### Licensing and Registration

This qualification is the minimum mandatory requirement for persons wishing to apply to the Australian Wool Exchange Ltd for registration as an Australian Wool Classer.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

Certificate III in Wool Clip Preparation or Certificate III in Advanced Wool Handling.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Diploma of Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Australian Wool Classer

## Licensing/Regulatory Information

Refer to Description

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification. Credit for this qualification may come from completion of Certificate III in Wool Clip Preparation or Certificate III in Advanced Wool Handling.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Sharing information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a member of a team</li> <li>• Working with diverse individuals and groups</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Showing independence and initiative in identifying problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role.</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

Learning	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of twelve (12) core units.

**CORE UNITS****Occupational Health and Safety**

Unit code	Unit title
AHCOHS401A	Maintain occupational health and safety (OHS) processes

**First Aid**

Unit code	Unit title
HLTFA301C	Apply first aid

**Wool**

Unit code	Unit title
AHCWOL301A	Appraise wool using industry descriptions
AHCWOL303A	Prepare wool based on its characteristics
AHCWOL304A	Prepare fleece wool for classing
AHCWOL305A	Prepare skirtings and oddments
AHCWOL307A	Document a wool clip

AHCWOL401A	Determine wool classing strategies
AHCWOL403A	Prepare for, implement and review wool harvesting, clip preparation and classing
AHCWOL404A	Establish work routines and manage wool harvesting and preparation staff
AHCWOL405A	Class fleece wool

### Work

Unit code	Unit title
AHCWRK401A	Implement and monitor quality assurance procedures

## AHC41412 Certificate IV in Seed Production

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Description

This Qualification allows individuals to develop higher level skills and knowledge to become specialists within the seed production industry. It is designed to meet the needs of supervisors or team leaders in the seed production industry.

### Pathways Information

#### Pathways into the Qualification

This Qualification may be accessed by direct entry.

#### Pathways from the Qualification

Further training pathways from this Qualification include, but are not limited to, AHC50110 Diploma of Agriculture.

#### Additional Qualification advice

This Qualification is suitable for an Australian Apprenticeship.

### Licensing/Regulatory Information

There is no direct link between this Qualification and licensing, legislative and/or regulatory requirements. However, an individual Unit of Competency may specify relevant licensing, legislative and/or regulatory requirements.

### Entry Requirements

There are no entry requirements for this Qualification.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include :
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Applying a range of strategies in problem solving</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> <li>• Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> <li>• Applying OHS knowledge when using technology</li> </ul>

## Packaging Rules

Complete **twelve (12)** Units of Competency comprised of **five (5)** core Units and **seven (7)** elective Units.

## Core Units of Competency



**Seed production**

Unit code	Unit title
AHCSDP401A	Plan a seed crop establishment program
AHCSDP402A	Supervise seed crop establishment
AHCSDP403A	Plan and implement seed crop maintenance
AHCSDP404A	Supervise seed crop harvesting

**Occupational health and safety**

Unit code	Unit title
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes

**Elective Units of Competency**

- Select **five (5)** Units from the Elective list below.
- Select **two (2)** Units from the list below and/or this or any other endorsed Training Package or accredited course at Certificate III, IV or Diploma.

Selected Units must be relevant to job outcomes in seed production.

**Agribusiness**

Unit code	Unit title
AHCAGB401A	Implement and monitor a property improvement plan
AHCAGB402A	Analyse and interpret production data
BSBRK401A	Identify risk and apply risk management processes

**Chemicals**

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM402A	Plan and implement a chemical use program

AHCCHM403A	Prepare safe operating procedures for calibration of equipment
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### Irrigation

Unit code	Unit title
AHCIRG410A	Select and manage pumping systems for irrigation
AHCIRG412A	Construct and install a sprinkler irrigation system
AHCIRG417A	Supervise sprinkler irrigation maintenance
AHCIRG421A	Manage a sprinkler irrigation system
AHCIRG426A	Evaluate water supply for irrigation

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM401A	Conduct major repair and overhaul of machinery and equipment
AHCMOM402A	Supervise maintenance of property machinery and equipment

### Pest management

Unit code	Unit title
AHCPMG408A	Assess and monitor weed, pest and/or disease control programs

### Plants

Unit code	Unit title
AHCPCM402A	Develop a soil health and plant nutrition program

### Soils and media

Unit code	Unit title
AHCSOL401A	Sample soils and interpret results

AHCSOL402A	Develop a soil use map for a property
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**Work**

Unit code	Unit title
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK402A	Provide information on issues and policies
AHCWRK403A	Supervise work routines and staff performance

# AHC41512 Certificate IV in Seed Testing

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Description

This Qualification provides a vocational outcome in seed testing and analysis.

## Pathways Information

### Pathways into the Qualification

The preferred pathway for entry to this Qualification is AHC33512 Certificate III in Seed Testing.

### Pathways from the Qualification

Further training pathways from this qualification include, but are not limited to, MSL50109 Diploma of Laboratory Technology.

### Additional Qualification advice

This qualification is suitable for an Australian Apprenticeship.

## Licensing/Regulatory Information

There is no direct link between this Qualification and licensing, legislative and/or regulatory requirements. However, an individual Unit of Competency may specify relevant licensing, legislative and/or regulatory requirements.

## Entry Requirements

Entrants into AHC41512 Certificate IV in Seed Testing are required to hold the following Units of Competency:

- AHCSDT301A Prepare a working sample
- AHCSDT302A Identify seeds
- AHCSDT304A Perform a seed purity analysis
- AHCSDT305A Perform a seed moisture test

- AHCSDT306A Perform a seed germination test
- AHCSDT307A Perform determination of other seeds by number
- AHCOHS301A Contribute to OHS processes
- AHCWRK306A Comply with industry quality assurance requirements
- AHCWRK313A Implement and monitor environmentally sustainable work practices

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this Qualification include:
Communication	<ul style="list-style-type: none"> <li>• Complete workplace documentation and records</li> <li>• Use a range of communication technologies to support work operations</li> <li>• Develop work instructions, specifications and procedures</li> <li>• Demonstrate effective and appropriate communication and interpersonal skills when dealing with people</li> <li>• Communicate with all team members in a professional manner</li> <li>• Demonstrate effective and appropriate documentation, communication and interpersonal skills when dealing with internal and external clients</li> <li>• Use most appropriate communication method given priority, cost and audience needs</li> <li>• Access, interpret and apply technical information</li> <li>• Analyse data and information to determine implications for work operations</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Work cooperatively with people of different ages, gender, race or religion</li> <li>• Liaise with and provide support to other team members</li> <li>• Demonstrate leadership skills</li> <li>• Identify and manage performance required to meet internal and external customer needs in own work and team work</li> <li>• Manage organisational processes and provide problem solving support to others</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Investigate problem causes</li> <li>• Identify, rectify or report potential and actual problems associated with work operations</li> <li>• Identify factors which may affect the product or service to be provided</li> <li>• Use material and process knowledge to solve problems</li> <li>• Identify hazards and suggest control measures</li> <li>• Monitor food safety practices</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Gather and analyse feedback on products, processes and procedures</li> </ul>

	<ul style="list-style-type: none"> <li>• Assess quality and other indicators of products</li> <li>• Support achievement of efficient production processes</li> <li>• Determine and act on situations requiring further information or problem solving</li> <li>• Assist in the implementation of continuous improvement processes</li> <li>• Provide leadership in the workplace</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Identify hazards and implement appropriate hazard control measures</li> <li>• Demonstrate time management skills</li> <li>• Source and prepare materials and resources and ensure availability to support work operations</li> <li>• Schedule and sequence work to maximise safety and productivity</li> <li>• Optimise work processes</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Interpret and apply relevant acts and regulations</li> <li>• Keep the work area clean and tidy at all times</li> <li>• Monitor own work and work of team and identify and act on any quality issues</li> <li>• Manage own time to meet deadlines</li> <li>• Implement and monitor workplace procedures and instructions</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Implement learning activities as appropriate to ensure achievement of specified work requirements</li> <li>• Be supportive, assertive and use interpersonal skills to encourage workplace learning</li> <li>• Identify own training needs and seek skill development if required</li> <li>• Gather feedback to own work to assess effectiveness in meeting objectives and integrate information into own practice</li> <li>• Assess work data and information to identify areas for improved performance</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Work with technology safely and according to workplace standards</li> <li>• Help others use technology efficiently and safely</li> <li>• Ensure readiness and operational efficiency of workplace technology</li> </ul>

## Packaging Rules

Complete **eighteen (18)** Units of Competency comprised of **nine (9)** core Units and **nine (9)**

elective Units.

### Core Units of Competency

Unit code	Unit title
AHCSDT402A	Prepare and maintain a seed reference collection
AHCSDT404A	Develop and implement laboratory policy and procedures
AHCSDT406A	Undertake internal audits in a seed laboratory
AHCSDT409A	Perform a tetrazolium seed viability test
AHCSDT410A	Perform seed vigour test
AHCSDT411A	Perform a 1000 seed weight test
AHCOHS401A	Maintain Occupational Health and Safety (OHS) processes
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK403A	Supervise work routines and staff performance

### Elective Units of Competency

- Select **five (5)** Units from the Elective list below.
- Select **four (4)** Units from the list below and/or this or any other endorsed Training Package or accredited course at Certificate II, III or IV level.

Selected Units must be relevant to job outcomes in a seed testing laboratory.

Unit code	Unit title
AHCSDT401A	Maintain a quarantine approved laboratory
AHCSDT403A	Perform an Anguina test on annual ryegrass seed
AHCSDT405A	Handle & store quarantinable materials
AHCSDT407A	Perform an endophytic seed test

AHCSDT408A	Perform an electrophoresis test on a seed sample
MSL904001A	Perform standard calibrations
MSL924001A	Process and interpret data
MSL924002A	Use laboratory application software
MSL934002A	Apply quality system and continuous improvement processes
MSL934003A	Maintain and control stocks



# AHC41612 Certificate IV in Organic Farming

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Description

This Qualification allows individuals to develop skills and knowledge within the organic farming and general agriculture industry. It is designed to meet the needs of supervisors or team leaders working in the organic agriculture industry.

This Qualification is suitable for people currently working or who wish to find employment on an organic farming enterprise.

**Job Roles:** Job roles and titles will vary. Possible job titles relevant to this Qualification include:

- Organic farm team leader
- Organic farm supervisor
- Organic farmer

## Pathways Information

### Pathways into the Qualification

This Qualification may be accessed by direct entry.

### Pathways from the Qualification

Further training pathways from this Qualification include, but are not limited to, AHC51812 Diploma of Organic Farming and AHC50110 Diploma of Agriculture.

## Licensing/Regulatory Information

There is no licensing or regulatory requirement specifically satisfied as a result of completing this Qualification.

## Entry Requirements

There are no entry requirements for this Qualification.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this Qualification include:
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation and codes of practice.</li> <li>• Interpreting the needs of internal/external customers, especially in relation to the organic supply chain.</li> <li>• Applying numeracy skills to workplace requirements.</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups.</li> <li>• Applying knowledge of own role as a part of a team.</li> <li>• Applying teamwork skills to a range of situations.</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems.</li> <li>• Showing independence and initiative in identifying problems.</li> <li>• Applying a range of strategies in problem solving.</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Being creative in response to workplace challenges.</li> <li>• Identifying opportunities that might not be obvious to others.</li> <li>• Generating a range of options in response to workplace matters.</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information.</li> <li>• Being appropriately resourceful.</li> <li>• Taking initiative and making decisions within workplace role.</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance.</li> <li>• Taking responsibility at the appropriate level, especially in relation to organic standards and compliance.</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques.</li> <li>• Learning in a range of settings including informal learning.</li> <li>• Contributing to the learning of others.</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment.</li> <li>• Using basic technology skills.</li> <li>• Using technology to organise data.</li> <li>• Applying OHS knowledge when using technology.</li> </ul>

## Packaging Rules

Completion of twelve (12) Units made up of one (1) core Unit and eleven (11) elective Units.

### Core Units of Competency

Unit code	Unit title
AHCOHS401A	Maintain occupational health and safety (OHS) processes

### Elective Units of Competency

- select four (4) Units from Group A
- select five (5) Units from Groups A or B
- select two (2) Units from Group A, Group B, or Units packaged in Certificates III, IV or Diploma in AHC10 or from any other currently endorsed Training Package or accredited course

Selected Units must be relevant to job outcomes in agriculture.

### GROUP A

Unit code	Unit title
AHCORG401A	Manage biodynamic production
AHCORG402A	Manage organic livestock production
AHCORG403A	Manage organic soil improvement
AHCORG404A	Arrange selling through community based marketing
AHCORG405A	Implement sustainable practices in the organic farm based business
AHCORG406A	Oversee compliance with an organic certification scheme

### GROUP B

#### Agribusiness

Unit code	Unit title
AHCAGB401A	Implement and monitor a property improvement plan
AHCAGB402A	Analyse and interpret production data

### Business

Unit code	Unit title
AHCBUS401A	Administer finance, insurance and legal requirements
AHCBUS402A	Cost a project
AHCBUS404A	Operate within a budget framework
AHCBUS405A	Participate in an e-business supply chain
BSBRSK401A	Identify risk and apply risk management processes
BSBSMB405B	Monitor and manage small business operations
BSBSMB406A	Manage small business finances

### Broadacre cropping

Unit code	Unit title
AHCBAC401A	Manage pastures for livestock production
AHCBAC402A	Plan a pasture establishment program
AHCBAC403A	Supervise agricultural crop establishment
AHCBAC404A	Plan and implement agricultural crop maintenance
AHCBAC405A	Supervise agricultural crop harvesting

### Livestock

Unit code	Unit title
AHCLSK402A	Develop livestock feeding plans
AHCLSK404A	Implement and monitor animal welfare programs

AHCLSK405A	Implement intensive production systems
AHCLSK406A	Oversee animal marking operations
AHCLSK407A	Plan and monitor intensive production systems
AHCLSK409A	Supervise animal health programs
AHCLSK411A	Supervise natural mating of livestock
AHCLSK412A	Arrange livestock purchases
AHCLSK414A	Arrange transport for farm produce or livestock
AHCLSK416A	Identify and select animals for breeding

### Production horticulture

Unit code	Unit title
AHCPHT402A	Develop a crop regulation program
AHCPHT404A	Implement and monitor a horticultural crop harvesting program

### Irrigation

Unit code	Unit title
AHCIRG402A	Determine hydraulic parameters for an irrigation system
AHCIRG404A	Implement an irrigation-related environmental protection system
AHCIRG405A	Plan and coordinate gravity-fed irrigation systems
AHCIRG408A	Schedule irrigations

### Soils and media

Unit code	Unit title
AHCSOL401A	Sample soils and interpret results

### Chemicals

<b>Unit code</b>	<b>Unit title</b>
AHCCHM401A	Minimise risk in the use of chemicals

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK401A	Implement and monitor quality assurance procedures
AHCWRK403A	Supervise work routines and staff performance

## AHC50110 Diploma of Agriculture

### Modification History

Release	TP Version	Comments
4	AHC10v6	<p>Added elective units:</p> <ul style="list-style-type: none"> <li>• AHCCFI501 Provide technical advice on the Carbon Farming Initiative</li> <li>• AHCCFI502 Assess the feasibility of a Carbon Farming Initiative project</li> <li>• AHCCFI503 Advise on Carbon Farming Initiative project planning and implementation</li> <li>• AHCCFI504 Monitor and report on a Carbon Farming Initiative project</li> <li>• AHCCFI505 Aggregate Carbon Farming Initiative projects</li> <li>• AHCCFI506 Plan a Carbon Farming Initiative livestock project</li> <li>• AHCCFI507 Plan a Carbon Farming Initiative waste or manure management project</li> <li>• AHCCFI508 Plan a Carbon Farming Initiative project to sequester carbon in soil or biochar</li> <li>• AHCCFI509 Plan a Carbon Farming Initiative savannah burning, feral animal or rangelands project</li> <li>• AHCCFI510 Plan a Carbon Farming Initiative vegetation project</li> <li>• AHCCFI511 Plan a Carbon Farming Initiative project to avoid emissions from soil and crops</li> </ul>
3	AHC10v5	Added elective unit <i>AHCPCM505A Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs</i>
2	AHC10v4	Equivalent imported units updated
1	AHC10	Initial release

## Description

The Diploma of Agriculture reflects the role of personnel working on farms and stations who manage enterprise production units and employees and sole operators of agribusinesses who provide crop production advice and services to production enterprises.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, AHC60110 Advanced Diploma of Agriculture.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

- Farm production manager
- Production unit manager
- Agronomist
- Station/property manager.
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## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.



## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Establishing/using networks</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Applying a range of strategies in problem solving</li> <li>• Listening to and resolving concerns in relation to workplace issues</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into action</li> <li>• Developing innovative solutions</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Taking initiative and making decisions within workplace role</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Having a personal vision and goals</li> <li>• Articulating own ideas and vision</li> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in order to accommodate change</li> <li>• Managing own learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> <li>• Applying technology as a management tool</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of ten (10) elective units.

#### ELECTIVE UNITS

- a minimum of five (5) units must come from elective group A
- a minimum of three (3) units must come from elective groups A or B
- a maximum of two (2) units may be selected from units aligned to Certificate IV, Diploma or Advanced Diploma in AHC10 or from any other currently endorsed Training Package or accredited course. Selected units must be relevant to job outcomes in agriculture.

#### ELECTIVE UNITS GROUP A

##### Agribusiness

Unit code	Unit title
AHCAGB501A	Develop climate risk management strategies
AHCAGB505A	Develop a whole farm plan

##### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS506A	Develop and review a business plan
AHCBUS507A	Monitor and review business performance

##### Broadacre cropping

Unit code	Unit title
AHCBAC501A	Manage agricultural crop production
AHCBAC502A	Manage forage conservation

AHCBAC503A	Manage integrated crop and pasture production
AHCBAC504A	Plan and manage a stored grain program
AHCBAC505A	Plan and manage long-term weed, pest and/or disease control in crops
AHCBAC506A	Manage the harvest of crops
AHCBAC507A	Develop production plans for crops

### Livestock

Unit code	Unit title
AHCLSK501A	Manage livestock production
AHCLSK502A	Arrange marketing of livestock
AHCLSK503A	Develop and implement a breeding strategy
AHCLSK504A	Develop livestock health and welfare strategies
AHCLSK505A	Develop production plans for livestock

### Occupational health and safety

Unit code	Unit title
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

### Organic production

Unit code	Unit title
AHCORG501A	Develop an organic management plan
AHCORG502A	Prepare the enterprise for organic certification

### Soils and media

Unit code	Unit title
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AHCSOL501A	Monitor and manage soils for production
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## ELECTIVE UNITS GROUP B

### Agribusiness

Unit code	Unit title
AHCAGB502A	Plan and manage infrastructure requirements
AHCAGB503A	Plan and monitor production processes
AHCAGB504A	Plan production for the whole land/farm based business
BSBWOR501B	Manage personal work priorities and professional development

### Business

Unit code	Unit title
AHCBUS502A	Market products and services
AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders
AHCBUS505A	Develop a marketing plan
AHCBUS508A	Prepare and monitor budgets and financial reports
BSBFIM501A	Manage budgets and financial plans
BSBHRM506A	Manage recruitment selection and induction processes
BSBRES401A	Analyse and present research information
BSBRISK501B	Manage risk
TLIL5019A	Implement and monitor transport logistics
TLIR4002A	Source goods/services and evaluate contractors
TLIR4003A	Negotiate a contract

### Carbon farming

Unit code	Unit title
AHCCFI501	Provide technical advice on the Carbon Farming Initiative
AHCCFI502	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI503	Advise on Carbon Initiative project planning and implementation
AHCCFI504	Monitor and report on a Carbon Farming Initiative project
AHCCFI505	Aggregate Carbon Farming Initiative projects
AHCCFI506	Plan a Carbon Farming Initiative livestock project
AHCCFI507	Plan a Carbon Farming Initiative waste or manure management project
AHCCFI508	Plan a Carbon Farming Initiative project to sequester carbon in soil or biochar
AHCCFI509	Plan a Carbon Farming Initiative savannah burning, feral animal or rangelands project
AHCCFI510	Plan a Carbon Farming Initiative vegetation project
AHCCFI511	Plan a Carbon Farming Initiative project to avoid emissions from soil and crops

### Chemicals

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals
AHCCHM501A	Develop and manage a chemical use strategy

### Deer

Unit code	Unit title
AHCDER401A	Handle, store and grade deer velvet
AHCDER501A	Comply with deer industry national velvet accreditation requirements

AHCDER502A	Harvest deer velvet
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### Drainage

Unit code	Unit title
AHCDRG501A	Design drainage systems

### Livestock

Unit code	Unit title
AHCLSK506A	Design livestock effluent systems

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM501A	Manage machinery and equipment
AHCMOM502A	Implement a machinery management system

### Merchandising and sales

Unit code	Unit title
AHCMER501A	Develop a sales strategy for rural products

### Natural area restoration

Unit code	Unit title
AHCNAR506A	Develop and implement sustainable land use strategies

### Organic production

Unit code	Unit title
AHCORG401A	Manage biodynamic production
AHCORG402A	Manage organic livestock production

AHCORG403A	Manage organic soil improvement
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### Plants

Unit code	Unit title
AHCPCM505A	Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs

### Shearing

Unit code	Unit title
AHCSHG405A	Arrange employment for shearing operations

### Water

Unit code	Unit title
AHCWAT502A	Manage water systems

### Work

Unit code	Unit title
AHCWRK501A	Plan, implement and review a quality assurance program
AHCWRK502A	Collect and manage data
AHCWRK504A	Assess new industry developments
AHCWRK505A	Manage trial and/or research material
AHCWRK509A	Provide specialist advice to clients
AHCWRK511A	Develop workplace policy and procedures for sustainability

## **AHC50210 Diploma of Pork Production**

### **Modification History**

Not Applicable

### **Description**

The Diploma of Pork Production Management reflects the role of personnel working on piggeries who manage enterprise production units.

### **Pathways Information**

#### **Qualification pathways**

##### **Pathways into the qualification**

This qualification may be accessed by direct entry or completion of the Certificate III in Pork Production.

##### **Pathways from the qualification**

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Agriculture or Advanced Diploma of Agribusiness Management.

#### **Australian Apprenticeships**

This qualification is suitable for an Australian Apprenticeship.

#### **Job roles**

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

Production unit manager

### **Licensing/Regulatory Information**

Not Applicable

### **Entry Requirements**

#### **Entry requirements**



There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Establishing/using networks</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Applying a range of strategies in problem solving</li> <li>• Listening to and resolving concerns in relation to workplace issues</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into action</li> <li>• Developing innovative solutions</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Taking initiative and making decisions within workplace role</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Having a personal vision and goals</li> <li>• Articulating own ideas and vision</li> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in order to accommodate change</li> <li>• Managing own learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>Applying technology as a management tool</li> </ul>



## Packaging Rules

### Packaging Rules

Completion of ten (10) units made up of two (2) core units and eight (8) elective units.

### ELECTIVE UNITS

- a minimum of six (6) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or from units aligned to Certificate III or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in pork production.

### CORE UNITS

#### Livestock

- |            |   |
|------------|---|
| AHCLSK501A | Manage livestock production                     |
| AHCLSK504A | Develop livestock health and welfare strategies |

### ELECTIVE UNITS

#### Pork production

- |            |   |
|------------|---|
| AHCPRK401A | Implement a feeding strategy for pig production |
|------------|---|

#### Livestock

- |            |   |
|------------|---|
| AHCLSK405A | Implement intensive production systems    |
| AHCLSK416A | Identify and select animals for breeding  |
| AHCLSK503A | Develop and implement a breeding strategy |
| AHCLSK505A | Develop production plans for livestock    |

#### Business

AHCBUS501A	Manage staff
AHCBUS508A	Prepare and monitor budgets and financial reports
BSBHRM506A	Manage recruitment selection and induction processes

**Work**

AHCWRK502A	Collect and manage data
AHCWRK503A	Prepare reports

## AHC50310 Diploma of Production Horticulture

### Modification History

Release	TP Version	Comments
3	AHC10v5	Added elective unit <i>AHCPCM505A Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs</i>
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

The Diploma of Production Horticulture reflects the role of personnel working on production horticulture farms.

The qualification can be contextualised for a tree cropping, vegetable, berry or flower production or mushroom production context as a job focus or, in the case of mixed enterprises, both.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Agriculture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Production horticulture farm manager

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> <li>• Sharing information</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> <li>• Participating in ongoing learning</li> <li>• Learning in order to accommodate change</li> <li>• Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> <li>• Applying technology as a management tool</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of ten (10) elective units.

### ELECTIVE UNITS

- a minimum of two (2) units must come from elective group A
- a minimum of six (6) units must come from elective groups A or B

- a maximum of two (2) units may be selected from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the production horticulture industry.

## ELECTIVE UNITS GROUP A

### Plants

Unit code	Unit title
AHCPCM501A	Diagnose plant health problems

### Production horticulture

Unit code	Unit title
AHCPHT502A	Develop a horticultural production plan
AHCPHT503A	Manage a controlled growing environment

### Hydroponics

Unit code	Unit title
AHCHYD501A	Develop a plan for a hydroponic system

### Soils and media

Unit code	Unit title
AHCSOL501A	Monitor and manage soils for production

## ELECTIVE UNITS GROUP B

### Biosecurity

Unit code	Unit title
AHCBIO501A	Manage active operational emergency disease or plant pest sites
AHCBIO502A	Manage the implementation of an emergency disease or plant

	pest control program
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### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS502A	Market products and services
AHCBUS503A	Negotiate and monitor contracts
AHCBUS505A	Develop a marketing plan
AHCBUS506A	Develop and review a business plan
AHCBUS507A	Monitor and review business performance
AHCBUS508A	Prepare and monitor budgets and financial reports
BSBR501B	Manage risk
TLIL5019A	Implement and monitor transport logistics
TLIR4002A	Source goods/services and evaluate contractors
TLIR4003A	Negotiate a contract

### Chemicals

Unit code	Unit title
AHCCHM501A	Develop and manage a chemical use strategy

### Drainage

Unit code	Unit title
AHCDRG501A	Design drainage systems

### Hydroponics

Unit code	Unit title
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AHCHYD501A	Develop a plan for a hydroponic system
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### Irrigation

Unit code	Unit title
AHCIRG502A	Design irrigation system maintenance and monitoring programs
AHCIRG503A	Design irrigation, drainage and water treatment systems
AHCIRG504A	Develop an irrigation and drainage management plan

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM501A	Manage machinery and equipment
AHCMOM502A	Implement a machinery management system

### Organic production

Unit code	Unit title
AHCORG501A	Develop an organic management plan
AHCORG502A	Prepare the enterprise for organic certification

### Plants

Unit code	Unit title
AHCPCM505A	Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs

### Water

Unit code	Unit title
AHCWAT501A	Design water treatment systems
AHCWAT502A	Manage water systems

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK501A	Plan, implement and review a quality assurance program
AHCWRK511A	Develop workplace policy and procedures for sustainability

## AHC50410 Diploma of Horticulture

### Modification History

Release	TP Version	Comments
3	AHC10v5	Added elective unit <i>AHCPCM505A Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs</i>
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

The Diploma of Horticulture reflects the role of those who manage amenity horticultural enterprises where a range of skills and knowledge across the breadth of the industry is required or personnel working in horticulture at a level requiring higher technical skills.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Horticulture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Senior Horticulturist

Parks and Garden manager

Horticulture enterprise manager

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> <li>• Sharing information</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Defining own learning needs</li> <li>• Carrying out independent learning to improve capability</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of ten (10) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of four (4) units must come from elective groups A or B
- a maximum of two (2) units may be selected from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must meet job outcomes relevant to horticulture.

**ELECTIVE UNITS GROUP A****Plants**

<b>Unit code</b>	<b>Unit title</b>
AHCPCM501A	Diagnose plant health problems
AHCPCM502A	Collect and classify plants

**Production horticulture**

<b>Unit code</b>	<b>Unit title</b>
AHCPHT502A	Develop a horticultural production plan
AHCPHT503A	Manage a controlled growing environment

**Arboriculture**

<b>Unit code</b>	<b>Unit title</b>
AHCARB501A	Assess trees
AHCARB502A	Identify, select and specify trees
AHCARB503A	Diagnose tree diseases
AHCARB504A	Develop a tree protection program
AHCARB505A	Document and audit tree work

**Hydroponics**

<b>Unit code</b>	<b>Unit title</b>
AHCHYD501A	Develop a plan for a hydroponic system

**Landscape**

<b>Unit code</b>	<b>Unit title</b>
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AHCLSC501A	Survey and establish site levels
AHCLSC502A	Manage landscape projects
AHCLSC503A	Manage a tree transplanting program

### Parks and gardens

Unit code	Unit title
AHCPGD501A	Manage plant cultural practices
AHCPGD502A	Plan the restoration of parks and gardens
AHCPGD503A	Manage parks and reserves
AHCPGD504A	Develop and implement a streetscape management plan
AHCPGD505A	Conduct comprehensive inspection of park facilities

### Turf

Unit code	Unit title
AHCTRF501A	Plan the establishment of sports turf playing surfaces

## ELECTIVE UNITS GROUP B

### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS502A	Market products and services
AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders
AHCBUS505A	Develop a marketing plan
AHCBUS508A	Prepare and monitor budgets and financial reports

BSBFIM501A	Manage budgets and financial plans
BSBHRM506A	Manage recruitment selection and induction processes
BSBRES401A	Analyse and present research information
TLIL5019A	Implement and monitor transport logistics
TLIR4002A	Source goods/services and evaluate contractors
TLIR4003A	Negotiate a contract

### Chemicals

Unit code	Unit title
AHCCHM501A	Develop and manage a chemical use strategy

### Design

Unit code	Unit title
AHCDES503A	Assess landscape sites

### Irrigation

Unit code	Unit title
AHCIRG501A	Audit irrigation systems
AHCIRG502A	Design irrigation system maintenance and monitoring programs
AHCIRG503A	Design irrigation, drainage and water treatment systems
AHCIRG504A	Develop an irrigation and drainage management plan
AHCIRG505A	Establish and maintain an irrigation-related environmental protection program

### Lands, parks and wildlife

Unit code	Unit title
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AHCLPW501A	Develop a management plan for a designated area
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### Machinery operation and maintenance

Unit code	Unit title
AHCMOM501A	Manage machinery and equipment
AHCMOM502A	Implement a machinery management system

### Pest management

Unit code	Unit title
AHCPMG501A	Coordinate the pest management strategy in a regional or broader context
AHCPMG502A	Define the pest problem in a regional or broader context
AHCPMG503A	Develop a strategy for the management of target pests
AHCPMG504A	Develop a system for monitoring the pest management strategy
AHCPMG505A	Evaluate the pest management strategy

### Plants

Unit code	Unit title
AHCPCM505A	Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs

### Soils and media

Unit code	Unit title
AHCSOL501A	Monitor and manage soils for production

### Water

Unit code	Unit title
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AHCWAT501A	Design water treatment systems
AHCWAT502A	Manage water systems

## Work

Unit code	Unit title
AHCWRK501A	Plan, implement and review a quality assurance program
AHCWRK502A	Collect and manage data
AHCWRK503A	Prepare reports
AHCWRK504A	Assess new industry developments
AHCWRK505A	Manage trial and/or research material
AHCWRK507A	Implement professional practice
AHCWRK508A	Interpret legislation
AHCWRK509A	Provide specialist advice to clients
AHCWRK510A	Audit site operations
AHCWRK511A	Develop workplace policy and procedures for sustainability
CPPWMT5043A	Develop and implement an environmental management strategy
CPPWMT5045A	Develop site safety plans
PSPPM502B	Manage complex projects
PSPPM503B	Close complex projects

## AHC50510 Diploma of Arboriculture

### Modification History

Not Applicable

### Description

The Diploma of Arboriculture reflects the role of personnel working as consultant arborists.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry or completion of the Certificate III in Arboriculture or equivalent qualification.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Horticulture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Consulting arborist

### Licensing/Regulatory Information

Not Applicable

### Entry Requirements

#### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

### EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> <li>• Sharing information</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	deliverables <ul style="list-style-type: none"> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Defining own learning needs</li> <li>• Carrying out independent learning to improve capability</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of ten (10) units made up of five (5) core units and five (5) elective units.

**ELECTIVE UNITS**

- a minimum of three (3) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the arboriculture industry.

**CORE UNITS****Arboriculture**

AHCARB501A	Assess trees
AHCARB502A	Identify, select and specify trees
AHCARB503A	Diagnose tree diseases
AHCARB504A	Develop a tree protection program
AHCARB505A	Document and audit tree work

**ELECTIVE UNITS**

**Business**

AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders
BSBRES401A	Analyse and present research information

**Occupational health and safety**

AHCOHS501A	Manage Occupational Health and Safety (OHS) processes
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**Plants**

AHCPCM601A	Develop and implement a plant health management strategy
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**Work**

AHCWRK503A	Prepare reports
AHCWRK504A	Assess new industry developments
AHCWRK507A	Implement professional practice
AHCWRK508A	Interpret legislation
AHCWRK509A	Provide specialist advice to clients
AHCWRK510A	Audit site operations

## AHC50610 Diploma of Landscape Design

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This is a specialist qualification for landscape designers.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry or completion of the Certificate III in Landscape Construction.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Horticulture.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

#### Job roles

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

Landscape designer

### Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> <li>• Sharing information</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> </ul>



**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<ul style="list-style-type: none"> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Defining own learning needs</li> <li>• Carrying out independent learning to improve capability</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of twelve (12) units made up of five (5) core units and seven (7) elective units.

**ELECTIVE UNITS**

- a minimum of five (5) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the landscape design industry.

**CORE UNITS****Design**

Unit code	Unit title
AHCDES501A	Design sustainable landscapes

AHCDES502A	Prepare a landscape project design
AHCDES503A	Assess landscape sites
AHCDES504A	Design for construction of landscape features
CUVACD302A	Produce computer-aided drawings

## ELECTIVE UNITS

### Arboriculture

Unit code	Unit title
AHCARB502A	Identify, select and specify trees

### Business

Unit code	Unit title
AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders

### Design

Unit code	Unit title
BSBDES501A	Implement design solutions
BSBDES502A	Establish, negotiate and refine a design brief

### Permaculture

Unit code	Unit title
PIL401A	Provide advice on permaculture principles and practices
PIL403A	Design an urban permaculture system
PIL404A	Plan for the implementation of permaculture works
PIL505A	Plan the implementation of a permaculture project

**Landscape**

<b>Unit code</b>	<b>Unit title</b>
AHCLSC501A	Survey and establish site levels
AHCLSC502A	Manage landscape projects

**Plants**

<b>Unit code</b>	<b>Unit title</b>
AHCPCM503A	Specify plants for landscapes
AHCPCM504A	Design and maintain a specialised landscape

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK503A	Prepare reports
AHCWRK507A	Implement professional practice
AHCWRK508A	Interpret legislation
AHCWRK509A	Provide specialist advice to clients
AHCWRK510A	Audit site operations

# AHC50710 Diploma of Parks and Gardens Management

## Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

## Description

The Diploma of Parks and Gardens Management reflects the role of those who manage private parks and gardens or personnel working in local government as parks managers.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Horticulture.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Parks and Gardens Manager

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> <li>• Sharing information</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<ul style="list-style-type: none"> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Defining own learning needs</li> <li>• Carrying out independent learning to improve capability</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of twelve (12) units made up of five (5) core units and seven (7) elective units.

**ELECTIVE UNITS**

- a minimum of five (5) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the parks and gardens industry.

**CORE UNITS****Business**

Unit code	Unit title
AHCBUS501A	Manage staff

AHCBUS504A	Prepare estimates, quotes and tenders
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### Parks and gardens

Unit code	Unit title
AHCPGD503A	Manage parks and reserves
AHCPGD504A	Develop and implement a streetscape management plan

### Turf

Unit code	Unit title
AHCTRF501A	Plan the establishment of sports turf playing surfaces

## ELECTIVE UNITS

### Parks and gardens

Unit code	Unit title
AHCPGD501A	Manage plant cultural practices
AHCPGD502A	Plan the restoration of parks and gardens
AHCPGD505A	Conduct comprehensive inspection of park facilities

### Arboriculture

Unit code	Unit title
AHCARB501A	Assess trees
AHCARB502A	Identify, select and specify trees
AHCARB503A	Diagnose tree diseases
AHCARB504A	Develop a tree protection program
AHCARB505A	Document and audit tree work

**Business**

Unit code	Unit title
AHCBUS503A	Negotiate and monitor contracts
BSBFIM501A	Manage budgets and financial plans
BSBHRM506A	Manage recruitment selection and induction processes
AHCWRK511A	Develop workplace policy and procedures for sustainability
TLIR4002A	Source goods/services and evaluate contractors
TLIR4003A	Negotiate a contract

**Chemicals**

Unit code	Unit title
AHCCHM501A	Develop and manage a chemical use strategy

**Irrigation**

Unit code	Unit title
AHCIRG501A	Audit irrigation systems
AHCIRG502A	Design irrigation system maintenance and monitoring programs
AHCIRG503A	Design irrigation, drainage and water treatment systems
AHCIRG504A	Develop an irrigation and drainage management plan

**Landscape**

Unit code	Unit title
AHCLSC501A	Survey and establish site levels
AHCLSC502A	Manage landscape projects
AHCLSC503A	Manage a tree transplanting program

**Occupational health and safety**



<b>Unit code</b>	<b>Unit title</b>
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

### **Plants**

<b>Unit code</b>	<b>Unit title</b>
AHCPCM501A	Diagnose plant health problems
AHCPCM502A	Collect and classify plants
AHCPCM503A	Specify plants for landscapes
AHCPCM504A	Design and maintain a specialised landscape

# AHC50810 Diploma of Production Nursery Management

## Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

## Description

The Diploma of Production Nursery Management reflects the role of those who manage commercial production nursery enterprises.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Horticulture.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Production nursery manager

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> <li>• Sharing information</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<ul style="list-style-type: none"> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Defining own learning needs</li> <li>• Carrying out independent learning to improve capability</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of ten (10) units made up of six (6) core units and four (4) elective units.

**ELECTIVE UNITS**

- a minimum of two (2) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the nursery industry.

**CORE UNITS****Occupational health and safety**

Unit code	Unit title
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

**Merchandising and sales**

<b>Unit code</b>	<b>Unit title</b>
SIRXINV005A	Control inventory

**Plants**

<b>Unit code</b>	<b>Unit title</b>
AHCPCM501A	Diagnose plant health problems
AHCPCM502A	Collect and classify plants

**Production horticulture**

<b>Unit code</b>	<b>Unit title</b>
AHCPHT502A	Develop a horticultural production plan

**Soils and media**

<b>Unit code</b>	<b>Unit title</b>
AHCSOL501A	Monitor and manage soils for production

**ELECTIVE UNITS****Business**

<b>Unit code</b>	<b>Unit title</b>
BSBSMB405B	Monitor and manage small business operations

**Chemicals**

<b>Unit code</b>	<b>Unit title</b>
AHCCHM501A	Develop and manage a chemical use strategy

**Drainage**

Unit code	Unit title
AHCDRG501A	Design drainage systems

**Machinery operation and maintenance**

Unit code	Unit title
AHCMOM501A	Manage machinery and equipment
AHCMOM502A	Implement a machinery management system

**Merchandising and sales**

Unit code	Unit title
SIRXPRO007A	Improve supply and distribution chains

**Pest management**

Unit code	Unit title
AHCPMG501A	Coordinate the pest management strategy in a regional or broader context
AHCPMG502A	Define the pest problem in a regional or broader context
AHCPMG503A	Develop a strategy for the management of target pests
AHCPMG504A	Develop a system for monitoring the pest management strategy
AHCPMG505A	Evaluate the pest management strategy

**Production horticulture**

Unit code	Unit title
AHCPHT503A	Manage a controlled growing environment

**Water**

<b>Unit code</b>	<b>Unit title</b>
AHCWAT501A	Design water treatment systems
AHCWAT502A	Manage water systems

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK501A	Plan, implement and review a quality assurance program
AHCWRK502A	Collect and manage data
AHCWRK503A	Prepare reports
AHCWRK505A	Manage trial and/or research material
AHCWRK507A	Implement professional practice
AHCWRK508A	Interpret legislation
AHCWRK509A	Provide specialist advice to clients
AHCWRK510A	Audit site operations
PSPPM502B	Manage complex projects
PSPPM503B	Close complex projects

# AHC50910 Diploma of Retail Nursery Management

## Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

## Description

The Diploma of Retail Nursery Management reflects the role of those who manage garden centres, retail nurseries and plant sales outlets.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Horticulture.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Retail nursery manager

Garden centre manager



## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> <li>• Sharing information</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Defining own learning needs</li> <li>• Carrying out independent learning to improve capability</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of ten (10) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of four (4) units must come from elective groups A or B
- a maximum of two (2) units may be selected from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the nursery industry.

### ELECTIVE UNITS GROUP A

#### Plants

Unit code	Unit title
AHCPCM501A	Diagnose plant health problems
AHCPCM502A	Collect and classify plants

### Merchandising and sales

Unit code	Unit title
BSBCUS501C	Manage quality customer service
SIRXCLM402	Manage store facilities
SIRXINV005A	Control inventory
SIRXSLS406	Manage sales and service delivery

### ELECTIVE UNITS GROUP B

#### Business

Unit code	Unit title
BSBSMB405B	Monitor and manage small business operations

#### Chemicals

Unit code	Unit title
AHCCHM501A	Develop and manage a chemical use strategy

#### Irrigation

Unit code	Unit title
AHCIRG502A	Design irrigation system maintenance and monitoring programs

### Merchandising and sales

Unit code	Unit title
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AHCMER501A	Develop a sales strategy for rural products
SIRXMPR001A	Profile a retail market
SIRXMER004A	Manage merchandise and store presentation
SIRXPRO007A	Improve supply and distribution chains
SIRXRSK404	Control store security

### Occupational health and safety

Unit code	Unit title
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

### Pest management

Unit code	Unit title
AHCPMG503A	Develop a strategy for the management of target pests

### Production horticulture

Unit code	Unit title
AHCPHT503A	Manage a controlled growing environment

### Soils and media

Unit code	Unit title
AHCSOL501A	Monitor and manage soils for production

### Water

Unit code	Unit title
AHCWAT502A	Manage water systems

### Work

<b>Unit code</b>	<b>Unit title</b>
AHCWRK501A	Plan, implement and review a quality assurance program
AHCWRK502A	Collect and manage data
AHCWRK503A	Prepare reports
AHCWRK505A	Manage trial and/or research material
AHCWRK509A	Provide specialist advice to clients

# AHC51010 Diploma of Sports Turf Management

## Modification History

April 2012: Electives AHCTRF502A, AHCTRF503A and AHCTRF504A added.

## Description

The Diploma of Sports Turf Management applies to curators, golf course superintendents, sports turf managers, senior bowling greenkeepers and turf consultants.

## Pathways Information

### Qualification pathways

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Horticulture.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Curator

Grounds manager

Golf course superintendent

Sports turf manager

Senior bowling greenkeeper

Turf consultant

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

Entrants must have completed the Certificate III in Sports Turf Management by course work or by Recognition of Prior Learning or an equivalent trade level qualification in green keeping or turf management.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> <li>• Establishing/using networks</li> <li>• Sharing information</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> </ul>

	<ul style="list-style-type: none"> <li>Working within or establishing clear project goals and deliverables</li> <li>Determining or applying required resources</li> <li>Allocating people and other resources to tasks and workplace requirements</li> <li>Managing time and priorities</li> <li>Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Defining own learning needs</li> <li>Carrying out independent learning to improve capability</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using technology to organise data</li> </ul>

## Packaging Rules

Completion of **ten (10)** units made up of **four (4)** core units and **six (6)** elective units.

### Core Units of Competency

#### Chemicals

Unit code	Unit title
AHCCHM501A	Develop and manage a chemical use strategy

#### Plants

Unit code	Unit title
AHCPCM501A	Diagnose plant health problems

#### Soils and media

Unit code	Unit title
AHCSOL501A	Monitor and manage soils for production

#### Turf



Unit code	Unit title
AHCTRF501A	Plan the establishment of sports turf playing surfaces

### Elective Units of Competency

- a minimum of four (4) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the turf industry

### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS508A	Prepare and monitor budgets and financial reports

### Drainage

Unit code	Unit title
AHCDRG501A	Design drainage systems

### Irrigation

Unit code	Unit title
AHCIRG502A	Design irrigation system maintenance and monitoring programs

### Landscape

Unit code	Unit title
AHCLSC502A	Manage landscape projects

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM501A	Manage machinery and equipment

### Occupational health and safety

Unit code	Unit title
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

### Pest management

Unit code	Unit title
AHCPMG504A	Develop a system for monitoring the pest management strategy

### Plants

Unit code	Unit title
AHCPCM601A	Develop and implement a plant health management strategy

### Turf

Unit code	Unit title
AHCTRF502A	Manage sports turf renovation programs* <i>AHCTRF305A Renovate sports turf</i>
AHCTRF503A	Develop sports turf management programs
AHCTRF504A	Manage sports turf facilities

### Work

Unit code	Unit title
AHCWRK505A	Manage trial and/or research material
BSBHRM402A	Recruit, select and induct staff
SRXGOV004B	Work effectively with the Board of an organisation



## AHC51110 Diploma of Conservation and Land Management

### Modification History

Release	TP Version	Comments
4	AHC10v6	<p>Added elective units:</p> <ul style="list-style-type: none"> <li>• AHCCFI504 Monitor and report on a Carbon Farming Initiative project</li> <li>• AHCCFI506 Plan a Carbon Farming Initiative livestock project</li> <li>• AHCCFI507 Plan a Carbon Farming Initiative waste or manure management project</li> <li>• AHCCFI508 Plan a Carbon Farming Initiative project to sequester carbon in soil or biochar</li> <li>• AHCCFI509 Plan a Carbon Farming Initiative savannah burning, feral animal or rangelands project</li> <li>• AHCCFI510 Plan a Carbon Farming Initiative vegetation project</li> <li>• AHCCFI511 Plan a Carbon Farming Initiative project to avoid emissions from soil and crops</li> </ul>
3	AHC10v5	<p>Updated superseded elective unit <i>AHCILM507A Plan for successful cultural practice at work</i> to <i>AHCILM510A Plan for successful cultural practice at work</i></p> <p>Added elective unit <i>AHCASW501A Survey and report on Aboriginal cultural sites</i></p> <p>Equivalent imported units updated</p>
2	AHC10v4	Equivalent imported units updated
1	AHC10	Initial release

### Description

The Diploma of Conservation and Land Management reflects the role of personnel working in management positions with technical level skill in land management roles.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Conservation and Land Management.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Lands, parks and wildlife manager

Senior Ranger

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>Establishing/using networks</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>Working with diverse individuals and groups</li> <li>Applying knowledge of own role as a part of a team</li> <li>Applying teamwork skills to a range of situations</li> <li>Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>Developing practical and creative solutions to workplace problems</li> <li>Applying a range of strategies in problem solving</li> <li>Listening to and resolving concerns in relation to workplace issues</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>Identifying opportunities that might not be obvious to others</li> <li>Generating a range of options in response to workplace matters</li> <li>Translating ideas into action</li> <li>Developing innovative solutions</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Taking initiative and making decisions within workplace role</li> <li>Working within or establishing clear project goals and deliverables</li> <li>Determining or applying required resources</li> <li>Allocating people and other resources to tasks and workplace requirements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Having a personal vision and goals</li> <li>Articulating own ideas and vision</li> <li>Monitoring and evaluating own performance</li> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Being open to learning, new ideas and techniques</li> <li>Learning in order to accommodate change</li> <li>Managing own learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using technology to organise data</li> <li>Applying technology as a management tool</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of ten (10) elective units.

## ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of four (4) units must come from elective groups A or B
- a maximum of two (2) units may be selected from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in conservation and land management.

## ELECTIVE UNITS GROUP A

### Indigenous land management

Unit code	Unit title
AHCASW501A	Survey and report on Aboriginal cultural sites
AHCILM501A	Conduct field research into natural and cultural resources
AHCILM502A	Develop conservation strategies for cultural resources
AHCILM503A	Manage restoration of cultural places
AHCILM504A	Develop strategies for Indigenous land or sea management
AHCILM505A	Map relationship of business enterprise to culture and country
AHCILM506A	Operate within community cultures and goals
AHCILM508A	Propose a negotiated outcome for a given area of country
AHCILM509A	Plan burning activities for natural and cultural resource management
AHCILM510A	Plan for successful cultural practice at work
AHCILM601A	Manage cultural processes in an Indigenous organisation
SITTGDE101	Interpret aspects of local Australian Indigenous culture

### Lands, parks and wildlife

Unit code	Unit title
AHCLPW501A	Develop a management plan for a designated area
AHCLPW503A	Assess applications for legislative compliance
AHCLPW504A	Review assessments for legislative compliance

AHCLPW505A	Implement natural and cultural resource management plans
AHCLPW506A	Investigate suspected breaches of Natural Resource Management (NRM) legislation
AHCLPW601A	Coordinate the preparation of a regional resource management plan
CPPWMT5043A	Develop and implement an environmental management strategy
NWP512B	Develop and review catchment management plan
NWP513B	Implement and manage catchment management plan
NWP516B	Develop and review surface water management plan
NWP517B	Implement and manage surface water management plan
NWP518B	Prepare and report on data related to flood mitigation
NWP519B	Develop and report flood mitigation
PUAFIR406B	Develop prescribed burning plans
SISXRES506A	Undertake open-space planning
SRXRES010B	Protect heritage and cultural assets

### Natural area restoration

Unit code	Unit title
AHCNAR501A	Manage natural areas on a rural property
AHCNAR502A	Conduct biological surveys
AHCNAR503A	Design a natural area restoration project
AHCNAR504A	Manage natural area restoration programs
AHCNAR505A	Plan river restoration works
AHCNAR506A	Develop and implement sustainable land use strategies

### Pest management



Unit code	Unit title
AHCPMG501A	Coordinate the pest management strategy in a regional or broader context
AHCPMG502A	Define the pest problem in a regional or broader context
AHCPMG503A	Develop a strategy for the management of target pests
AHCPMG504A	Develop a system for monitoring the pest management strategy
AHCPMG505A	Evaluate the pest management strategy
AHCPMG506A	Manage the implementation of legislation

### Plants

Unit code	Unit title
AHCPCM502A	Collect and classify plants

### Soil and water conservation

Unit code	Unit title
AHCSAW501A	Design control measures and structures
AHCSAW502A	Plan erosion and sediment control measures
AHCSAW503A	Plan conservation earthworks

### ELECTIVE UNITS GROUP B

#### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders
AHCBUS508A	Prepare and monitor budgets and financial reports

TLIR4003A	Negotiate a contract
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### Carbon farming

Unit code	Unit title
AHCCFI504	Monitor and report on a Carbon Farming Initiative project
AHCCFI506	Plan a Carbon Farming Initiative livestock project
AHCCFI507	Plan a Carbon Farming Initiative waste or manure management project
AHCCFI508	Plan a Carbon Farming Initiative project to sequester carbon in soil or biochar
AHCCFI509	Plan a Carbon Farming Initiative savannah burning, feral animal or rangelands project
AHCCFI510	Plan a Carbon Farming Initiative vegetation project
AHCCFI511	Plan a Carbon Farming Initiative project to avoid emissions from soil and crops

### Fauna

Unit code	Unit title
AHCFAU501A	Manage fauna populations

### Fire

Unit code	Unit title
AHCFIR501A	Manage wildfire hazard reduction programs

### Lands, parks and wildlife

Unit code	Unit title
AHCLPW501A	Develop a management plan for a designated area

**Machinery operation and maintenance**

<b>Unit code</b>	<b>Unit title</b>
AHCMOM501A	Manage machinery and equipment
AHCMOM502A	Implement a machinery management system
BSBWHS503A	Contribute to the systematic management of WHS risk
BSBWHS508A	Manage WHS hazards associated with plant

**Occupational health and safety**

<b>Unit code</b>	<b>Unit title</b>
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

**Natural area restoration**

<b>Unit code</b>	<b>Unit title</b>
AHCNAR501A	Manage natural areas on a rural property
AHCNAR502A	Conduct biological surveys
AHCNAR503A	Design a natural area restoration project
AHCNAR504A	Manage natural area restoration programs
AHCNAR505A	Plan river restoration works
AHCNAR506A	Develop and implement sustainable land use strategies
SITTPPD402	Develop interpretative activities
SITTPPD602	Develop environmentally sustainable tourism operations

**Natural resource management**

<b>Unit code</b>	<b>Unit title</b>
AHCNRM501A	Develop a coastal rehabilitation strategy
AHCNRM502A	Develop a water quality monitoring program

AHCNRM503A	Support the implementation of waterways strategies
AHCNRM504A	Interpret and report on catchment hydrology
AHCNRM505A	Provide technical advice on sustainable catchment management
AHCNRM506A	Plan and monitor works projects in catchments and waterways
AHCNRM507A	Manipulate and analyse data within geographic information systems

### Parks and gardens

Unit code	Unit title
AHCPGD503A	Manage parks and reserves
AHCPGD505A	Conduct comprehensive inspection of park facilities

### Work

Unit code	Unit title
AHCWRK502A	Collect and manage data
AHCWRK503A	Prepare reports
AHCWRK508A	Interpret legislation
AHCWRK509A	Provide specialist advice to clients
AHCWRK511A	Develop workplace policy and procedures for sustainability
PSPPM502B	Manage complex projects
PSPPM503B	Close complex projects

## AHC51210 Diploma of Community Coordination and Facilitation

### Modification History

Release	TP Version	Comments
3	AHC10v6	Added elective units: <ul style="list-style-type: none"> <li>• AHCCFI501 Provide technical advice on the Carbon Farming Initiative</li> <li>• AHCCFI502 Assess the feasibility of a Carbon Farming Initiative project</li> <li>• AHCCFI503 Advise on Carbon Farming Initiative project planning and implementation</li> <li>• AHCCFI504 Monitor and report on a Carbon Farming Initiative project</li> <li>• AHCCFI505 Aggregate Carbon Farming Initiative projects</li> </ul>
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

Community coordination and facilitation sector is about fostering, promoting and supporting community development, particularly in rural communities that are engaged in land management activities.

### Pathways Information

#### Qualification pathways

##### Pathways into the qualification

This qualification may be accessed by direct entry.

##### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Conservation and Land Management.

#### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Volunteer, project manager, community group leader, group or project coordinator, regional coordinator

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Establishing/using networks</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Applying a range of strategies in problem solving</li> <li>• Listening to and resolving concerns in relation to workplace issues</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• Translating ideas into action</li> <li>• Developing innovative solutions</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Taking initiative and making decisions within workplace role</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Having a personal vision and goals</li> <li>• Articulating own ideas and vision</li> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in order to accommodate change</li> <li>• Managing own learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> <li>• Applying technology as a management tool</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of ten (10) elective units.

### ELECTIVE UNITS

- a minimum of four (4) units must come from elective group A
- a minimum of four (4) units must come from elective groups A or B
- a maximum of two (2) units may be selected from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in community coordination and facilitation.

### ELECTIVE UNITS GROUP A

#### Community coordination and facilitation

Unit code	Unit title
AHCCCF501A	Evaluate project submissions
AHCCCF502A	Facilitate development of group goals and projects
AHCCCF503A	Promote group formation and development
AHCCCF504A	Support group and community changes in resource management
AHCCCF505A	Contribute to regional planning process
AHCCCF506A	Manage the incorporation of a group
AHCCCF601A	Map regional issues and stakeholders

## ELECTIVE UNITS GROUP B

### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS502A	Market products and services
AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders
AHCBUS505A	Develop a marketing plan
AHCBUS506A	Develop and review a business plan
AHCBUS507A	Monitor and review business performance
AHCBUS508A	Prepare and monitor budgets and financial reports
BSBADM504B	Plan or review administrative systems
BSBRES401A	Analyse and present research information
TLIL5019A	Implement and monitor transport logistics
TLIR4002A	Source goods/services and evaluate contractors



TLIR4003A	Negotiate a contract
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### Carbon farming

Unit code	Unit title
AHCCFI501	Provide technical advice on the Carbon Farming Initiative
AHCCFI502	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI503	Advise on Carbon Initiative project planning and implementation
AHCCFI504	Monitor and report on a Carbon Farming Initiative project
AHCCFI505	Aggregate Carbon Farming Initiative projects

### Community coordination and facilitation

Unit code	Unit title
AHCCCF401A	Prepare project acquittal
AHCCCF402A	Report on project
AHCCCF403A	Obtain and manage sponsorship
AHCCCF404A	Contribute to association governance
AHCCCF405A	Develop community networks
AHCCCF406A	Facilitate ongoing group development
AHCCCF407A	Obtain resources from community and groups
AHCCCF408A	Promote community programs
AHCCCF409A	Participate in assessments of project submissions
AHCCCF410A	Support individuals in resource management change processes
AHCCCF411A	Develop approaches to include cultural and human diversity
AHCCCF412A	Coordinate board/committee elections
AHCCCF413A	Service committees

AHCCCF414A	Coordinate fund-raising activities
AHCCCF415A	Coordinate social events to support group purposes
AHCCCF416A	Present proposed courses of action to meeting
CHCCD404E	Develop and implement community programs
LGACOM502B	Devise and conduct community consultations

### Lands, parks and wildlife

Unit code	Unit title
PUACOM012B	Liaise with media at a local level
AHCLPW501A	Develop a management plan for a designated area

### Occupational health and safety

Unit code	Unit title
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

### Work

Unit code	Unit title
AHCWRK501A	Plan, implement and review a quality assurance program
AHCWRK502A	Collect and manage data
AHCWRK503A	Prepare reports
AHCWRK504A	Assess new industry developments
AHCWRK505A	Manage trial and/or research material
AHCWRK507A	Implement professional practice
AHCWRK508A	Interpret legislation
AHCWRK509A	Provide specialist advice to clients
AHCWRK510A	Audit site operations

AHCWRK511A	Develop workplace policy and procedures for sustainability
PSPPM502B	Manage complex projects
PSPPM503B	Close complex projects

# AHC51310 Diploma of Pest Management

## Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

## Description

The Diploma of Pest Management reflects the role of personnel working as managers of pest management units.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry or by completion of the Certificate III in Vertebrate Pest Management or the Certificate III in Weed Management.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Conservation and Land Management.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Pest management manager

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Establishing/using networks</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Applying a range of strategies in problem solving</li> <li>• Listening to and resolving concerns in relation to workplace issues</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into action</li> <li>• Developing innovative solutions</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Taking initiative and making decisions within workplace role</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Having a personal vision and goals</li> <li>• Articulating own ideas and vision</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<ul style="list-style-type: none"> <li>Monitoring and evaluating own performance</li> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Being open to learning, new ideas and techniques</li> <li>Learning in order to accommodate change</li> <li>Managing own learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using technology and related workplace equipment</li> <li>Using technology to organise data</li> <li>Applying technology as a management tool</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of ten (10) elective units.

**ELECTIVE UNITS**

- a minimum of four (4) units must come from elective group A
- a minimum of four (4) units must come from elective groups A or B
- a maximum of two (2) units may be selected from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in pest management.

**ELECTIVE UNITS GROUP A****Pest management**

Unit code	Unit title
AHCPMG501A	Coordinate the pest management strategy in a regional or broader context
AHCPMG502A	Define the pest problem in a regional or broader context
AHCPMG503A	Develop a strategy for the management of target pests
AHCPMG504A	Develop a system for monitoring the pest management strategy
AHCPMG505A	Evaluate the pest management strategy

AHCPMG506A	Manage the implementation of legislation
AHCPMG601A	Develop a plant pest survey strategy
AHCPMG602A	Develop a plant pest destruction strategy

## ELECTIVE UNITS GROUP B

### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders
AHCBUS508A	Prepare and monitor budgets and financial reports
BSBRES401A	Analyse and present research information
TLIR4002A	Source goods/services and evaluate contractors
TLIR4003A	Negotiate a contract

### Chemicals

Unit code	Unit title
AHCCHM501A	Develop and manage a chemical use strategy

### Occupational health and safety

Unit code	Unit title
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

### Plants

Unit code	Unit title
AHCPCM502A	Collect and classify plants

**Natural area restoration**

<b>Unit code</b>	<b>Unit title</b>
AHCNAR502A	Conduct biological surveys

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK501A	Plan, implement and review a quality assurance program
AHCWRK502A	Collect and manage data
AHCWRK503A	Prepare reports
AHCWRK504A	Assess new industry developments
AHCWRK505A	Manage trial and/or research material
AHCWRK508A	Interpret legislation
AHCWRK509A	Provide specialist advice to clients
AHCWRK511A	Develop workplace policy and procedures for sustainability
PSPPM502B	Manage complex projects
PSPPM503B	Close complex projects



## AHC51410 Diploma of Agribusiness Management

### Modification History

Release	TP Version	Comments
4	AHC10v6	Added elective units: <ul style="list-style-type: none"> <li>• AHCCFI501 Provide technical advice on the Carbon Farming Initiative</li> <li>• AHCCFI502 Assess the feasibility of a Carbon Farming Initiative project</li> <li>• AHCCFI503 Advise on Carbon Farming Initiative project planning and implementation</li> <li>• AHCCFI504 Monitor and report on a Carbon Farming Initiative project</li> <li>• AHCCFI505 Aggregate Carbon Farming Initiative projects</li> </ul>
3	AHC10v5	Added electives <i>AHCBUS401A Administer finance, insurance and legal requirements</i> , <i>AHCMOM501A Manage machinery and equipment</i> and <i>AHCMOM502A Implement a machinery management system</i>
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

The Diploma of Agribusiness Management reflects the role of personnel working on farms, stations and related rural businesses involved in administering and managing those businesses.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Agribusiness Management or Advanced Diploma of Agriculture.

### **Australian Apprenticeships**

This qualification is suitable for an Australian Apprenticeship.

### **Job roles**

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

Farm manager/administrator

Production unit manager/administrator

Station/property manager/Agribusiness manager/administrator

### **Licensing/Regulatory Information**

Not Applicable

### **Entry Requirements**

#### **Entry requirements**

There are no entry requirements for this qualification.

### **Employability Skills Summary**

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Establishing/using networks</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Applying a range of strategies in problem solving</li> <li>• Listening to and resolving concerns in relation to workplace issues</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into action</li> <li>• Developing innovative solutions</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Taking initiative and making decisions within workplace role</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Having a personal vision and goals</li> <li>• Articulating own ideas and vision</li> <li>• Monitoring and evaluating own performance</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in order to accommodate change</li> <li>• Managing own learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using technology to organise data</li> <li>• Applying technology as a management tool</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of ten (10) elective units.

### ELECTIVE UNITS

- a minimum of eight (8) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in rural business.

**ELECTIVE UNITS****Agribusiness**

<b>Unit code</b>	<b>Unit title</b>
AHCAGB501A	Develop climate risk management strategies
AHCAGB502A	Plan and manage infrastructure requirements
AHCAGB503A	Plan and monitor production processes
AHCAGB504A	Plan production for the whole land/farm based business
AHCAGB505A	Develop a whole farm plan
AHCBUS401A	Administer finance, insurance and legal requirements
BSBADM504B	Plan or review administrative systems
BSBWOR501B	Manage personal work priorities and professional development
TLIL5019A	Implement and monitor transport logistics
TLIR4002A	Source goods/services and evaluate contractors
TLIR4003A	Negotiate a contract

**Business**

<b>Unit code</b>	<b>Unit title</b>
AHCBUS501A	Manage staff
AHCBUS502A	Market products and services
AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders
AHCBUS505A	Develop a marketing plan
AHCBUS506A	Develop and review a business plan
AHCBUS507A	Monitor and review business performance
AHCBUS508A	Prepare and monitor budgets and financial reports

**Carbon farming**

<b>Unit code</b>	<b>Unit title</b>
AHCCFI501	Provide technical advice on the Carbon Farming Initiative
AHCCFI502	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI503	Advise on Carbon Initiative project planning and implementation
AHCCFI504	Monitor and report on a Carbon Farming Initiative project
AHCCFI505	Aggregate Carbon Farming Initiative projects

**Occupational Health and Safety**

<b>Unit code</b>	<b>Unit title</b>
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

**Machinery operation and maintenance**

<b>Unit code</b>	<b>Unit title</b>
AHCMOM501A	Manage machinery and equipment
AHCMOM502A	Implement a machinery management system

**Natural area restoration**

<b>Unit code</b>	<b>Unit title</b>
AHCNAR506A	Develop and implement sustainable land use strategies

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK511A	Develop workplace policy and procedures for sustainability

## AHC51513 Diploma of Viticulture

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Description

This qualification is designed to meet the needs of managers in the viticulture industry.

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

- Viticulture farm manager.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Pathways Information

#### Pathways into the Qualification

Preferred pathways for candidates considering this qualification include

- AHC40310 Certificate IV in Production Horticulture

or

- with equivalent technical skills in vineyard operations and vocational experience in a supervisory or technician role but no formal qualification.

#### Pathways from the Qualification

Further training pathways from this Qualification include, but are not limited to, AHC60110 Advanced Diploma of Agriculture or AHC60310 Advanced Diploma of Agribusiness Management.

### Licensing/Regulatory Information

Not applicable.

## Entry Requirements

There are no formal entry requirements for this qualification. However, the qualification assumes that a learner has current or past work experience where operational or technical skills have already been gained and a production management level of responsibility exists. The qualification is not suitable for direct entry from school.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation.</li> <li>• Writing to audience needs.</li> <li>• Interpreting the needs of internal/external customers.</li> <li>• Applying numeracy skills to workplace requirements.</li> <li>• Establishing/using networks.</li> <li>• Sharing information.</li> <li>• Negotiating responsively.</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member.</li> <li>• Working with diverse individuals and groups.</li> <li>• Identifying and using the strengths of other team members.</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems.</li> <li>• Showing independence and initiative in identifying problems.</li> <li>• Solving problems individually or in teams.</li> <li>• Applying a range of strategies in problem solving.</li> <li>• Using numeracy skills to solve problems.</li> <li>• Testing assumptions and taking context into account.</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations.</li> <li>• Being creative in response to workplace challenges.</li> <li>• Identifying opportunities that might not be obvious to others.</li> <li>• Generating a range of options in response to workplace matters.</li> <li>• Translating ideas into actions.</li> <li>• Developing a strategic, creative long-term vision.</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting, analysing and organising information.</li> <li>• Using basic business systems for planning and organising.</li> <li>• Being appropriately resourceful.</li> <li>• Taking initiative and making decisions within workplace role.</li> </ul>

	<ul style="list-style-type: none"> <li>• Participating in continuous improvement and planning processes.</li> <li>• Working within or establishing clear project goals and deliverables.</li> <li>• Determining or applying required resources.</li> <li>• Allocating people and other resources to tasks and workplace requirements.</li> <li>• Managing time and priorities.</li> <li>• Adapting resource allocations to cope with contingencies.</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level.</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning new ideas and techniques.</li> <li>• Learning in a range of settings including informal learning.</li> <li>• Participating in ongoing learning.</li> <li>• Learning in order to accommodate change.</li> <li>• Contributing to the learning of others.</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment.</li> <li>• Using basic technology skills.</li> <li>• Using technology to organise data.</li> <li>• Applying technology as a management tool.</li> </ul>

## Packaging Rules

Completion of 10 units of competency comprising four (4) core units and six (6) elective units.

### Core Units of Competency

#### Business

Unit code	Unit title
AHCBUS501A	Manage staff

#### Plants

Unit code	Unit title
AHCPCM501A	Diagnose plant health problems



**Production horticulture**

Unit code	Unit title
AHCPHT504A	Develop a grape production plan

**Soil**

Unit code	Unit title
AHCSOL501A	Monitor and manage soils for production

**Elective Units of Competency**

- select three (3) units from the elective list below
- select three additional (3) units from the elective list below, or from units packaged in Certificate IV, Diploma or Advanced Diploma in AHC10 or from any other currently endorsed Training Package or accredited course

Selected units must be relevant to job outcomes in the viticulture industry.

**Broadacre cropping**

Unit code	Unit title
AHCBAC505A	Plan and manage long-term weed, pest &/or disease control in crops

**Biosecurity**

Unit code	Unit title
AHCBIO501A	Manage active operational emergency disease or plant pest sites
AHCBIO502A	Manage the implementation of an emergency disease or plant pest control program

**Business**

Unit code	Unit title
AHCBUS502A	Market products and services

AHCBUS503A	Negotiate and monitor contracts
AHCBUS505A	Develop a marketing plan
AHCBUS506A	Develop and review a business plan
AHCBUS507A	Monitor and review business performance
AHCBUS508A	Prepare and monitor budgets and financial reports
BSBR5K501B	Manage risk
TLIL5019A	Implement and monitor transport logistics
TLIR4002A	Source goods/services and evaluate contractors

### Chemicals

Unit code	Unit title
AHCCHM501A	Develop and manage a chemical use strategy

### Drainage

Unit code	Unit title
AHCDRG501A	Design drainage systems

### Irrigation

Unit code	Unit title
AHCIRG502A	Design irrigation system maintenance and monitoring programs
AHCIRG503A	Design irrigation, drainage and water treatment systems
AHCIRG504A	Develop an irrigation and drainage management plan

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM501A	Manage machinery and equipment

AHCMOM502A	Implement a machinery management system
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### Natural area restoration

Unit code	Unit title
AHCNAR506A	Develop and implement sustainable land use strategies

### Occupational health and safety

Unit code	Unit title
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

### Organic

Unit code	Unit title
AHCORG501A	Develop an organic management plan
AHCORG502A	Prepare the enterprise for organic certification

### Production horticulture

Unit code	Unit title
AHCPHT505A	Evaluate wine
AHCPHT506A	Manage a wine making process

### Water

Unit code	Unit title
AHCWAT502A	Manage water systems

### Work

Unit code	Unit title
AHCWRK501A	Plan, implement and review a quality assurance program



# AHC51610 Diploma of Irrigation Management

## Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

## Description

The Diploma of Irrigation Management reflects the role of an irrigation business manager.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry or by completion of the Irrigation Industry Agronomist Skill Set.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Irrigation business manager

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> <li>• Testing assumptions and taking context into account</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Generating a range of options in response to workplace matters</li> <li>• Translating ideas into actions</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

Learning	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> <li>• Applying OHS knowledge when using technology</li> <li>• Applying technology as a management tool</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of eleven (11) units made up of six (6) core units and five (5) elective units.

**ELECTIVE UNITS**

- a minimum of three (3) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in the irrigation industry.

**CORE UNITS****Irrigation**

Unit code	Unit title
AHCIRG402A	Determine hydraulic parameters for an irrigation system
AHCIRG501A	Audit irrigation systems
AHCIRG502A	Design irrigation system maintenance and monitoring programs
AHCIRG503A	Design irrigation, drainage and water treatment systems
AHCIRG504A	Develop an irrigation and drainage management plan

**Soils and media**

Unit code	Unit title
AHCSOL501A	Monitor and manage soils for production

## ELECTIVE UNITS

### Irrigation

Unit code	Unit title
AHCIRG505A	Establish and maintain an irrigation-related environmental protection program

### Merchandising and sales

Unit code	Unit title
BSBCUS501C	Manage quality customer service
SIRXCLM402	Manage store facilities
SIRXINV005A	Control inventory
SIRXMER004A	Manage merchandise and store presentation
SIRXRSK404	Control store security
SIRXSLS406	Manage sales and service delivery

### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS502A	Market products and services
AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders
AHCBUS505A	Develop a marketing plan
AHCBUS506A	Develop and review a business plan



AHCBUS507A	Monitor and review business performance
AHCBUS508A	Prepare and monitor budgets and financial reports
BSBFIM501A	Manage budgets and financial plans
BSBHRM506A	Manage recruitment selection and induction processes
BSBRES401A	Analyse and present research information
AHCWRK511A	Develop workplace policy and procedures for sustainability
TLIR4002A	Source goods/services and evaluate contractors

### Drainage

Unit code	Unit title
AHCDRG501A	Design drainage systems

### Work

Unit code	Unit title
AHCWRK502A	Collect and manage data
AHCWRK503A	Prepare reports
AHCWRK507A	Implement professional practice
AHCWRK509A	Provide specialist advice to clients
AHCWRK510A	Audit site operations
PSPPM502B	Manage complex projects
PSPPM503B	Close complex projects

### Occupational Health and Safety

Unit code	Unit title
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes



# AHC51710 Diploma of Rural Machinery Management

## Modification History

Release	TP Version	Comments
3	AHC10v5	Equivalent imported units updated
2	AHC10v4	Equivalent imported units updated
1	AHC10	Initial release

## Description

The Diploma of Rural Machinery Management reflects the role of personnel working as managers of farm machinery contract services.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Pathways from the qualification

Further training pathways from this qualification include, but are not limited to, Advanced Diploma of Agriculture.

### Australian Apprenticeships

This qualification is suitable for an Australian Apprenticeship.

### Job roles

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

Machinery operations manager

Harvesting contractor/manager

Rural plant contractor

Farm machinery contract manager

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation.</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Applying numeracy skills to workplace requirements</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as an individual and a team member</li> <li>• Working with diverse individuals and groups</li> <li>• Applying knowledge of own role as a part of a team</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role.</li> <li>• Determining or applying required resources</li> <li>• Managing time and priorities</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Having a personal vision and goals</li> <li>• Taking responsibility at the appropriate level</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning new skills and techniques</li> <li>• Managing own learning</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment</li> <li>• Using basic technology skills</li> <li>• Applying OHS knowledge when using technology</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of ten (10) units made up of one (1) core unit and nine (9) elective units.

**ELECTIVE UNITS**

- a minimum of three (3) units must come from elective group A
- a minimum of four (4) units must come from elective group A or B
- a maximum of two (2) units may be selected from units aligned to Certificate IV or above in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in machinery management.

**CORE UNIT****Occupational Health and Safety**

Unit code	Unit title
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

**ELECTIVE UNITS GROUP A****Machinery operation and maintenance**

Unit code	Unit title
AHCMOM501A	Manage machinery and equipment
AHCMOM502A	Implement a machinery management system

AHCMOM601A	Analyse machinery options
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### Occupational Health and Safety

Unit code	Unit title
BSBWHS503A	Contribute to the systematic management of WHS risk
BSBWHS508A	Manage WHS hazards associated with plant

### ELECTIVE UNITS GROUP B

#### Agribusiness

Unit code	Unit title
AHCAGB502A	Plan and manage infrastructure requirements
BSBWOR501B	Manage personal work priorities and professional development

#### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS503A	Negotiate and monitor contracts
AHCBUS504A	Prepare estimates, quotes and tenders
AHCBUS506A	Develop and review a business plan
AHCBUS507A	Monitor and review business performance
AHCBUS508A	Prepare and monitor budgets and financial reports
TLIL5019A	Implement and monitor transport logistics
TLIR4002A	Source goods/services and evaluate contractors
TLIR4003A	Negotiate a contract

# AHC51812 Diploma of Organic Farming

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Description

This Diploma of Organic Farming reflects the role of personnel working within an organic farming enterprise who manage enterprise production units, manage the certification and continued compliance with organic standards and develop and maintain organic produce supply chains. It is designed to meet the needs of owners and managers of organic farming enterprises.

This Qualification is suitable for people currently working or who wish to find employment on an organic farming enterprise or who own an organic farming enterprise.

**Job Roles:** Job roles and titles will vary. Possible job titles relevant to this Qualification include:

- Organic farm production manager
- Organic supply chain manager

## Pathways Information

### Pathways into the Qualification

This Qualification may be accessed by direct entry or following completion of the Certificate IV in Organic Production.

### Pathways from the Qualification

Further training pathways from this Qualification include, but are not limited to, Advanced Diploma of Agriculture.

## Licensing/Regulatory Information

There is no licensing or regulatory requirement specifically satisfied as a result of completing this Qualification.

## Entry Requirements

There are no entry requirements for this Qualification.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this Qualification include:
Communication	<ul style="list-style-type: none"> <li>• Reading and interpreting workplace related documentation and codes of practice.</li> <li>• Interpreting the needs of internal/external customers, especially in relation to the organic supply chain.</li> <li>• Establishing/using networks.</li> <li>• Writing to audience needs.</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working with diverse individuals and groups.</li> <li>• Applying knowledge of own role as a part of a team.</li> <li>• Applying teamwork skills to a range of situations.</li> <li>• Identifying and using the strengths of other team members.</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems.</li> <li>• Applying a range of strategies in problem solving.</li> <li>• Listening to and resolving concerns in relation to workplace issues.</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying opportunities that might not be obvious to others.</li> <li>• Generating a range of options in response to workplace matters.</li> <li>• Translating ideas into action.</li> <li>• Developing innovative solutions.</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Taking initiative and making decisions within workplace role.</li> <li>• Working within or establishing clear project goals and deliverables.</li> <li>• Determining or applying required resources.</li> <li>• Allocating people and other resources to tasks and workplace requirements.</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Monitoring and evaluating own performance.</li> <li>• Taking responsibility at the appropriate level, especially in relation to organic standards and compliance.</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques.</li> <li>• Learning in order to accommodate change.</li> <li>• Managing own learning.</li> </ul>



Technology	<ul style="list-style-type: none"> <li>• Using technology and related workplace equipment.</li> <li>• Using technology to organise data.</li> <li>• Applying technology as a management tool.</li> </ul>
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## Packaging Rules

Completion of 10 Units of Competency comprising two (2) core Units and eight (8) elective Units.

### Core Units of Competency

Unit code	Unit title
AHCORG505A	Develop and monitor a sustainable production plan
AHCORG501A	Develop an organic management plan

### Elective Units of Competency

- select two (2) Units from Group A
- select five (5) Units from Groups A or B
- select one (1) Unit from Groups A, Group B or from Units packaged in Certificate IV, Diploma or Advanced Diploma in AHC10 or from any other currently endorsed Training Package or accredited course

Selected Units must be relevant to job outcomes in agriculture.

### GROUP A

Unit code	Unit title
AHCNAR506A	Develop and implement sustainable land use strategies
AHCORG401A	Manage biodynamic production
AHCORG402A	Manage organic livestock production
AHCORG403A	Manage organic soil improvement
AHCORG502A	Prepare the enterprise for organic certification

AHCORG503A	Design and document an organic farm landscape
AHCORG504A	Develop and manage a community based marketing supply chain
AHCORG506A	Manage an agro-ecology production system

## GROUP B

### Agribusiness

Unit code	Unit title
AHCAGB501A	Develop climate risk management strategies
AHCBUS502A	Market products and services
AHCBUS503A	Negotiate and monitor contracts
AHCBUS505A	Develop a marketing plan
AHCBUS508A	Prepare and monitor budgets and financial reports
AHCMER501A	Develop a sales strategy for rural products
BSBFIM501A	Manage budgets and financial plans
TLIR4003A	Negotiate a contract

### Business

Unit code	Unit title
AHCBUS501A	Manage staff
AHCBUS506A	Develop and review a business plan
AHCBUS507A	Monitor and review business performance
BSBR501B	Manage risk

### Broadacre cropping

Unit code	Unit title
AHCBAC501A	Manage agricultural crop production

AHCBAC503A	Manage integrated crop and pasture production
AHCBAC505A	Plan and manage long-term weed, pest and/or disease control in crops
AHCBAC506A	Manage the harvest of crops
AHCBAC507A	Develop production plans for crops

### Production horticulture

Unit code	Unit title
AHCPHT502A	Develop a horticultural production plan

### Livestock

Unit code	Unit title
AHCLSK501A	Manage livestock production
AHCLSK502A	Arrange marketing of livestock
AHCLSK503A	Develop and implement a breeding strategy
AHCLSK504A	Develop livestock health and welfare strategies
AHCLSK505A	Develop production plans for livestock

### Water

Unit code	Unit title
AHCIRG503A	Design irrigation, drainage and water treatment systems
AHCWAT502A	Manage water systems

### Chemicals

Unit code	Unit title
AHCCHM401A	Minimise risks in the use of chemicals

### Work health and safety

<b>Unit code</b>	<b>Unit title</b>
AHCOHS501A	Manage Occupational Health and Safety (OHS) processes

**Work**

<b>Unit code</b>	<b>Unit title</b>
AHCWRK501A	Plan, implement and review a quality assurance program
AHCWRK502A	Collect and manage data
AHCWRK504A	Assess new industry developments
AHCWRK511A	Develop workplace policy and procedures for sustainability

# AHC60110 Advanced Diploma of Agriculture

## Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

## Description

This qualification reflects the roles of individuals working in management roles in agriculture.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

### Job roles

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

Agricultural enterprise business managers

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Establishing/using networks</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Having a personal vision and goals</li> <li>• Articulating own ideas and vision</li> </ul>

**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> <li>• Managing own learning</li> <li>• Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> <li>• Applying OHS knowledge when using technology</li> <li>• Applying technology as a management tool</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of eight (8) elective units.

- a minimum of six (6) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or units aligned to Diploma or Advanced Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in agricultural management.

**ELECTIVE UNITS****Agribusiness**

<b>Unit code</b>	<b>Unit title</b>
AHCAGB501A	Develop climate risk management strategies
AHCAGB502A	Plan and manage infrastructure requirements
AHCAGB601A	Develop export markets for produce
AHCAGB602A	Manage estate planning
AHCAGB603A	Manage the production system
AHCAGB604A	Analyse business performance

AHCAGB605A	Manage business capital
AHCAGB606A	Manage price risk through trading strategy

### Business

Unit code	Unit title
AHCBUS601A	Manage capital works
AHCBUS602A	Review land management plans and strategies
AHCBUS603A	Develop and review a strategic plan
AHCBUS604A	Design and manage the enterprise quality management system
AHCBUS605A	Manage human resources
AHCBUS606A	Develop a monitoring, evaluation and reporting program
AHCBUS607A	Implement a monitoring, evaluation and reporting program
AHCBUS608A	Manage risk

### Work

Unit code	Unit title
AHCWRK601A	Monitor projects in a program
AHCWRK602A	Lead and manage community or industry organisations
AHCWRK603A	Design and conduct a field-based research trial
CPPWMT5045A	Develop site safety plans
PSPPOL404A	Support policy implementation
SRXGOV001B	Participate as a member of an effective Board of an organisation
SRXGOV002B	Undertake the role of an individual Director of an organisation
SRXGOV003B	Undertake the role of a Chairperson at a Board meeting
SRXGOV004B	Work effectively with the Board of an organisation



SRXINU004A	Promote compliance with laws and legal principles
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### **Machinery operation and maintenance**

<b>Unit code</b>	<b>Unit title</b>
AHCMOM601A	Analyse machinery options

### **Merchandising and sales**

<b>Unit code</b>	<b>Unit title</b>
AHCMER501A	Develop a sales strategy for rural products

## AHC60210 Advanced Diploma of Horticulture

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

This qualification reflects the roles of individuals working in management roles in horticulture.

### Pathways Information

#### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

#### Job roles

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

Horticulture enterprise business managers in local government

Nursery/Garden Centre owner managers

Landscape company owner/managers

Tree service/arboriculture company owner/managers

### Licensing/Regulatory Information

Not Applicable

### Entry Requirements

#### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Establishing/using networks</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Having a personal vision and goals</li> <li>Articulating own ideas and vision</li> <li>Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Being open to learning, new ideas and techniques</li> <li>Learning in a range of settings including informal learning</li> <li>Managing own learning</li> <li>Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using basic technology skills</li> <li>Using technology to organise data</li> <li>Applying OHS knowledge when using technology</li> <li>Applying technology as a management tool</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of eight (8) elective units.

- a minimum of six (6) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or units aligned to Diploma or Advanced Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in horticulture management.

### ELECTIVE UNITS

#### Agribusiness

<b>Unit code</b>	<b>Unit title</b>
AHCAGB501A	Develop climate risk management strategies
AHCAGB502A	Plan and manage infrastructure requirements
AHCAGB601A	Develop export markets for produce
AHCAGB602A	Manage estate planning

AHCAGB603A	Manage the production system
AHCAGB604A	Analyse business performance
AHCAGB605A	Manage business capital
AHCAGB606A	Manage price risk through trading strategy

### Business

Unit code	Unit title
AHCBUS601A	Manage capital works
AHCBUS602A	Review land management plans and strategies
AHCBUS603A	Develop and review a strategic plan
AHCBUS604A	Design and manage the enterprise quality management system
AHCBUS605A	Manage human resources
AHCBUS606A	Develop a monitoring, evaluation and reporting program
AHCBUS607A	Implement a monitoring, evaluation and reporting program
AHCBUS608A	Manage risk

### Machinery operation and maintenance

Unit code	Unit title
AHCMOM601A	Analyse machinery options

### Merchandising and sales

Unit code	Unit title
AHCMER501A	Develop a sales strategy for rural products

### Work

Unit code	Unit title
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AHCWRK601A	Monitor projects in a program
AHCWRK602A	Lead and manage community or industry organisations
AHCWRK603A	Design and conduct a field-based research trial
CPPWMT5045A	Develop site safety plans
PSPPOL404A	Support policy implementation
SRXGOV001B	Participate as a member of an effective Board of an organisation
SRXGOV002B	Undertake the role of an individual Director of an organisation
SRXGOV003B	Undertake the role of a Chairperson at a Board meeting
SRXGOV004B	Work effectively with the Board of an organisation
SRXINU004A	Promote compliance with laws and legal principles

# AHC60310 Advanced Diploma of Agribusiness Management

## Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

## Description

This qualification reflects the roles of individuals working in a range of agribusinesses. The units covered in this qualification are uniquely contextualised for the agribusiness sector and reflect the need for agribusiness specific management expertise in planning and analysis, financial and human resource management together with an emphasis on sustainability.

This qualification is also suited to the needs of individuals who possess significant theoretical agribusiness skills and knowledge that they would like to further develop in order to create further educational or employment opportunities.

## Pathways Information

### Qualification pathways

#### Pathways into the qualification

This qualification may be accessed by direct entry.

### Job roles

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

Rural and regional agribusiness manager (including lending managers, insurance brokers, machinery dealers, chemical resellers, stock agents, grain marketers, real estate agents)

Agriculture enterprise business managers

Production horticulture enterprise business managers

## Licensing/Regulatory Information

Not Applicable

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Establishing/using networks</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning</li> </ul>



**EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**

	<p>processes</p> <ul style="list-style-type: none"> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Having a personal vision and goals</li> <li>• Articulating own ideas and vision</li> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> <li>• Managing own learning</li> <li>• Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> <li>• Applying OHS knowledge when using technology</li> <li>• Applying technology as a management tool</li> </ul>

**Packaging Rules****Packaging Rules**

Completion of eight (8) elective units.

- a minimum of six (6) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or units aligned to Diploma or Advanced Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in agribusiness management.

**ELECTIVE UNITS****Agribusiness**

Unit code	Unit title
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AHCAGB501A	Develop climate risk management strategies
AHCAGB502A	Plan and manage infrastructure requirements
AHCAGB601A	Develop export markets for produce
AHCAGB602A	Manage estate planning
AHCAGB603A	Manage the production system
AHCAGB604A	Analyse business performance
AHCAGB605A	Manage business capital
AHCAGB606A	Manage price risk through trading strategy

### Business

Unit code	Unit title
AHCBUS601A	Manage capital works
AHCBUS602A	Review land management plans and strategies
AHCBUS603A	Develop and review a strategic plan
AHCBUS604A	Design and manage the enterprise quality management system
AHCBUS605A	Manage human resources
AHCBUS606A	Develop a monitoring, evaluation and reporting program
AHCBUS607A	Implement a monitoring, evaluation and reporting program
AHCBUS608A	Manage risk

### Work

Unit code	Unit title
AHCWRK601A	Monitor projects in a program
AHCWRK602A	Lead and manage community or industry organisations
AHCWRK603A	Design and conduct a field-based research trial
CPPWMT5045A	Develop site safety plans

PSPPOL404A	Support policy implementation
SRXGOV001B	Participate as a member of an effective Board of an organisation
SRXGOV002B	Undertake the role of an individual Director of an organisation
SRXGOV003B	Undertake the role of a Chairperson at a Board meeting
SRXGOV004B	Work effectively with the Board of an organisation
SRXINU004A	Promote compliance with laws and legal principles

### **Machinery operation and maintenance**

<b>Unit code</b>	<b>Unit title</b>
AHCMOM601A	Analyse machinery options

### **Merchandising and sales**

<b>Unit code</b>	<b>Unit title</b>
AHCMER501A	Develop a sales strategy for rural products

# **AHC60410 Advanced Diploma of Conservation and Land Management**

## **Modification History**

Not Applicable

## **Description**

This qualification reflects the roles of individuals working in management roles in conservation and land management.

## **Pathways Information**

### **Qualification pathways**

#### **Pathways into the qualification**

This qualification may be accessed by direct entry.

### **Job roles**

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

Regional conservation manager

Senior land management officer

## **Licensing/Regulatory Information**

Not Applicable

## **Entry Requirements**

### **Entry requirements**

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• Listening and understanding</li> <li>• Speaking clearly and directly</li> <li>• Writing to audience needs</li> <li>• Interpreting the needs of internal/external customers</li> <li>• Establishing/using networks</li> <li>• Negotiating responsively</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Applying knowledge of own role as a part of a team</li> <li>• Applying teamwork skills to a range of situations</li> <li>• Identifying and using the strengths of other team members</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Developing practical and creative solutions to workplace problems</li> <li>• Showing interdependence and initiative in identifying problems</li> <li>• Solving problems individually or in teams</li> <li>• Applying a range of strategies in problem solving</li> <li>• Using numeracy skills to solve problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations</li> <li>• Being creative in response to workplace challenges</li> <li>• Identifying opportunities that might not be obvious to others</li> <li>• Translating ideas into actions</li> <li>• Developing a strategic, creative long-term vision</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Collecting analysing and organising information</li> <li>• Using basic business systems for planning and organising</li> <li>• Being appropriately resourceful</li> <li>• Taking initiative and making decisions within workplace role</li> <li>• Participating in continuous improvement and planning processes</li> <li>• Working within or establishing clear project goals and deliverables</li> <li>• Determining or applying required resources</li> <li>• Allocating people and other resources to tasks and workplace requirements</li> <li>• Managing time and priorities</li> <li>• Adapting resource allocations to cope with contingencies</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Having a personal vision and goals</li> <li>• Articulating own ideas and vision</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• Taking responsibility at the appropriate level</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Being open to learning, new ideas and techniques</li> <li>• Learning in a range of settings including informal learning</li> <li>• Managing own learning</li> <li>• Contributing to the learning of others</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using basic technology skills</li> <li>• Using technology to organise data</li> <li>• Applying OHS knowledge when using technology</li> <li>• Applying technology as a management tool</li> </ul>

## Packaging Rules

### Packaging Rules

Completion of eight (8) elective units.

- a minimum of six (6) units must come from the elective units list
- a maximum of two (2) units may be selected from the elective units or units aligned to Diploma or Advanced Diploma in AHC10 or from any other currently endorsed training package or accredited course. Selected units must be relevant to job outcomes in conservation and land management.

### ELECTIVE UNITS

#### Business

AHCBUS602A Review land management plans and strategies

AHCBUS608A Manage risk

BSBFIM501A Manage budgets and financial plans

BSBMGT617A Develop and implement a business plan

BSBHRM604A Manage employee relations

PSPPOL603A Manage policy implementation

PUAFIR601B Develop and administer agency policy, procedures and practices

#### Community coordination and facilitation

AHCCCF601A Map regional issues and stakeholders

### **Indigenous land management**

AHCILM601A      Manage cultural processes in an Indigenous organisation

### **Lands, parks and wildlife**

AHCLPW601A      Coordinate the preparation of a regional resource management plan

AHCWRK511A      Develop workplace policy and procedures for sustainability

### **Work**

AHCWRK601A      Monitor projects in a program

## AHCSS00001 Advanced Chemical Spray Application Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards a large number of qualifications in the AHC10 Training Package, including but not limited to AHC40110 Certificate IV in Agriculture and AHC40310 Certificate IV in Production Horticulture.

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

<b>Units</b>	AHCWRK302A Monitor weather conditions
	AHCMOM315A Operate chemical application machinery and equipment
	AHCCHM401A Minimise risks in the use of chemicals
	AHCCHM402A Plan and implement a chemical use program

### Target Group

Individuals responsible for planning, risk management and application tasks associated with the spray application of chemicals used in primary production.



## **Suggested words for Statement of Attainment**

These competencies meet the industry requirements for those responsible for planning and risk management associated with the spray application of chemicals in primary production.

## **Custom Content Section**

Not applicable.

## AHCSS00002 Agricultural Chemical Skill Set

### Modification History

Release	TP Version	Comments
2	AHC10v4	Minor wording change to broaden applicability of Skill Set
1	AHC10	Initial release

### Description

Not Applicable

### Pathways Information

Pathway	
	<p>These units provide credit towards the following Certificates:</p> <p>AHC20110 Certificate II in Agriculture</p> <p>AHC20210 Certificate II in Poultry Production Operations</p> <p>AHC20310 Certificate II in Production Horticulture</p> <p>AHC20410 Certificate II in Horticulture</p> <p>AHC20510 Certificate II in Arboriculture</p> <p>AHC20610 Certificate II in Parks and Gardens</p> <p>AHC20710 Certificate II in Production Nursery</p> <p>AHC20810 Certificate II in Retail Nursery</p> <p>AHC20910 Certificate II in Sports Turf Management</p> <p>AHC21010 Certificate II in Conservation and Land Management</p> <p>AHC21110 Certificate II in Irrigation</p> <p>AHC21210 Certificate II in Rural Operations</p> <p>AHC21510 Certificate II in Floriculture</p> <p>AHC21610 Certificate II in Landscaping</p> <p>AHC30110 Certificate III in Agriculture</p>

AHC30210 Certificate III in Agriculture (Dairy Production)
AHC30310 Certificate III in Horse Breeding
AHC30410 Certificate III in Pork Production
AHC30510 Certificate III in Poultry Production
AHC30610 Certificate III in Production Horticulture
AHC30710 Certificate III in Horticulture
AHC30810 Certificate III in Arboriculture
AHC30910 Certificate III in Landscape Construction
AHC31010 Certificate III in Parks and Gardens
AHC31110 Certificate III in Production Nursery
AHC31210 Certificate III in Retail Nursery
AHC31310 Certificate III Turf Management
AHC31410 Certificate III in Conservation and Land Management
AHC31510 Certificate III in Indigenous Land Management
AHC31610 Certificate III in Lands, Parks and Wildlife
AHC31710 Certificate III in Natural Area Restoration
AHC31810 Certificate III in Vertebrate Pest Management
AHC31910 Certificate III in Weed Management
AHC32010 Certificate III in Beekeeping
AHC32210 Certificate III in Commercial Composting
AHC32310 Certificate in Conservation Earthworks
AHC32410 Certificate III in Irrigation
AHC32610 Certificate III in Rural Machinery Operations
AHC32710 Certificate III in Rural Merchandising
AHC32810 Certificate III in Rural Operations
AHC40110 Certificate IV in Agriculture
AHC40210 Certificate IV in Poultry Production
AHC40310 Certificate IV in Production Horticulture
AHC40410 Certificate IV in Horticulture
AHC40510 Certificate IV in Parks and Gardens

	AHC40610 Certificate IV in Production Nursery AHC40710 Certificate IV in Retail Nursery AHC40810 Certificate IV in Sports Turf Management AHC40910 Certificate IV in Conservation and Land Management AHC41010 Certificate IV in Agribusiness AHC41110 Certificate IV in Irrigation
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

<b>Units</b>	AHCCHM303A Prepare and apply chemicals
	AHCCHM304A Transport, handle and store chemicals

### Target Group

<b>Target Group</b>	Those applying agricultural chemicals.
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### Suggested words for Statement of Attainment

<b>Suggested form of words for Statement of Attainment</b>	These competencies meet State / Territory licensing requirements for the application of agricultural chemicals.
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## AHCSS00003 Cotton Industry Skill Set

### Modification History

Not Applicable

### Description

Not Applicable

### Pathways Information

<b>Pathway</b>	These units provide credit towards the following Certificates: AHC20110 Certificate II in Agriculture
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

<b>Units</b>	AHCOHS201A	Participate in OHS processes
	HLTFA201A	Provide basic emergency life support
	AHCMOM202A	Operate tractors
	AHCMOM304A	Operate machinery and equipment
	AHCWRK202A	Observe environmental work practices
	AHCWRK204A	Work effectively in the industry
	AHCBAC202A	Assist agricultural crop maintenance

## Target Group

<b>Target Group</b>	Those working as farmhands in the cotton production industry.
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## Suggested words for Statement of Attainment

<b>Suggested form of words for Statement of Attainment</b>	<b>These competencies meet the minimum industry requirements for cotton industry work.</b>
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## AHCSS00004 Gravity Fed Irrigation Operator Skill Set

### Modification History

Not Applicable

### Description

Not Applicable

### Pathways Information

<b>Pathway</b>	These units provide credit towards the following Certificates: AHC32410 Certificate III in Irrigation
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

AHCIRG301A	Implement a maintenance program for an irrigation system
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG304A	Operate gravity fed irrigation systems
AHCIRG306A	Troubleshoot irrigation systems
AHCSOL401A	Sample soils and interpret results
AHCWRK313A	Implement and monitor environmentally sustainable work practices

## Target Group

<b>Target Group</b>	Those working with gravity fed systems as irrigation operators.
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## Suggested words for Statement of Attainment

<b>Suggested form of words for Statement of Attainment</b>	<b>These competencies meet the industry requirements for Irrigation Australia Ltd certified irrigation operator.</b>
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## AHCSS00005 Irrigation Agronomist Skill Set

### Modification History

Release	TP Version	Comments
2	AHC10v4	Replaced AHCIRG403A Determine seasonal irrigation scheduling tasks with AHCIRG408A Schedule irrigations - Units have equivalent outcome
1	AHC10	Initial release

### Description

Not Applicable

### Pathways Information

Pathway	<p>These units provide credit towards the following Certificates:</p> <p><b>AHC51610 Diploma of Irrigation Management</b></p>
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

AHCIRG402A	Determine hydraulic parameters for an irrigation system
AHCIRG404A	Implement an irrigation-related environmental protection program
AHCIRG408A	Schedule irrigations
AHCIRG501A	Audit irrigation systems

AHCIRG402A	Determine hydraulic parameters for an irrigation system
AHCIRG504A	Develop an irrigation and drainage management plan
AHCSOL402A	Develop a soil use map for a property
AHCWRK509A	Provide specialist advice to clients

### Target Group

<b>Target Group</b>	<b>Those working as irrigation agronomists.</b>
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### Suggested words for Statement of Attainment

<b>Suggested form of words for Statement of Attainment</b>	<b>These competencies meet the industry requirements for Irrigation Australia Ltd certified irrigation agronomist.</b>
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## AHCSS00006 Irrigation Contractor Skill Set

### Modification History

Not Applicable

### Description

Not Applicable

### Pathways Information

<b>Pathway</b>	These units provide credit towards the following Certificates: AHC41110 Certificate IV in Irrigation
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

<b>Units</b>	AHCIRG401A	Acquire resources for irrigation installation and construction
	AHCIRG402A	Determine hydraulic parameters for an irrigation system
	AHCIRG406A	Plan on-site irrigation system installation and construction work
	AHCIRG407A	Supervise on-site irrigation installation and construction work
	AHCWRK313A	Implement and monitor environmentally sustainable work practices

## Target Group

<b>Target Group</b>	Those working as irrigation installation contractors.
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## Suggested words for Statement of Attainment

<b>Suggested form of words for Statement of Attainment</b>	<b>These competencies meet the industry requirements for Irrigation Australia Ltd certified irrigation contractor.</b>
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## AHCSS00007 Irrigation Installer Skill Set

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

Not Applicable

### Pathways Information

Pathway	<p>These units provide credit towards the following Certificates:</p> <p><b>AHC32410 Certificate III in Irrigation</b></p>
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

AHCIRG302A	Install irrigation systems
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG306A	Troubleshoot irrigation systems
AHCSOL401A	Sample soils and interpret results
AHCWRK313A	Implement and monitor environmentally sustainable work practices

AHCIRG302A	Install irrigation systems
CUVCRS04B	Produce technical drawings

## Target Group

Target Group	Those working as irrigation installers.
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## Suggested words for Statement of Attainment

Suggested form of words for Statement of Attainment	These competencies meet the industry requirements for Irrigation Australia Ltd certified irrigation installer.
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## AHCSS00008 Irrigation Manager Skill Set

### Modification History

Release	TP Version	Comments
2	AHC10v4	Removed AHCIRG403A Determine seasonal irrigation scheduling tasks and AHCIRG409A Implement, monitor and adjust irrigation schedules as they have the same outcome as AHCIRG408A Schedule irrigations
1	AHC10	Initial release

### Description

Not Applicable

### Pathways Information

<b>Pathway</b>	These units provide credit towards the following Certificates: AHC41110 Certificate IV in Irrigation
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

Units		
	AHCIRG402A	Determine hydraulic parameters for an irrigation system
	AHCIRG404A	Implement an irrigation-related environmental protection

<b>Units</b>		program
	AHCIRG408A	Schedule irrigations
	AHCSOL402A	Develop a soil use map for a property

### Target Group

<b>Target Group</b>	Those working as irrigation managers.
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### Suggested words for Statement of Attainment

<b>Suggested form of words for Statement of Attainment</b>	<b>These competencies meet the industry requirements for Irrigation Australia Ltd certified irrigation manager.</b>
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## AHCSS00009 Irrigation Retailer Skill Set

### Modification History

Release	TP Version	Comments
2	AHC10v4	Equivalent imported Units updated
1	AHC10	Initial release

### Description

Not Applicable

### Pathways Information

Pathway	These units provide credit towards the following Certificates: AHC32410 Certificate III in Irrigation
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

Units	AHCIRG402A	Determine hydraulic parameters for an irrigation system
	AHCWRK208A	Provide information on products and services
	SIRXSL201	Sell products and services
	SIRXSL002A	Advise on products and services

## Target Group

<b>Target Group</b>	Those working as irrigation products and services retailers.
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## Suggested words for Statement of Attainment

<b>Suggested form of words for Statement of Attainment</b>	These competencies meet the industry requirements for Irrigation Australia ltd certified irrigation retailer.
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## AHCSS00010 Pork Industry Stockperson Skill Set

### Modification History

Not Applicable

### Description

Not Applicable

### Pathways Information

<b>Pathway</b>	<p>These units provide credit towards the following Certificates:</p> <p>AHC30110 Certificate III in Agriculture</p> <p>AHC30410 Certificate III in Pork Production</p>
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

<b>Units</b>	AHCPRK201A	Care for health and welfare of pigs
	AHCPRK203A	Move and handle pigs
	AHCWRK206A	Observe enterprise quality assurance procedures
	AHCOHS301A	Contribute to OHS processes
	AHCLSK301A	Administer medication to animals
	AHCLSK309A	Implement animal health control programs

<b>Units</b>	AHCPRK201A	Care for health and welfare of pigs
	AHCLSK331A	Comply with industry animal welfare requirements

### Target Group

<b>Target Group</b>	Those working as animal attendants in the pork production industry.
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### Suggested words for Statement of Attainment

<b>Suggested form of words for Statement of Attainment</b>	<b>These competencies meet the industry welfare and quality assurance requirements for stockpersons working in the pork industry.</b>
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## AHCSS00011 Pressurised Irrigation System Operator Skill Set

### Modification History

Not Applicable

### Description

Not Applicable

### Pathways Information

<b>Pathway</b>	These units provide credit towards the following Certificates: AHC32410 Certificate III in Irrigation
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### Licensing/Regulatory Information

Not Applicable

### Skill Set Requirements

AHCIRG301A	Implement a maintenance program for an irrigation system
AHCIRG303A	Measure irrigation delivery system performance
AHCIRG305A	Operate pressurised irrigation systems
AHCIRG306A	Troubleshoot irrigation systems
AHCSOL401A	Sample soils and interpret results
AHCWRK313A	Implement and monitor environmentally sustainable work practices

## Target Group

<b>Target Group</b>	Those working with pressurised systems as irrigation operators.
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## Suggested words for Statement of Attainment

<b>Suggested form of words for Statement of Attainment</b>	<b>These competencies meet the industry requirements for Irrigation Australia Ltd certified irrigation operator.</b>
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## AHCSS00012 Recognise Aboriginal Cultural Sites Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards AHC32513 Certificate III in Aboriginal-sites Work.

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

<b>Units</b>	AHCASW302A Relate Aboriginal culture to sites work
	AHCASW303A Identify and record Aboriginal-sites, artefacts and cultural landscapes
	AHCILM306A Follow Aboriginal cultural protocols
	BSBWHS302A Apply knowledge of WHS legislation in the workplace

### Target Group

Aboriginal-sites workers responsible for sites work activity under supervision.

### Suggested words for Statement of Attainment

These competencies meet industry requirements for introductory Aboriginal-sites work.

## Custom Content Section

Not applicable.



## AHCSS00013 Report on Aboriginal Cultural Sites Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards AHC51110 Diploma of Conservation and Land Management.

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

Units	
	AHCASW307A Map Aboriginal cultural landscapes
	AHCASW309A Interpret Aboriginal cultural landscapes
	AHCASW501A Survey and report on Aboriginal cultural sites
	AHCILM508A Propose a negotiated outcome for a given area of country
	LGALAND504A Undertake effective consultation with Indigenous people on matter of cultural heritage

### Target Group

Experienced Aboriginal-sites workers who are managers or supervisors with responsibility for writing sites survey reports.

## **Suggested words for Statement of Attainment**

These competencies meet industry requirements for Aboriginal-sites survey reporting.

## **Custom Content Section**

Not applicable.

## AHCSS00014 Seed Crop Field Inspector Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Description

Not applicable.

### Pathways Information

This Unit provides credit towards the Certificate IV in Agriculture.

### Licensing/Regulatory Information

Readers should ensure that they have also read the part of the Training Package that outlines licensing and regulatory requirements.

### Skill Set Requirements

Units	AHCSDP405A Inspect a seed crop for quality assurance purposes
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### Target Group

Those working as field inspectors in commercial crop production industry.

### Suggested words for Statement of Attainment

This competency meets the industry requirements for field inspectors in commercial crop production industry.

## AHCSS00015 Carbon Farming Initiative Advisor Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards the following qualifications:

- AHC50110 Diploma of Agriculture
- AHC51210 Diploma of Community Coordination and Facilitation
- AHC51410 Diploma of Agribusiness

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

Unit Code	Unit Title
AHCCFI501A	Provide technical advice on the Carbon Farming Initiative
AHCCFI502A	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI503A	Advise on Carbon Farming Initiative project planning and implementation

### Target Group

Those whose work role includes the provision of technical, planning and implementation advice about the Carbon Farming Initiative.

## **Suggested words for Statement of Attainment**

These competencies meet the industry requirement for Carbon Farming Initiative advisors.

## AHCSS00016 Carbon Farming Initiative Business Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards the following qualifications:

- AHC50110 Diploma of Agriculture
- AHC51210 Diploma of Community Coordination and Facilitation
- AHC51410 Diploma of Agribusiness

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

Unit Code	Unit Title
AHCCFI501A	Provide technical advice on the Carbon Farming Initiative
AHCCFI502A	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI505A	Aggregate Carbon Farming Initiative projects
FNSFMK512A	Apply knowledge of emissions markets

### Target Group

Those whose work role includes developing individual or aggregated carbon farming projects using approved methodologies under the Carbon Farming Initiative.

## **Suggested words for Statement of Attainment**

These competencies meet the industry requirement for Carbon Farming Initiative business developers.

# AHCSS00017 Carbon Farming Initiative Livestock Project Implementer Skill Set

## Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

## Description

Not applicable.

## Pathways Information

These units provide credit towards the following qualifications:

- AHC50110 Diploma of Agriculture
- AHC51110 Diploma of Conservation and Land Management
- AHC51210 Diploma of Community Coordination and Facilitation
- AHC51410 Diploma of Agribusiness

## Licensing/Regulatory Information

Not applicable.

## Skill Set Requirements

Unit Code	Unit Title
AHCCFI501A	Provide technical advice on the Carbon Farming Initiative
AHCCFI502A	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI504A	Monitor and report on a Carbon Farming Initiative project
AHCCFI506A	Plan a Carbon Farming Initiative livestock project



## **Target Group**

Those whose work role includes managing the design, planning and implementation of approved livestock or feral animal methodologies developed under the Carbon Farming Initiative.

## **Suggested words for Statement of Attainment**

These competencies meet the industry requirement for Carbon Farming Initiative livestock project implementers.

## AHCSS00018 Carbon Farming Initiative Waste and Manure Management Project Implementer Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards the following qualifications:

- AHC50110 Diploma of Agriculture
- AHC51110 Diploma of Conservation and Land Management
- AHC51210 Diploma of Community Coordination and Facilitation
- AHC51410 Diploma of Agribusiness

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

Unit Code	Unit Title
AHCCFI501A	Provide technical advice on the Carbon Farming Initiative
AHCCFI502A	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI504A	Monitor and report on a Carbon Farming Initiative project
AHCCFI507A	Plan a Carbon Farming Initiative waste or manure management project

## **Target Group**

Those whose work role includes managing the design, planning and implementation of approved waste or manure management methodologies developed under the Carbon Farming Initiative.

## **Suggested words for Statement of Attainment**

These competencies meet the industry requirement for Carbon Farming Initiative waste and manure management project implementers.

## AHCSS00019 Carbon Farming Initiative Soil or Biochar Project Implementer Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards the following qualifications:

- AHC50110 Diploma of Agriculture
- AHC51110 Diploma of Conservation and Land Management
- AHC51210 Diploma of Community Coordination and Facilitation
- AHC51410 Diploma of Agribusiness

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

Unit Code	Unit Title
AHCCFI501A	Provide technical advice on the Carbon Farming Initiative
AHCCFI502A	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI504A	Monitor and report on a Carbon Farming Initiative project
AHCCFI508A	Plan a Carbon Farming Initiative to sequester carbon in soil or biochar

## **Target Group**

Those whose work role includes managing the design, planning and implementation of approved cropping and/or soil project methodologies developed under the Carbon Farming Initiative.

## **Suggested words for Statement of Attainment**

These competencies meet the industry requirement for Carbon Farming Initiative soil or biochar project implementers.

## AHCSS00020 Carbon Farming Initiative Savannah Burning, Feral Animal, Rangelands Project Implementer Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards the following qualifications:

- AHC50110 Diploma of Agriculture
- AHC51110 Diploma of Conservation and Land Management
- AHC51210 Diploma of Community Coordination and Facilitation
- AHC51410 Diploma of Agribusiness

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

Unit Code	Unit Title
AHCCFI501A	Provide technical advice on the Carbon Farming Initiative
AHCCFI502A	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI504A	Monitor and report on a Carbon Farming Initiative project
AHCCFI509A	Plan a Carbon Farming Initiative savannah burning, feral animal or rangelands project

## **Target Group**

Those whose work role includes the implementation of approved fire methodologies developed under the Carbon Farming Initiative.

## **Suggested words for Statement of Attainment**

These competencies meet the industry requirement for Carbon Farming Initiative savannah burning, feral animal or rangelands project implementers.

# AHCSS00021 Carbon Farming Initiative Vegetation Project Implementer Skill Set

## Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

## Description

Not applicable.

## Pathways Information

These units provide credit towards the following qualifications:

- AHC50110 Diploma of Agriculture
- AHC51110 Diploma of Conservation and Land Management
- AHC51210 Diploma of Community Coordination and Facilitation
- AHC51410 Diploma of Agribusiness

## Licensing/Regulatory Information

Not applicable.

## Skill Set Requirements

Unit Code	Unit Title
AHCCFI501A	Provide technical advice on the Carbon Farming Initiative
AHCCFI502A	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI504A	Monitor and report on a Carbon Farming Initiative project
AHCCFI510A	Plan a Carbon Farming Initiative vegetation project



## **Target Group**

Those whose work role includes managing the design, planning and implementation of approved vegetation methodologies developed under the Carbon Farming Initiative.

## **Suggested words for Statement of Attainment**

These competencies meet the industry requirement for Carbon Farming Initiative vegetation project implementers.

## AHCSS00022 Carbon Farming Initiative Emissions Avoidance from Soil and Crops Project Implementer Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards the following qualifications:

- AHC50110 Diploma of Agriculture
- AHC51110 Diploma of Conservation and Land Management
- AHC51210 Diploma of Community Coordination and Facilitation
- AHC51410 Diploma of Agribusiness

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

Unit Code	Unit Title
AHCCFI501A	Provide technical advice on the Carbon Farming Initiative
AHCCFI502A	Assess the feasibility of a Carbon Farming Initiative project
AHCCFI504A	Monitor and report on a Carbon Farming Initiative project
AHCCFI511A	Plan a Carbon Farming Initiative project to avoid emissions from soil and crops

## **Target Group**

Those whose work role includes the implementation of approved fire methodologies developed under the Carbon Farming Initiative.

## **Suggested words for Statement of Attainment**

These competencies meet the industry requirement for Carbon Farming Initiative Emissions Avoidance from soil, burning crop residues or rice plants project implementers.

## AHCSS00023 Basic Introduction to Beekeeping Skill Set

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Description

Not applicable.

### Pathways Information

These units provide credit towards AHC32010 Certificate III in Beekeeping.

### Licensing/Regulatory Information

Not applicable.

### Skill Set Requirements

Unit Code	Unit Title
AHCBEK202A	Use a bee smoker
AHCBEK203A	Open and reassemble a beehive
AHCBEK204A	Construct and repair beehives
AHCBEK302A	Manipulate honey bee brood
AHCBEK306A	Manage pests and disease within a honey bee colony

### Target Group

Entry level or unqualified workers in the beekeeping industry and hobbyist beekeepers.

## **Suggested words for Statement of Attainment**

These competencies meet the industry requirements for the basic maintenance and monitoring of beehives.

## AHCAGB301A Keep records for a primary production business

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of keeping records for a primary production business and defines the standard required to: prepare and process basic financial transactions; reconcile and prepare invoices within primary production businesses; copy and file invoices and other related documents in accordance with organisational requirements for taxation and auditing purposes.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires a full range of well-developed skills where some discretion and judgement is required. The physical and financial records of the business are vital for use by management for planning purposes, meeting legislative requirements, and the efficient operation of the business on a daily basis.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare and store physical records	<p>1.1. Physical records and inventories required for the organisation are determined in consultation with the management team.</p> <p>1.2. Methods for collecting information are reliable, and time and resources are used efficiently.</p> <p>1.3. Appropriate interpersonal skills are used to access relevant information from individuals and teams.</p> <p>1.4. Information is organised into a format suitable for analysis, interpretation and dissemination in accordance with organisational requirements.</p> <p>1.5. Business equipment/technology is used to maintain information in accordance with organisational and Occupational Health and Safety (OHS) requirements.</p> <p>1.6. Records are updated and stored in accordance with organisational requirements.</p>
2. Process petty cash transactions	<p>2.1. Petty cash claims and vouchers are checked for accuracy and authenticity prior to processing.</p> <p>2.2. Petty cash transactions are processed and recorded in accordance with organisational requirements.</p> <p>2.3. Petty cash book balanced in accordance with organisational requirements.</p>
3. Establish and maintain a cash book in accordance with organisational	<p>3.1. Cash receipts and payments book created, and documentation relating to financial transactions checked for validity prior to processing.</p> <p>3.2. Cashbook balances reconciled with bank and</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
requirements	<p>creditor statements.</p> <p>3.3.Cashbook balances are used to complete legislative reporting requirements.</p> <p>3.4.Cash flow statements are prepared on the basis of summarised cashbook entries.</p>
4. Reconcile invoices for payment to creditors	<p>4.1.Adjustments and errors are identified, reported and rectified in accordance with organisational requirements.</p> <p>4.2.Invoices processed and payment made in accordance with organisational requirements.</p>
5. Prepare invoices for debtor	<p>5.1.Invoices are prepared accurately and, if required, distributed to nominated person for verification prior to despatch.</p> <p>5.2.Adjustments are made as required in accordance with organisational requirements.</p> <p>5.3.Invoices and other related documents copied and filed in accordance with organisational requirements for taxation and auditing purposes.</p>

## Required Skills and Knowledge

Not Applicable

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare and process basic financial transactions</li> <li>• reconcile and prepare invoices within primary</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<p>production businesses</p> <ul style="list-style-type: none"> <li>• copy and file invoices and other related documents in accordance with organisational requirements for taxation and auditing purposes.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Financial records may include:	<ul style="list-style-type: none"> <li>• financial transactions</li> <li>• cashbook and invoices within a primary production business.</li> </ul>
Physical records may include:	<ul style="list-style-type: none"> <li>• property plan</li> <li>• livestock records</li> <li>• paddock treatments including spraying</li> <li>• rainfall records</li> <li>• physical production</li> <li>• sales data</li> <li>• supplies</li> <li>• machinery and equipment</li> <li>• stock records.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Agribusiness
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCAGB401A Implement and monitor a property improvement plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the implementation and monitoring of a property improvement plan and defines the standard required to: consider the environmental impacts of property improvements; plan and implement the construction of physical resources; organise and schedule the maintenance of physical resources; and analyse and assess the costs and benefits of plans and layouts in the light of all considerations Occupational Health and Safety (OHS), financial, environmental and animal welfare; prepare plans and procedures for implementation by others.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm supervisors who implement and monitor a property improvement plan.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Agree on the improvement to be carried out	<p>1.1. Specific improvements for the planning period are discussed with the relevant people and agreements are made.</p> <p>1.2. Plans are made, and schedules amended, to construct and maintain the improvements in line with property management plans.</p> <p>1.3. Allocations are made from the available budget for the planned improvements.</p>
2. Arrange the design and layout of the property improvements	<p>2.1. Alternative plans and layouts are assessed and selected based on how appropriate they are for the management plan, and environmental and OHS considerations.</p> <p>2.2. Plans for the improvements are drawn and dimensions are calculated for the agreed improvements.</p>
3. Order materials for property improvements	<p>3.1. Materials required for the construction of the improvements are calculated from the drawn plans and discussed with relevant colleagues.</p> <p>3.2. Quotes are obtained from suppliers for the materials and suitable suppliers are selected.</p> <p>3.3. Orders are placed with the chosen suppliers for the quantities, sizes and types of materials required.</p>
4. Prepare sites for installation	<p>4.1. Sites are inspected, key features noted, and suitable sites are chosen for the planned property improvements.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.2. All relevant people, including neighbours, are informed of the proposed activities where this is appropriate and/or necessary.</p> <p>4.3. Selected sites are measured and pegged according to the prepared plans.</p> <p>4.4. The site is prepared to be ready for construction, and precautions are taken to ensure that potential negative environmental impacts are minimised or eliminated.</p> <p>4.5. OHS hazards are identified and assessed, and responsible action taken throughout the site preparation activities.</p>
5. Supervise installation and operation of property improvements	<p>5.1. All materials required for each work period are obtained, organised, and on site ready for construction.</p> <p>5.2. Installation of property improvements is started according to the drawn plans and the prepared schedules.</p> <p>5.3. All installation works are undertaken in a manner that ensures that potential negative environmental impacts are minimised or eliminated.</p> <p>5.4. OHS hazards are identified and assessed, and responsible action taken throughout the installation works.</p> <p>5.5. Communication is maintained between those working at the site and others.</p> <p>5.6. The installation works are regularly checked to ensure consistency with the drawn plans, and environmental and OHS requirements.</p> <p>5.7. Any waste material or substances are disposed of in full consideration of environmental implications.</p> <p>5.8. Where corrective action is required, it is initiated and taken.</p>
6. Carry out and monitor planned maintenance	<p>6.1. Planned maintenance to the improvements is carried out and monitored according to the guidelines and standards of the property.</p> <p>6.2. Precautions are taken throughout the maintenance works to ensure that potential negative environmental impacts are minimised or eliminated.</p> <p>6.3. OHS hazards are identified, assessed, monitored and responsible action taken throughout the maintenance works.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan and implement the construction of physical resources
- organise and schedule the maintenance of physical resources
- analyse and assess the costs and benefits of plans and layouts in the light of all considerations - OHS, financial, environmental and animal welfare
- observe, identify and react appropriately to environmental implications and OHS hazards
- prepare written plans and procedures for implementation by others
- prepare drawn plans and sketches for implementation by, or notification of, others
- interpret, analyse and extract information from legal documents and discussions
- estimate and order the materials required for delivery at the appropriate time and place
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- constructing buildings, fences, and earthworks, such as stock yards, yard facilities, grain and fodder storage facilities, irrigation works, and water supply and drainage features
- requirements for grain and fodder storage
- tree planting techniques
- sustainable land and water use principles and practices applicable in the region
- environmental controls and codes of practice applicable to the business and to the improvement works
- the whole property plan
- legislation, regulations and codes of practice relating to soil and water degradation issues, animal health and welfare, chemical use, building construction and OHS.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• consider the environmental impacts of property improvements</li> <li>• plan and implement the construction of physical resources</li> <li>• organise and schedule the maintenance of physical resources</li> <li>• analyse and assess the costs and benefits of plans and layouts in the light of all considerations - OHS, financial, environmental and animal welfare</li> <li>• prepare plans and procedures for implementation by others.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Physical assets in property improvement plans may include:	<ul style="list-style-type: none"> <li>• buildings</li> <li>• dairy sheds</li> <li>• shelters</li> <li>• stock yards</li> <li>• stock handling structures</li> <li>• fences</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• water supply systems</li> <li>• roads and tracks</li> <li>• soil conservation works</li> <li>• irrigation and drainage channels</li> <li>• silage pits and/or grain and fodder storage.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Agribusiness
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCAGB402A Analyse and interpret production data

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the analysis and interpretation of production data and defines the standard required to: collect and organise data; analyse and interpret data; present data with conclusions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm supervisors who collect and use data from animal production, crop and horticultural production activities.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect and organise production data	<p>1.1.Information is collected and organised in a format suitable for analysis and interpretation in accordance with enterprise requirements.</p> <p>1.2.Information held by the production unit is assessed for accuracy and relevance in line with enterprise requirements.</p> <p>1.3.Methods of collecting data are reliable and make efficient use of resources in accordance with organisational requirements.</p> <p>1.4.Business equipment is used to access, organise and monitor data in accordance with organisational requirements.</p> <p>1.5.Information is updated, modified, maintained and stored in accordance with organisational requirements.</p>
2. Analyse and interpret data	<p>2.1.Objectives of analysis are clearly defined and consistent with enterprise requirements.</p> <p>2.2.Methods of data analysis are reliable and suitable to research purposes.</p> <p>2.3.Assumptions used in analyses are clear, justified and consistent with enterprise objectives.</p> <p>2.4.Conclusions are supported by evidence and contribute to the achievement of business objectives.</p>
3. Present data	<p>3.1.Data are prepared in an appropriate format, style and structure using suitable business technology.</p> <p>3.2.Structure and format of reports are clear and conform to enterprise requirements.</p> <p>3.3.Findings are reported and distributed in accordance with enterprise requirements.</p> <p>3.4.Feedback and comments on suitability and sufficiency of findings is obtained in accordance with</p>

ELEMENT	PERFORMANCE CRITERIA
	enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collect and organise production data
- analyse and interpret data
- present data
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the relevant legislation, industry and enterprise codes of practice and quality assurance procedures that impact on intensive production
- knowledge of enterprise record keeping and recording practices
- knowledge of enterprise policies and procedures relating to collection, analysis and maintenance of production data
- methods to collect and analyse production data
- data management systems and methods
- business equipment
- principles of report writing and data presentation.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• collect and organise data</li> <li>• analyse and interpret data</li> <li>• present data with conclusions.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Data may include:	<ul style="list-style-type: none"> <li>• information based on feedback on results</li> <li>• review of previous data and production figures</li> <li>• peer review</li> <li>• data sampling</li> <li>• statistical analysis.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Agribusiness
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCAGB501A Develop climate risk management strategies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the work function associated with developing climate risk management strategies for an agricultural, horticultural or land management enterprise and defines the standard required to: research climate and enterprise data; analyse and interpret climate and enterprise data; prepare risk management strategies; and integrate climate risk and opportunities for management strategies at a business management level.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes developing climate risk management strategies for an agricultural or production horticultural.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Survey climate and enterprise data	<p>1.1. Historical climate data is obtained and interpreted from a range of sources.</p> <p>1.2. Weather and climate risk factors are identified.</p> <p>1.3. Information on normal and significant climate events and their impact on natural and rural systems are collected.</p> <p>1.4. Current and historical property and enterprise situation is detailed according to enterprise guidelines.</p> <p>1.5. Short and long term enterprise goals are reviewed.</p> <p>1.6. Climate and enterprise data is sourced, presented and updated according to enterprise requirements.</p>
2. Climate risks and opportunities are identified and analysed	<p>2.1. Forecasted chances of seasonal climate are analysed.</p> <p>2.2. Climate risks and opportunities are identified.</p> <p>2.3. Impact on production of different weather and climate risk factors are determined according to enterprise requirements.</p> <p>2.4. Qualitative and quantitative risk and opportunity factors are identified and developed.</p> <p>2.5. Importance of climate variability and significant climate events is evaluated.</p> <p>2.6. Tactics to address a range of different climate variability risks and opportunities are outlined according to enterprise requirements.</p> <p>2.7. Contingency options for enterprises and the business are identified.</p>
3. Prepare climate risk	<p>3.1. Climate variability and seasonal climate forecasts are</p>

ELEMENT	PERFORMANCE CRITERIA
management strategies	<p>analysed.</p> <p>3.2. Insurance and other options are addressed in strategies.</p> <p>3.3. Major climate risk factors are addressed in strategies.</p> <p>3.4. Financial outcomes for all strategies are prepared according to enterprise guidelines.</p> <p>3.5. Impacts on the environment, property value and equity are predicted for the preferred strategies.</p> <p>3.6. Preferred production, enterprise or alternative strategies are reviewed, and options selected according to enterprise requirements.</p> <p>3.7. A planned strategy to cope with variable climate and climate risk management is presented in a format according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research climate and enterprise data
- analyse and interpret climate and enterprise data
- prepare risk management strategies
- integrate climate risk, and opportunities and management strategies at a business management level
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- current forecasting techniques and phenomena, such as El Nino, ENSO, Southern



## REQUIRED SKILLS AND KNOWLEDGE

- Oscillation Index (SOI) and Pacific and Indian Ocean SST patterns
- the impact of weather and climate phenomena on rainfall, plant growth and yields
- causes of general patterns of weather and climate over Australia
- climate variability and climate change
- direct and indirect impacts of climate variability on land management and sustainability
- property and enterprise management decisions affected by the variable climate
- recognition of climate risks and opportunities
- seasonal climate forecasting systems and related indicators
- drought planning and strategies
- flood planning and strategies
- climate and weather issues pertaining to sustainable agriculture
- potential impacts of greenhouse warming on land and natural resource management
- strategic options and planning in response to climate variability for a range of seasons (normal, drier or wetter than normal), and other risks and opportunities
- calculating financial returns for different strategic options
- computer applications and Internet to access, record and analyse data
- principles of decision-making based on the variable climate and seasonal climate forecasts.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- research climate and enterprise data
- analyse and interpret climate and enterprise data
- prepare risk management strategies
- integrate climate risk and opportunities for

<b>EVIDENCE GUIDE</b>	
	management strategies at a business management level.
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Climate data may include:	<ul style="list-style-type: none"> <li>the statistics of temperature, humidity, atmospheric pressure, wind, rainfall, atmospheric particle count and numerous other meteorological elements in a given region over long periods of time.</li> </ul>
Risk management may include:	<ul style="list-style-type: none"> <li>the identification, assessment, and prioritisation of risks followed by coordinated and economical application of resources to minimise, monitor and control the probability and/or impact of events.</li> </ul>
Data may include:	<ul style="list-style-type: none"> <li>data from primary and secondary sources, including:               <ul style="list-style-type: none"> <li>field work and trials</li> <li>research materials</li> <li>published books</li> <li>academic reports</li> <li>industry reports</li> <li>colleagues</li> <li>computer software</li> <li>internet</li> <li>newspapers</li> <li>photographic data</li> <li>journals</li> <li>industry publications</li> <li>industry specialists and experts.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Agribusiness
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCAGB502A Plan and manage infrastructure requirements

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning and managing infrastructure requirements and defines the standard required to: identify infrastructure requirements for the enterprise; source, construct and/or modify infrastructure to meet enterprise requirements; develop an infrastructure maintenance program, including scheduling and responsibilities; establish a recording system for infrastructure purchase, construction and maintenance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role involves planning and managing infrastructure requirements in agricultural or production horticultural enterprises.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine infrastructure requirements	<p>1.1.Information regarding the characteristics of the products and their respective market requirements is accessed.</p> <p>1.2.Characteristics of the land under production and the production processes to be used are confirmed from colleagues and other planning processes.</p> <p>1.3.Historical data, including recent data, from organisational records is identified and accessed for input to infrastructure planning processes.</p> <p>1.4.Information regarding other organisational planning processes and potential for improvements or innovations, is collected and used to inform the infrastructure planning process.</p> <p>1.5.Requirements of the organisation are taken into consideration during analysis.</p> <p>1.6.All available information is analysed, and the infrastructure required to efficiently achieve the targeted production requirements are identified and compared with those existing and available in the organisation.</p> <p>1.7.Occupational Health and Safety (OHS) hazards identified, risks assessed and suitable controls are incorporated into the planning process.</p> <p>1.8.Replacements, purchases and sales of plant and vehicles are planned and budgeted for according to organisational policies and procedures.</p> <p>1.9.Details regarding infrastructure requirements are used as input to other organisational planning</p>

ELEMENT	PERFORMANCE CRITERIA
	processes.
2. Obtain, prepare or build infrastructure	<p>2.1.Solutions to bridging the gaps between required and existing infrastructure are identified.</p> <p>2.2.Preferred solution to filling gaps in required infrastructure is determined from a cost benefit analysis.</p> <p>2.3.Negotiations are undertaken to obtain infrastructure or componentry at the best rate for the organisation.</p> <p>2.4.Preparation work required for existing infrastructure is organised and undertaken as necessary.</p> <p>2.5.Works required are planned and commissioned according to organisation requirements.</p> <p>2.6.All alterations to infrastructure or new developments give due consideration to environmental and waste management requirements.</p>
3. Manage infrastructure	<p>3.1.Infrastructure maintenance programs are determined including scheduling and responsibilities.</p> <p>3.2.Replacements, purchases and sales of plant and vehicles are undertaken according to plans made, and are in line with organisation policies and guidelines.</p> <p>3.3.Any reallocations of land required are undertaken with the planning and consultation required by the organisation, and within all relevant guidelines and regulations.</p> <p>3.4.Situations that require unplanned maintenance are managed within organisation guidelines and policy.</p> <p>3.5.Checks are made to ensure that program specifications are adhered to and amendments are made where necessary.</p> <p>3.6.Checks are made to ensure that all OHS requirements are adhered to, including the appropriate use of personal protective equipment.</p> <p>3.7.Checks are made to ensure that potential detrimental environmental impacts are minimised or eliminated.</p>
4. Record and manage information	<p>4.1.Data, observations and documentation recorded during the production cycle are analysed against the plan according to organisation guidelines.</p> <p>4.2.Recommendations for future plans are prepared based on the analysis of the data.</p> <p>4.3.A report is prepared that documents the plans implementation according to the organisations requirements and guidelines.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.4. Records and documentation are created, maintained and kept as described in the infrastructure plan, the OHS requirements, and machinery and equipment management programs.</p> <p>4.5. Records and documentation are completed clearly and accurately throughout production in the organisation.</p> <p>4.6. The record keeping system that is used ensures that required information is available, accessible, meaningful and useful.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret monitored information on production processes
- interpret, analyse and extract information from a range sources such as professional literature, legal documents, discussions, and workshops
- identify, build and use network and support groups
- recognise potential opportunities to use or install more environmentally efficient systems or equipment
- assess, then adopt, profitable innovations
- planning
- calculating volumes areas and distances
- cost benefit analyses observe
- identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- sustainable land use principles and practices
- property planning, financial management and enterprise budgeting systems and procedures
- environmental controls and codes of practice available to the organisation
- relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, and vehicle and plant use
- sound management practices and processes to minimise noise odours and debris from production processes
- sustainable land use principles and practices applicable in the region
- relevant legislation and regulations relating to soil and water degradation issues, animal health and welfare, and chemical use.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify infrastructure requirements for the enterprise
- source, construct and/or modify infrastructure to meet enterprise requirements
- develop an infrastructure maintenance program including scheduling and responsibilities
- establish a recording system for infrastructure purchase, construction and maintenance.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Infrastructure may include:	<ul style="list-style-type: none"> <li>• buildings</li> <li>• sheds</li> <li>• shelters</li> <li>• stock yards</li> <li>• stock handling structures</li> <li>• fences</li> <li>• water supply systems</li> <li>• roads</li> <li>• tracks</li> <li>• soil conservation works</li> <li>• irrigation and drainage channels</li> <li>• silage pits, and/or grain and fodder storage</li> <li>• dams</li> <li>• monitoring systems</li> <li>• information technology systems.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Agribusiness
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCAGB503A Plan and monitor production processes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning and monitoring production processes and defines the standard required to: identify production processes required to achieve targeted production; establish production targets for each enterprise and each product, crop, herd, or flock; schedule production processes with monitoring points and performance indicators; evaluate production processes and make modifications; create and maintain records and documentation as described in the production plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be undertaken alone or under broad guidance. Responsibility for the planning and management of the work of others may be involved.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine production process requirements	<p>1.1.Information regarding the characteristics of products being grown or refined/manufactured and their respective market requirements is accessed.</p> <p>1.2.Characteristics of the land under production and the quality and amount of existing infrastructure are confirmed from colleagues and other planning processes.</p> <p>1.3.Historical data, including recent data from organisational records is identified and accessed for input to production planning.</p> <p>1.4.Information regarding other organisational planning processes and potential for improvements or innovations is collected and used to inform production planning.</p> <p>1.5.Requirements of the organisation are taken into consideration during analysis.</p> <p>1.6.Production processes required to efficiently achieve the targeted production requirements in line with organisational policies are identified and compared with those that currently exist.</p> <p>1.7.Details regarding production planning are used as input to other organisational planning processes.</p>
2. Determine monitoring requirements and systems	<p>2.1.Production targets for each enterprise and each product, crop, herd, or flock are established from the range of organisational management and strategic plans.</p> <p>2.2.Scheduling for production processes is determined taking varying organisational factors into</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>consideration.</p> <p>2.3.Environmental and waste management controls are established and specifically included in the production plan.</p> <p>2.4.Monitoring points and performance indicators for the production process are established using target, environmental management and scheduling information.</p> <p>2.5.Prepared risk management strategies are put into place and acted upon when necessary.</p> <p>2.6.A plan is prepared that documents the decisions taken, the assessments made, the targets established, and any specific issues that relate to environmental and Occupational Health and Safety (OHS) risks.</p>
3. Monitor/evaluate effectiveness of production processes	<p>3.1.Checks are made to ensure that the performance indicators, targets, and specifications are being met and amendments to the process are made where necessary.</p> <p>3.2.The effectiveness of the production processes is evaluated at key points and adjustments are made as necessary.</p> <p>3.3.Environmental impacts and OHS hazards relating to production processes are identified, monitored and assessed throughout the production cycle.</p> <p>3.4.Modifications are made to the production process when made necessary by shifting priorities and results.</p> <p>3.5.Data, observations and documentation from the production process are analysed against the plan according to organisation guidelines.</p>
4. Record and manage information	<p>4.1.Recommendations for future plans are prepared based on the analysis of the data.</p> <p>4.2.A report is prepared that documents the plans implementation according to the organisations requirements and guidelines.</p> <p>4.3.Records and documentation are created, maintained and kept as described in the production plan, the OHS requirements, and machinery and equipment management programs.</p> <p>4.4.The recordkeeping system that is used ensures that required information is available, accessible, meaningful and useful.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret monitored information on production processes
- interpret, analyse and extract information from a range sources such as professional literature, legal documents, discussions and workshops
- identify, build and use network and support groups
- observe, identify and react appropriately to environmental implications and OHS hazards
- assess, then adopt profitable innovations
- set yield targets and objectives and estimate timelines
- prepare enterprise budgets and calculate financial returns
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- environmental controls and codes of practice available to the organisation
- relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, and vehicle and plant use
- sound management practices and processes to minimise noise, odours and debris from production processes
- sustainable land use principles and practices applicable in the region
- planning processes
- cost benefit analysis
- relevant legislation and regulations, such as those relating to soil and water degradation issues, animal health and welfare, and chemical use.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify production processes required to achieve targeted production</li> <li>• establish production targets for each enterprise and each product, crop, herd, or flock</li> <li>• schedule production processes with monitoring points and performance indicators</li> <li>• evaluate production processes and make modifications</li> <li>• create, and maintain records and documentation as described in the production plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The production process includes:	<ul style="list-style-type: none"> <li>• the resources, personnel, methodology, and any interactions between them for an agricultural or horticultural enterprise.</li> </ul>

## Unit Sector(s)

Unit sector	Agribusiness
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCAGB504A Plan production for the whole land/farm based business

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning production for the whole land/farm based business and defines the standard required to review strategic plans and production goals; prepare enterprise budgets and calculate financial returns of the business; develop financial management and marketing plans for the business; review the natural resource base of the enterprise and incorporate ecological sustainability; principles and goals into land use planning; identify the personal aims and priorities of management as well as the availability, productivity and training needs of labour and incorporate into production planning.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to agribusiness managers whose role is to review and confirm the organisation's business goals and vision, its land-use, human resource development and financial plans.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Review and confirm the organisations business goals and vision	<p>1.1.The organisations documented business goals and vision are accessed and analysed against actual business activities and decisions taken.</p> <p>1.2.The values and community expectations of the organisation are reviewed and analysed against actual business activities and decisions taken.</p> <p>1.3.The organisations operating environment is reviewed to identify potential opportunities and threats.</p> <p>1.4.The overall strengths and weaknesses of the organisation are analysed to identify potential areas for development.</p> <p>1.5.Information on available innovations for potential use in the organisation is accessed and discussed with colleagues.</p> <p>1.6.The organisations goals and vision are articulated and documented to provide a basis for future planning and decision-making.</p>
2. Prepare human resource development plans	<p>2.1.Personal values, attributes and skills of the management team are identified and analysed.</p> <p>2.2.Specific areas of expertise in the business are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>recognised and articulated.</p> <p>2.3. Specific areas of responsibilities are devolved to the most suitable team members based on identified skills and attributes.</p> <p>2.4. The processes for succession planning are discussed and decided with management team members and the process is put in place.</p> <p>2.5. Areas in which skill development and training is required for individual team members, or the entire group, are identified and recorded.</p> <p>2.6. A commitment is made to ongoing skill development of the management team.</p> <p>2.7. Ongoing communication strategies are put in place, and an environment in which all members can contribute is fostered and developed, to ensure the smooth running of the business.</p>
3. Prepare a plan to manage land use	<p>3.1. Land is surveyed to identify natural resources, soil characteristics, water resources, and cultural heritage values of the property.</p> <p>3.2. Land use capacities are determined from land condition tests and history of yields.</p> <p>3.3. Land use for individual paddocks is determined based on land use capacities, products being produced, and the organisations goals and vision.</p> <p>3.4. A plan to improve the management and use of land on the property is developed, based on property resources and the organisations goals and vision, and incorporated into the production plan.</p> <p>3.5. Organisational policy in relation to the environmental management of the land is developed based on land use, prevalent pests and diseases, and the organisations goals and vision.</p>
4. Plan production processes	<p>4.1. Information regarding the characteristics of the products being grown or refined/ manufactured and their respective market requirements is accessed.</p> <p>4.2. Characteristics of the land under production and the quality and amount of existing infrastructure are confirmed from colleagues and other planning processes.</p> <p>4.3. Historical data, including recent data, from organisational records is identified and accessed for input to production planning.</p> <p>4.4. Information regarding other organisational planning</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>processes and potential for improvements or innovations is collected and used to inform production planning.</p> <p>4.5. Requirements of the organisation are taken into consideration during analysis.</p> <p>4.6. Production processes required to efficiently achieve the targeted production requirements in line with organisational policies are identified and compared with those that currently exist.</p>
5. Develop financial goals and risk management strategies	<p>5.1. The key financial performance indicators of each enterprise in the business are identified from analysis of cash flow, profitability and net worth.</p> <p>5.2. The financial performance of each enterprise in the business is assessed through analysis of key financial performance indicators and their impacts on business performance.</p> <p>5.3. Financial goals for each enterprise in the business are identified from financial performance assessment and the organisations goals and vision.</p> <p>5.4. Areas of risk in the organisation are identified from analysis of the operating environment, production strategies, and skill and ability resources of the organisation.</p> <p>5.5. Risk management strategies are identified and put in place.</p>
6. Prepare and communicate the organisations vision, goals and plan	<p>6.1. The organisations goals and vision, human resource development, land-use, production and financial plans are integrated to reflect the decisions taken in each area.</p> <p>6.2. The organisations goals, vision and plans are clearly articulated to those that will implement them, to ensure a common understanding.</p> <p>6.3. A schedule is put in place to regularly review the organisations vision, goals and plans.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- assess the skills and expertise of self and colleagues
- facilitate group decision-making within the business
- identify, build and use network and support groups
- assess and evaluate land conditions
- recognise land and soil degradation
- determine land use appropriate to land conditions
- set yield targets and objectives and estimate timelines
- implement sustainable land management practices
- assess environmental impacts and implement impact reduction techniques
- interpret historical data in relation to production, finances, environmental issues, staffing and land use
- recognise potential opportunities to use or install more environmentally efficient systems or equipment
- assess, then adopt, profitable innovations
- interpret, analyse and extract information from a range of sources such as professional literature, legal documents, discussions and workshops
- assess financial strategies and prepare budgets
- prepare enterprise budgets and calculate financial returns
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- holistic business planning and benchmarking
- marketplace in which the organisation operates
- sustainable land use principles and practices
- soil nutrient cycling potential and limitations
- chemical and biological methods for pest control
- relevant State/Territory legislative requirements with regard to environmental protection and control standards
- property planning, financial management and enterprise budgeting systems and procedures
- relevant State/Territory legislation, regulations and codes of practice with regard to

## REQUIRED SKILLS AND KNOWLEDGE

- OHS and the use and control of hazardous substances
- monitoring strategies for financial, production, land-use, and human resource development plans
- methods for assessing skills and expertise
- the reasons and methods for succession planning
- the value and methods of risk assessment.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- review strategic plans and production goals
- prepare enterprise budgets and calculate financial returns of the business
- develop financial management and marketing plans for the business
- review the natural resource base of the enterprise and incorporate ecological sustainability
- principles and goals into land use planning
- identify the personal aims and priorities of management as well as the availability, productivity and training needs of labour and incorporate into production planning.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Production process may include:	<ul style="list-style-type: none"> <li>the resources, personnel, methodology and interactions between them.</li> </ul>
Business may include:	<ul style="list-style-type: none"> <li>a family business that operates from a small to medium base or a land-based operation of a corporate business.</li> </ul>
Production planning may include:	<ul style="list-style-type: none"> <li>plans for land-use</li> <li>human resource management and development</li> <li>financial</li> <li>risk management</li> <li>infrastructure</li> <li>strategic planning.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Agribusiness
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCAGB505A Develop a whole farm plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a whole farm plan and defines the standard required to: audit the natural resources of the property; monitor legal requirements impacting on the management of the property; develop management strategies to address the key natural resource management issues of water, soils, vegetation and wildlife; develop management strategies to address natural resource management issues; and integrate business objectives and production plans with sustainable land management in a whole farm plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm managers whose job includes developing a whole farm plan.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine directions for the business	<p>1.1. Long-term directions and purposes of the business are established through identification and analysis of the values, expectations and personal goals of the people involved.</p> <p>1.2. Business and personal Strengths, Weaknesses, Opportunities and Threats (SWOT) are identified.</p> <p>1.3. Strategies to address the SWOT are developed consistent with the business vision.</p>
2. Audit the natural resources and infrastructure of the property	<p>2.1. Physical characteristics of the soil resource are identified and recorded.</p> <p>2.2. Soil map of property is drawn and land classes are recorded using classification terminology.</p> <p>2.3. Land capability is determined and land management options for each land class identified.</p> <p>2.4. Natural property features and infrastructure are shown on property map.</p> <p>2.5. Areas at risk of soil degradation are identified.</p> <p>2.6. Native vegetation is classified and condition is assessed.</p> <p>2.7. Endangered species are identified as appropriate.</p> <p>2.8. Other natural resource issues are identified as appropriate to the property.</p> <p>2.9. Infrastructure is marked to assist with maintenance and planning.</p>
3. Monitor legal requirements impacting on the	<p>3.1. Current knowledge of relevant Acts and regulations impacting on the property is maintained.</p> <p>3.2. Legal requirements are addressed through</p>

ELEMENT	PERFORMANCE CRITERIA
management of the property	management plans.
4. Develop management strategies to address natural resource management issues	4.1. Property improvement plans to assist natural resource management are developed, costed and prioritised. 4.2. Plans to repair land degradation are developed. 4.3. Strategies to address water supply and water management, vegetation and revegetation management, and wildlife management are prepared as appropriate to the property. 4.4. Strategies for weed and pest management are developed. 4.5. Plans to address fire risk/fire management are developed as appropriate.
5. Review whole farm plan	5.1. Plans are reviewed and revised to meet changing circumstances.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assessment of soil physical characteristics
- determine existing and required infrastructure requirements
- identification and determination of Natural Resource Management (NRM) requirements
- ability to determine landuse capability
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- SWOT analysis
- sustainable land management practices
- property planning processes and approaches
- land capability
- water, vegetation, soil, fire and wildlife management strategies
- legal requirements impacting on whole farm planning
- risk management.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- audit the natural resources of the property
- monitor legal requirements impacting on the management of the property
- develop management strategies to address the key natural resource management issues of water, soils, vegetation and wildlife
- develop management strategies to address natural resource management issues
- integrate business objectives and production plans with sustainable land management in a whole farm plan.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

	enterprise circumstances.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Whole farm plans include:

- all production land and natural areas
- waterways and physical features and improvements.

**Unit Sector(s)**

<b>Unit sector</b>	Agribusiness
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCAGB601A Develop export markets for produce

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes of evaluating a product for export, developing an export market and implementing an export strategy and defines the standard to: research and analyse product knowledge; establish market potential; and develop the export market strategy.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the research and analyse markets and the determination of the capability of a business to meet the market requirements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Evaluate export potential	<p>1.1. Competitive advantages and disadvantages for the proposed product are identified in respect to the products entry to overseas markets.</p> <p>1.2. Features of potential markets are analysed in respect to cultural factors, quality requirements, government regulations and other economic, political and social factors.</p> <p>1.3. Business resources are analysed for their appropriateness and capacity to contribute to the marketing effort.</p> <p>1.4. Available capital and time are identified for the development of the export plan.</p>
2. Develop export strategy	<p>2.1. Customer analysis is conducted and the market niche defined.</p> <p>2.2. Operational plan is developed to address the market mix.</p> <p>2.3. Budgets are prepared to address the investment required in the operational plan.</p> <p>2.4. Overseas visit is planned and conducted to confirm the target market and initiate negotiations.</p>
3. Implement export strategy	<p>3.1. Steps in an export transaction are identified and addressed.</p> <p>3.2. Documentation requirements for export is identified and prepared.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- evaluate export potential
- develop export strategy
- implement export strategy
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- sources of information in respect to export requirements
- requirements set out in standards, codes of practice, quality assurance (QA) processes and procedures
- marketing plan formats
- cash flow budgeting techniques
- sensitivity analysis and investment evaluation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance



<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• research and analyse product knowledge</li> <li>• establish market potential</li> <li>• develop the export market strategy.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Market for export includes:	<ul style="list-style-type: none"> <li>• agricultural products and services</li> <li>• horticultural products and services.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Agribusiness
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCAGB602A Manage estate planning

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing an estate and defines the standard required to: identify estate planning requirements; clarify estate planning arrangements; implement estate planning.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to the process of managing and planning the succession and distribution of an estate within a family agricultural business context.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify estate planning requirements	1.1. Contingency and succession arrangements are identified and assessed against enterprise and individual requirements. 1.2. Income continuation options are identified and evaluated to find best fit for enterprise requirements. 1.3. Personal and business goals are identified and distinguished. 1.4. Needs of those affected by succession arrangements are considered and taken account of in estate planning.
2. Clarify estate planning arrangements	2.1. Plans for retirement and inheritance are made clear to all relevant parties. 2.2. Apparent inequities in estate distribution are discussed, clarified and mediated. 2.3. Legal implications of succession planning are accounted for in determining succession arrangements and estate distribution. 2.4. External advice is sought as required to clarify obligations and potential effects on business performance.
3. Implement estate planning	3.1. Strategies for estate distribution and succession are determined and implemented. 3.2. Estate structures and transfer arrangements are monitored and reviewed against tax and legislative requirements. 3.3. Estate planning and succession is monitored against enterprise performance. 3.4. Relevant documentation is completed to meet legal and procedural obligations, and to avoid legal complications.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- separate personal goals from enterprise goals
- behave ethically
- define agreements and contracts
- logically consider investment financial and retirement options
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- effective interpersonal communication techniques
- conflict resolution, negotiation and mediation techniques
- solve problems relating to estate management
- goal setting strategies
- working knowledge of estate structures, retirement options, wills and estate planning procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify estate planning requirements</li> <li>• clarify estate planning arrangements</li> <li>• implement estate planning.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Factors influencing planning may include:	<ul style="list-style-type: none"> <li>• the size and asset classes of the estate</li> <li>• the range of options for their allocation.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Agribusiness
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCAGB603A Manage the production system

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing the production system of an organisation and defines the standard to: align relevant production systems with the enterprise strategic plan; adjust production systems to meet the overarching sustainability requirements for the enterprise; adopt a systemised approach to the incorporation of productions systems into the business plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to integrating the production plans for each sector of the organisation with the strategic plan, developing risk management strategies, and analysing the organisations performance in terms of sustainability and profitability.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Integrate plans for different sectors of the enterprise	<p>1.1.Strategic, production, infrastructure and land management plans are examined to identify interactions between different sectors of the enterprise.</p> <p>1.2.Types of interactions and their impacts on resources and production system performance over time, are determined.</p> <p>1.3.Beneficial interactions are assessed and any potential additional benefits are identified for further improvements to the systems efficiency.</p> <p>1.4.Detrimental interactions are assessed and the production system is adjusted to minimise potential losses.</p> <p>1.5.Information on available innovations for potential use in the organisation is accessed and discussed with colleagues and integrated with operational plans.</p>
2. Develop and implement risk management strategies	<p>2.1.The business is analysed to identify its strengths and weaknesses as well as any threats to, or opportunities to improve, the organisations sustainability and/or profitability.</p> <p>2.2.Potential results of threats are considered in terms of natural resources, business assets and infrastructure.</p> <p>2.3.Preventative and reactive contingency plans are developed to minimise threats and maximise opportunities.</p> <p>2.4.Contingency plans aim to ensure business stability and profitability, while protecting and preserving natural resources and business assets.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Analyse the overall performance of the production system	3.1. Whole-business physical and financial analyses are undertaken to determine the long-term sustainability and profitability of the production system. 3.2. Results of analyses are prepared and discussed with colleagues for input to future planning processes.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- integrate plans for different enterprises into sustainable land management and production systems
- interpret historical data in relation to production, finances, environmental issues, staffing and land use
- recognise potential opportunities to use or install more environmentally efficient systems or equipment
- assess, then adopt profitable innovations
- assess financial strategies and prepare budgets
- prepare enterprise budgets and calculate financial returns
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- marketplace in which the organisation operates
- property planning, financial management and enterprise budgeting systems and procedures
- relevant State/Territory legislation, regulations and codes of practice with regard to OHS and the use and control of hazardous substances
- methods of measuring and implementing business and environmental sustainability

**REQUIRED SKILLS AND KNOWLEDGE**

- financial analysis tools and techniques for land based businesses
- sources of information to assist in analysis of operational plans, resourcing and financial analysis
- monitoring strategies for a range of operational plans
- the value and methods of risk assessment.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- align relevant production systems with the enterprise strategic plan.
- adjust production systems to meet the overarching sustainability requirements for the enterprise
- adopt a systemised approach to the incorporation of production systems into the business plan.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

**RANGE STATEMENT**

The production system may include:

- the product
- the production processes
- the infrastructure
- the land resource of each enterprise within the business as well as the interactions and relationships between them.

**Unit Sector(s)**

<b>Unit sector</b>	Agribusiness
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCAGB604A Analyse business performance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of analysing business performance for an agricultural or horticultural enterprise and defines the standard required to: analyse financial reports; use financial analysis tools; identify profit drivers for the enterprise; benchmark business performance against other businesses; and develop strategies for improving business performance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to analysing financial reports, using financial analysis tools, identifying profit drivers for the enterprise and developing strategies for improving business performance.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Analyse financial reports	<p>1.1.Taxation reports are correctly interpreted and accounts are determined to be true and fair.</p> <p>1.2.Management reports generated by the enterprise are reviewed and interpreted.</p> <p>1.3.Distribution of profit is determined.</p>
2. Use financial analysis tools	<p>2.1.Gross margins and relevant breakdowns of profit and loss are calculated.</p> <p>2.2.Ratios related to production activity, solvency and liquidity, gearing and profitability are calculated.</p> <p>2.3.Relevant performance benchmarks are sourced and compared to the enterprise.</p> <p>2.4.Trends in production and profitability are identified and analysed.</p>
3. Identify opportunities for increasing profit	<p>3.1.Yield/production potential is assessed and current position determined.</p> <p>3.2.Key issues related to production efficiency are identified.</p> <p>3.3.Key issues related to market return are identified.</p>
4. Develop strategies for improving business performance	<p>4.1.Strengths, Weaknesses, Opportunities and Threats (SWOT) approach is used to determine possible strategies for addressing production and marketing issues.</p> <p>4.2.Sensitivity analyses are performed to evaluate strategies.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse financial reports
- use financial analysis tools
- identify profit drivers for the enterprise
- develop strategies for improving business performance
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- financial reports
- financial analysis tools
- performance benchmarking
- issues related to production efficiency and marketing
- SWOT analysis and developing business strategies.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• analyse financial reports</li> <li>• use financial analysis tools</li> <li>• identify profit drivers for the enterprise</li> <li>• benchmark business performance against other businesses</li> <li>• develop strategies for improving business performance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Financial analysis tools and reporting systems applied may include:	<ul style="list-style-type: none"> <li>• the range of primary production and related business activities.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Agribusiness
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### Co-requisite units

<b>Co-requisite units</b>	



<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCAGB605A Manage business capital

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing business capital in an agricultural or horticultural enterprise and defines the standard required to: assess capital needs; assess appropriate equity levels for a business; establish and maintain appropriate financing arrangements; review the mix of liabilities; monitor key indicators of financial returns for the business.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to having the ability to assess capital needs, assess appropriate equity levels for a business, establish and maintain appropriate financing arrangements, review the mix of liabilities, and monitor equity and return on equity.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess the capital needs of the business	1.1. Working capital and capital requirements for development is determined. 1.2. Return on capital/opportunity cost of development capital determined.
2. Assess appropriate equity levels for the business	2.1. Risks associated with the business are assessed. 2.2. Personal and business risk preferences are identified. 2.3. Equity levels in comparable enterprises are analysed using benchmark data.
3. Establish and maintain appropriate financing arrangements for the business	3.1. Capacity to service debt/meet liabilities is determined. 3.2. Sources of funds are identified and terms and conditions compared and evaluated. 3.3. Negotiations are conducted to ensure the establishment of the most favourable terms and conditions. 3.4. Loan funds are sourced and agreements checked. 3.5. Costs of finance are monitored within defined budget limits. 3.6. Relationships with finance providers are managed. 3.7. The economic environment is monitored and implications for the business assessed.
4. Monitor and review the mix of liabilities	4.1. Regular reviews are conducted of the mix of liabilities and the costs and benefits associated with reconfiguring loans are determined. 4.2. Loans are reviewed and renegotiated as appropriate.
5. Monitor equity,	5.1. Review valuations on assets and monitor the effect

ELEMENT	PERFORMANCE CRITERIA
return on equity	<p>on equity.</p> <p>5.2&gt;Returns on assets and returns on equity are calculated and used to assist business performance.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess capital needs
- assess appropriate equity levels for the business
- establish and maintain appropriate financing arrangements
- monitor and review the mix of liabilities
- monitor equity and return on equity
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- preparation of financial reports
- impacts resulting from changes to various macro economic factors
- sources of finance
- negotiation techniques
- concept of equity, ROA, ROE, IRR
- bank and lending institution policies and requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess capital needs</li> <li>• assess appropriate equity levels for a business</li> <li>• establish and maintain appropriate financing arrangements</li> <li>• review the mix of liabilities</li> <li>• monitor key indicators of financial returns for the business.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Capital needs may be:	<ul style="list-style-type: none"> <li>• major fixed assets including machinery, land purchases, buildings and other equipment.</li> </ul>
Risks may include:	<ul style="list-style-type: none"> <li>• price risk</li> <li>• seasonal and other production risks</li> <li>• other business and personal risks for example, those related to age and health factors and succession.</li> </ul>
Sources of funds may include:	<ul style="list-style-type: none"> <li>• debt financing through term loans, bank bills, overdraft facilities, bridging finance, hire</li> </ul>

**RANGE STATEMENT**

	<p>purchase and private finance</p> <ul style="list-style-type: none"> <li>• funds may also be derived through equity financing.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Agribusiness
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCAGB606A Manage price risk through trading strategy

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing price risk through trading strategy and defines the standard required to: determine cost of production; assess risk to financial returns through market or currency movements; analyse trends and evaluate forecasts; monitor and assess price movements; implement a trading strategy for price risk management.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the ability to determine cost of production, assess risk, analyse trends and evaluate forecasts, and monitor and assess price movements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Conduct market research	1.1. Estimates of supply and demand are collated and evaluated. 1.2. Past trends are analysed and possible future scenarios assessed. 1.3. Own products are related to market indicators.
2. Determine price required	2.1. Cost of production is calculated and break-even price is determined. 2.2. Margins for profit and risk are determined. 2.3. Forward price objectives are set to meet cost of production plus profit required. 2.4. Personal attitude to risk is evaluated.
3. Develop sales plan	3.1. Cash markets are evaluated and projected price trends assessed. 3.2. Forward contract information is obtained and assessed. 3.3. Futures prices are obtained and assessed. 3.4. Options are evaluated against price objectives and the assessment of price movement risk. 3.5. Taxation and cash flow implications are assessed. 3.6. Appropriate mix of sale options is developed in a trading strategy. 3.7. Contingency plans are developed to address possible shifts in price trend.
4. Implement trading strategy	4.1. Appropriate expertise is sought as required. 4.2. Market information is monitored and trading strategy adjusted according to contingency plans.



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- determine cost of production
- assess risk
- analyse trends and evaluate forecasts
- monitor and assess price movements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- supply, demand and price relationships
- price trends and sources of market information/forecasts
- cost of production
- risk assessment and attitudes to risk
- selling options for the relevant commodity
- operation of futures markets, forward selling arrangements, put options
- foreign exchange rates
- contract law
- cash flow and taxation planning
- contingency planning.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine cost of production</li> <li>• assess risk to financial returns through market or currency movements</li> <li>• analyse trends and evaluate forecasts</li> <li>• monitor and assess price movements</li> <li>• implement a trading strategy for price risk management.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Cash markets may relate to:	<ul style="list-style-type: none"> <li>• markets that do not involve any hedging or forward selling.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Agribusiness
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCAIS201A Assist with artificial insemination procedures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assisting with artificial insemination procedures and defines the standard required to: handle animals humanely and safely; prepare relevant materials and equipment; clean up work areas and equipment following insemination fertility; record details of artificial insemination.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under supervision within enterprise guidelines. The artificial insemination procedure will generally be carried out by a registered veterinarian or licensed inseminator, but technical support needs to be provided.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assist with preparation of animals for insemination	<p>1.1. Animals on heat are detected and information recorded or reported to supervisors.</p> <p>1.2. Animals on heat are moved to the insemination area.</p> <p>1.3. Animals are restrained, where required, using safe and humane techniques to minimise stress and discomfort.</p> <p>1.4. Assistance is provided with the hygienic preparation of tools and equipment.</p> <p>1.5. Suitable personal protective equipment and clothing is selected, used and maintained according to Occupational Health and Safety (OHS) and enterprise requirements.</p>
2. Support insemination procedure	<p>2.1. All insemination equipment is sterilised and cleaned or disposed of according to industry code of practice.</p> <p>2.2. Intended recipient is correctly identified and readied.</p> <p>2.3. Intended recipient is restrained, where required, and prepared for insemination to optimise results according to recognised handling techniques that minimise stress.</p>
3. Clean work area and equipment	<p>3.1. Waste is disposed of according to recommended hygiene standards and environmental policy.</p> <p>3.2. Work area and equipment cleaned to industry standards and returned to operating order.</p> <p>3.3. Animals are safely returned to designated area according to enterprise requirements and instructions.</p> <p>3.4. Where used, restraints and harnesses are cleaned and returned to safe and operational order.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions
- safely and humanely handle livestock
- sterilise equipment and prepare hygienic work site prior to insemination procedures
- identify and record animals on heat
- keenly observe animals and insemination processes
- employ safe work practices
- clean up worksite and safely dispose of waste
- communicate effectively with other team members, veterinarians and/or licensed inseminators
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- oestrus cycle and heat detection
- sterilisation procedures
- safe animal handling
- animal welfare requirements
- environmental impacts and procedures of working with animals
- record keeping systems.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• handle animals humanely and safely</li> <li>• prepare relevant materials and equipment</li> <li>• clean up work areas and equipment following insemination fertility</li> <li>• record details of artificial insemination.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• sheep</li> <li>• goats</li> <li>• pigs</li> <li>• alpacas</li> <li>• horses.</li> </ul>

## Unit Sector(s)

Unit sector	Artificial insemination
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCAIS301A Collect semen

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the routine process of collecting semen for artificial insemination of livestock and defines the standard required to: prepare for and undertake hygienic collection of semen; match collection vessels and labelling to the sire; transfer semen safely to the preparation and storage area; handle animals in a humane, stress free, and safe manner; clean up work areas and equipment; record data.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working as part of a technical operation within enterprise guidelines for Occupational Health and Safety (OHS) and animal welfare.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare animals for collecting semen	<p>1.1.Suitable personal protective equipment and clothing is selected, used and maintained according to OHS and enterprise requirements.</p> <p>1.2.Appropriate equipment for collection is selected and prepared.</p> <p>1.3.Nominated sire is prepared and located at the appropriate semen collection area.</p> <p>1.4.Semen is collected from the nominated sire using industry approved collection techniques.</p> <p>1.5.Semen is transferred to the processing and storage area according to enterprise requirements and instructions.</p>
2. Complete collection procedures	<p>2.1.Post-collection procedures are carried out according to enterprise requirements.</p> <p>2.2.Waste is disposed of according to recommended hygiene standards.</p> <p>2.3.Work area and equipment are cleaned to industry standards and returned to operating order.</p> <p>2.4.Animals are safely returned to the designated area according to enterprise requirements and instructions.</p>
3. Document and record data	<p>3.1.Data on semen collection is accurate and recorded according to enterprise requirements.</p> <p>3.2.Information is supplied to relevant authorities to promote research and improvements in industry practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- sterilise equipment and prepare hygienic worksite prior to insemination procedures
- identify and record animals on heat
- employ safe work practices
- clean up work site and safely dispose of waste
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- animal health and abnormalities
- semen collecting and transfer techniques
- animal handling techniques and behavioural characteristics
- enterprise and industry identification system for animals
- personal protective equipment and when and how it should be used
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS and animal welfare
- enterprise and industry policies with regard to semen collection and recording and reporting routines.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare for and undertake hygienic collection of semen</li> <li>• match collection vessels and labelling to the sire</li> <li>• transfer semen safely to the preparation and storage area</li> <li>• handle animals in a humane, stress free, and safe manner</li> <li>• clean up work areas and equipment and record data.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• sheep</li> <li>• alpacas</li> <li>• goats</li> <li>• pigs.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Artificial insemination
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCAIS302A Process and store semen

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of storing and processing semen collected from livestock for the purpose of artificial insemination and defines the standard required to: prepare diluent; maintain temperatures required for storing of diluent and processed semen doses; assess semen for quality parameters for livestock semen intended for use in artificial insemination procedures; ensure incubator is operational and prepare and label doses.
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### Application of the Unit

<b>Application of the unit</b>	This unit is performed under limited supervision and with reference to established procedures. Some discretion and independent judgement is required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare diluent	<p>1.1.Containers to be used for preparation of diluent are cleaned according to enterprise hygiene standards.</p> <p>1.2.Equipment and tools to be used in processing semen are calibrated according to manufacturers' specifications.</p> <p>1.3.Distilled water for use in diluent is heated to required temperature.</p> <p>1.4.Distilled water is added to powdered diluent in correct proportions.</p> <p>1.5.Diluent is correctly stored before use.</p>
2. Determine number of doses	<p>2.1.Concentration of the ejaculate is determined using spectrophotometer or other appropriate equipment.</p> <p>2.2.Number of doses is calculated according to the concentration determined. Number of doses is calculated according to the concentration determined.</p>
3. Assess quality of semen batch	<p>3.1.Semen batch is examined and checked for contamination.</p> <p>3.2.Motility of semen is assessed.</p> <p>3.3.Quality of semen batch is compared against enterprise benchmarks.</p> <p>3.4.Poor quality semen is discarded according to enterprise procedures.</p>
4. Ensure incubator is operational	<p>4.1.Temperature and other operational parameters of incubator are checked before use.</p> <p>4.2.Problems with incubator are reported to supervisor and/or resolved before proceeding.</p>

ELEMENT	PERFORMANCE CRITERIA
5. Prepare doses	5.1. Diluent is added to semen batch. 5.2. Diluted semen is divided into doses. 5.3. Each dose is labelled. 5.4. Doses are placed in incubator. 5.5. Quality of doses prepared is assessed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- operate incubator
- operate spectrophotometer
- calculate concentration and motility of semen batch
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- temperatures required for storing of diluent and processed semen doses
- quality parameters for livestock semen intended for use in artificial insemination procedures
- operation of incubator.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare diluent</li> <li>• maintain temperatures required for storing of diluent and processed semen doses</li> <li>• assess semen for quality parameters for livestock semen intended for use in artificial insemination procedures</li> <li>• ensure incubator is operational</li> <li>• prepare and label doses.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• alpacas</li> <li>• cattle</li> <li>• poultry</li> <li>• pigs.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Artificial insemination
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCAIS303A Artificially inseminate livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of artificially inseminating livestock and defines the standard required to: prepare for insemination; observe animals on heat to detect correct insemination timing; prepare equipment and work sites; correctly select and thaw semen for insemination; inseminate animals; record data after insemination is complete.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for insemination of animals	<p>1.1. Timing of insemination process is scheduled to ensure availability of resource and personnel requirements.</p> <p>1.2. Hygiene factors are identified and appropriate procedures followed.</p> <p>1.3. Semen supplies are accessed from appropriate and reliable sources and stored appropriately.</p> <p>1.4. Animals are prepared to maximise success of insemination program.</p> <p>1.5. Suitable personal protective equipment and clothing is selected, used and maintained according to Occupational Health and Safety (OHS) and enterprise requirements.</p>
2. Inseminate animals	<p>2.1. Semen is prepared according to accepted industry and enterprise practices.</p> <p>2.2. Insemination equipment is sterile and clean and applied according to industry code of practice.</p> <p>2.3. Intended recipient is correctly identified and observed, and checked for signs of ovulation.</p> <p>2.4. Intended recipient is restrained and prepared for insemination to optimise results according to recognised handling techniques that minimise stress.</p> <p>2.5. Insemination is carried out in sterile conditions and according to appropriate hygiene procedures.</p>
3. Document and record data	<p>3.1. Data on insemination process is accurate and recorded according to enterprise requirements.</p> <p>3.2. Historical data is reviewed to measure performance</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>of herd in insemination program.</p> <p>3.3. Conception rates are calculated and used to determine success of AI program.</p> <p>3.4. Information is supplied to relevant authorities to promote research and improvements in industry practice.</p> <p>3.5. Necessary modifications to herd program are identified and recorded to assist continuous improvement processes.</p>
4. Clean work area and equipment	<p>4.1. Waste is disposed of according to recommended hygiene standards and environmental policy.</p> <p>4.2. Work area is cleaned to industry standards and returned to operating order.</p> <p>4.3. Restraints and harnesses are cleaned and returned to safe and operational order.</p> <p>4.4. Animals are safely returned to designated area according to enterprise requirements and instructions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and employ safe work practices
- store and thaw semen and check sire details
- sterilise equipment and prepare hygienic worksite prior to insemination procedures
- observe animals on heat to detect correct insemination timing
- accurately scan for ovulation
- carry out artificial insemination procedure
- maintain hygiene during the operation
- clean up work site and dispose of waste in an environmentally responsible manner
- monitor pregnancy rates to review effectiveness of operation
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as

**REQUIRED SKILLS AND KNOWLEDGE**

specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- working knowledge of enterprises herd improvement or animal production plan
- basic breeding principles, including the oestrus cycle and its significance
- pregnancy testing
- animal health and abnormalities
- preparation techniques such as puberty stimulation
- semen thawing and storage techniques
- preparation requirements for artificial insemination of animals
- animal movement and behavioural characteristics
- harness and restraint equipment, components and functions
- handling techniques, restraint methods and when to use them
- enterprise and industry identification system for animals
- personal protective equipment and when and how it should be used
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS and animal welfare
- legislative and regulatory controls with regard to artificial insemination
- enterprise and industry policies with regard to artificial insemination and recording and reporting routines.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include

<b>EVIDENCE GUIDE</b>	
	<p>achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare for insemination</li> <li>• observe animals on heat to detect correct insemination timing</li> <li>• prepare equipment and work sites</li> <li>• correctly select and thaw semen for insemination</li> <li>• inseminate animals</li> <li>• record data after insemination is complete.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep</li> <li>• goats</li> <li>• alpacas</li> <li>• deer.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Artificial insemination
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCAIS401A Supervise artificial breeding and/or embryo transfer programs

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising artificial breeding and/or embryo transfer programs and defines the standard required to: identify appropriate artificial breeding options; schedule and resource insemination and implantation strategies; match oestrus cycles, resource availability and timing of operations; manage the genetic material; transfer, identify and implement re-insemination and implantation; maximise conception rates; record all details of the program.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to artificial breeding technicians.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine breeding method	<p>1.1.Options for artificial breeding are reviewed to determine most suitable and affordable method according to breeding objectives.</p> <p>1.2.Artificial breeding option is selected and matched to resources and breeding objectives so as to meet the enterprise's livestock management program.</p> <p>1.3.Resource implications of breeding programs are identified, sourced and arranged.</p> <p>1.4.Program schedules are prepared according to available resources.</p> <p>1.5.Suitable Personal Protective Equipment (PPE) and clothing for breeding support staff and self according to Occupational Health and Safety (OHS) and enterprise requirements is made readily available.</p>
2. Implement breeding method	<p>2.1.Genetic material is obtained from reliable and legitimate sources.</p> <p>2.2.Genetic material is received, checked and stored according to industry codes of practice, and to ensure maximum viability and program outcomes.</p> <p>2.3.Where Artificial Insemination (AI) is the selected option, females are inseminated at the optimal stage of the oestrus cycle.</p> <p>2.4.Where Embryo Transfer (ET) is the selected option for artificial breeding, checks are carried out to ensure intended recipients are prepared and correctly scheduled for ET according to confirmed pregnancy status, oestrus cycle, animal health and program schedule.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Where ET is the selected option for artificial breeding, hormone injections are provided to intended recipients at appropriate stages of transfer programs to maximise fertilisation and conception.</p> <p>2.6. Where ET is the selected option for artificial breeding, transfers are conducted according to accepted industry practice.</p>
3. Monitor and maintain program	<p>3.1. Need for return to service of intended recipient is monitored through selected methods.</p> <p>3.2. Appropriate arrangements are made for the care of sick and injured animals.</p> <p>3.3. Adjustments in genetic material transfer practices are reviewed to enhance success of future programs.</p> <p>3.4. Data on genetic material transfer programs is documented and maintained according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- administer AI
- arrange for implantation of embryos by a veterinarian
- prepare stock for AI and embryo implantation
- determine AI and embryo implantation timing for livestock
- identify hazards and implement safe work practices
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- artificial breeding methods and benefits, and limitations of each method
- anatomy and physiology of the reproductive organs and reproductive process in livestock
- fertilisation and implantation methods
- physical resource requirements and how to safely handle and transport them
- ovulation stimulation and synchronisation
- semen collection and dilution processes
- semen thawing techniques
- knowledge of enterprise's breeding programs
- breeding principles
- pregnancy testing
- animal health and abnormalities
- preparation requirements for AI
- enterprise and industry identification system for livestock
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS and animal welfare
- legislative and regulatory controls with regard to AI and embryo implants
- enterprise and industry policies with regard to AI, and recording and reporting requirements
- identification of veterinary and non-veterinary procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify appropriate artificial breeding options

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• schedule and resource insemination and implantation strategies</li> <li>• match oestrus cycles, resource availability and timing of operations</li> <li>• manage the genetic material</li> <li>• transfer, identify and implement re-insemination and implantation</li> <li>• record and maximise conception rates</li> <li>• record all details of the program.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Artificial breeding programs may include:	<ul style="list-style-type: none"> <li>• the supervision of both AI and ET programs covering: <ul style="list-style-type: none"> <li>• mares</li> <li>• cows</li> <li>• ewes</li> <li>• sows</li> <li>• does.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Artificial insemination
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCARB201A Apply a range of treatments to trees

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the application of a range of treatments to trees and defines the standard required to: recognise a range of common causes and sources of stress to trees; prepare and properly maintain tools and equipment for treating common causes of stress to trees; apply common treatments to trees in a safe manner.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to a range of treatments conducted on trees to remedy common problems including alleviating tree stress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to apply tree treatments	<p>1.1. Trees requiring treatments are located and the treatment determined according to work procedures.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.3. Tools and equipment appropriate to the task being undertaken are prepared and used according to supervisor's instructions and enterprise guidelines.</p> <p>1.4. Personal Protective Equipment (PPE) is selected and used according to enterprise OHS requirements.</p>
2. Modify trees to alleviate stress	<p>2.1. All dead, fractured, poorly attached, dying and diseased wood is removed at the designated position according to Compartmentalisation of Decay in Trees (CODIT) principles.</p> <p>2.2. Competing branches are removed to allow adequate space for the natural form of the tree.</p> <p>2.3. Growth patterns are re-directed to avoid physical and structural damage to the tree.</p> <p>2.4. Removed plant material is disposed of according to enterprise guidelines and with due regard for environmental implications.</p>
3. Modify environment to maintain health and vigour of tree	<p>3.1. Competing plants are removed to ensure adequate space; light, water and nutrient requirements of the tree are maintained.</p> <p>3.2. Nutrient additives are applied to the soil at rates and designated location according to supervisor's instructions.</p>



ELEMENT	PERFORMANCE CRITERIA
	3.3. Soil structure is ameliorated according to supervisor's instructions.
4. Apply treatment	4.1. Application equipment is checked for volume calibration, adjusted and operated according to manufacturer's instructions and enterprise guidelines. 4.2. Treatments are applied following manufacturer's instructions, enterprise guidelines and in accordance with OHS requirements and with due regard for environmental implications. 4.3. Tools and equipment are cleaned or sterilised to avoid disease transfer according to Enterprise's Standard Operating Procedures (SOPs).

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- work using a variety of chemical application tools and pieces of equipment that are suitable for the particular application task while minimising environmental impact
- dispose of plant and equipment debris in an environmentally aware and sensitive manner, such as sorting plant and paper-based waste for recycling
- dispose of chemical substances and their containers in a way designed to minimise environmental impact
- interpret directions
- read labels
- record information
- communicate with fellow team members
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

## REQUIRED SKILLS AND KNOWLEDGE

- how trees react to drainage and stresses
- industry code of practice
- environmental considerations associated with the treatment program including use of chemical treatments and the environmentally safe disposal of plant, equipment and chemical debris
- principles and methods relating to identification of pests and disease
- factors affecting the timing and method of applying tree treatments
- different broad chemical types, for example, insecticides, herbicides and fungicides and the environmental implications of using these chemicals
- health, safety and environmental considerations when applying chemical treatments
- timing and placement of fertilisers and the need to minimise fertiliser use to limit environmental impact.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- recognise a range of common causes and sources of stress to trees
- prepare and properly maintain tools and equipment for treating common causes of stress to trees
- apply common treatments to trees in a safe manner.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>all species of trees and woody tree like vegetation forms.</li> </ul>
Treatments may include:	<ul style="list-style-type: none"> <li>all chemical, biological, and environmental treatments on trees.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Arboriculture
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCARB202A Fell small trees

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of small tree felling and defines the standard required to: prepare and properly maintain equipment; determine the tree felling conditions, direction of fall, safe fall zone, exclusion zone and escape route; use safe tree felling techniques; use safe tree removal techniques.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of small tree felling where hazards have been assessed as low risk.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify tree felling requirements	<p>1.1. Instructions for tree felling operations are received and clarified with supervisor prior to work being undertaken.</p> <p>1.2. Topography and site conditions are assessed and factors influencing the natural direction of fall are identified and confirmed with supervisor.</p> <p>1.3. Tree is visually assessed and factors influencing the tree felling operation are identified and confirmed with supervisor.</p> <p>1.4. Natural direction of fall, safe fall zone and exclusion zone are determined and confirmed with supervisor.</p> <p>1.5. Occupational Health and Safety (OHS) hazards associated with felling operation are identified, risks assessed and reported to the supervisor.</p>
2. Prepare for tree felling	<p>2.1. Felling equipment and component options that are appropriate to the task being undertaken are selected and prepared.</p> <p>2.2. Appropriate support tools are prepared, transported and placed to minimise felling delays.</p> <p>2.3. Suitable safety equipment and Personal Protective Equipment (PPE) are selected, checked, used, maintained and stored.</p> <p>2.4. Fall zone is cleared of obstacles and articles which may be damaged by felled tree.</p> <p>2.5. Clear escape route is established appropriate to the site and according to recognised guidelines.</p>
3. Fell tree	<p>3.1. Location of other personnel is noted and monitored.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.2. Standard tree felling techniques are determined by ground conditions and state of canopy. 3.3. Corrective action is taken in response to changing conditions or problems encountered. 3.4. Planned escape route is used when tree starts to fall. 3.5. Fall of tree and movement on ground are monitored until felled tree is stable. 3.6. Safe working practices are employed according to OHS requirements.
4. Complete tree felling operation	4.1. Appropriate method of clearing the site of felled tree is determined. 4.2. Machinery required for removal of felled tree is selected and used according to manufacturer's specifications and OHS requirements. 4.3. Fall site is cleared of tree and all tree debris.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret work procedures
- demonstrate safe working practices
- communicate orally and using hand signals with other personnel
- participate in teams and contribute to team objectives
- determine safe fall zones and exclusion zones
- measure distances
- monitor and maintain tree felling tools and equipment
- recognise structural defects, common diseases, pests, and nutrition deficiencies
- operate a chainsaw
- recognise caution or hazard signs and symbols
- interpret tasks or information from labels, manuals or written instructions
- record information accurately or verbally report information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

**REQUIRED SKILLS AND KNOWLEDGE**

clarification and seeking advice from supervisor

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- basic operational and maintenance requirements of tree felling equipment
- safe working practices for chainsaw operation
- safety procedures and potential hazards for working safely in the amenity tree industry
- emergency and first aid procedures
- the effect of tree removal on the environment
- local government regulations that apply to tree removal where appropriate
- identification of services and other hazards that affect the performance of the unit
- principles and methods of inspecting trees to identify structural defects.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare and properly maintain equipment
- determine the tree felling conditions, direction of fall, safe fall zone, exclusion zone and escape route
- use safe tree felling techniques
- use safe tree removal techniques

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Trees may include:

- all species of trees and woody tree like vegetation forms.

**Unit Sector(s)****Unit sector**

Arboriculture

**Co-requisite units****Co-requisite units****Competency field****Competency field**



## AHCARB203A Perform above ground pruning

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of aerial pruning of ornamental trees and shrubs and defines the standard required to: carry out pre-operational and safety checks; identify and report site and tree hazards and implement risk controls for pruning; climb using documented safe work methods; perform pruning to AS4373 - 2007 Pruning of amenity trees; drop pruned material safely; record pruning activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the pruning of trees and shrubs in amenity horticulture in urban and regional areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for pruning operations	<p>1.1. Pruning instructions are obtained and confirmed from supervisor.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.3. Tools and equipment are selected that are appropriate to the task being undertaken.</p> <p>1.4. Pre-operational and safety checks are carried out on pruning tools and equipment, according to manufacturer's specifications and work procedures.</p> <p>1.5. Personal Protective Equipment (PPE) required for above ground pruning is selected and used.</p>
2. Perform remedial and corrective pruning of trees	<p>2.1. Safety harness is fitted and adjusted according to manufacturer's guidelines and workplace safety requirements.</p> <p>2.2. Ascent to a given position for the pruning operation is achieved using communication and signage techniques according to enterprise requirements.</p> <p>2.3. Tools are used to perform remedial and corrective pruning operations according to supervisor's instructions.</p> <p>2.4. Pruning operations are carried out according to strict OHS requirements, and industry codes of practice and AS4373 - 2007 Pruning of amenity trees.</p> <p>2.5. Pruning material is dropped in a safe manner into designated drop zone and may include the use of ropes.</p> <p>2.6. Descent at the conclusion of the pruning operation is</p>

ELEMENT	PERFORMANCE CRITERIA
	completed in accordance with industry safe work standards.
3. Complete pruning operations	3.1. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and enterprise Standard Operating Procedures (SOPs). 3.2. Pruned material is collected and disposed of and/or recycled in a manner that causes minimal damage to the environment. 3.3. Workplace records are maintained according to enterprise guidelines.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret directions and communicate with fellow team members
- calculate heights and safe working loads
- dispose of plant debris in an environmentally aware and sensitive manner
- minimise noise, dust, and high activity vehicle traffic to prevent nuisance-level environmental disturbance
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the procedures to be followed for safe use of controlled ascending and descending devices
- factors affecting the timing and method of tree or shrub pruning
- basic tree structure and growth patterns
- employees OHS responsibilities when carrying out above ground pruning
- the effect of adverse climatic conditions (e.g., rain, hail, wind or very high

**REQUIRED SKILLS AND KNOWLEDGE**

- temperatures), which may prevent or impede above ground pruning operations
- the relevant industry Code of Practice
  - AS4373 - 2007 Pruning of amenity trees.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out pre-operational and safety checks
- identify and report hazards, and implement risk controls for pruning
- climb using documented safe work methods
- perform remedial and corrective pruning to AS4373 - 2007 Pruning of amenity trees
- drop pruned material safely
- record pruning activities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>• all species of trees and woody tree like vegetation forms.</li> </ul>
Pruning may include:	<ul style="list-style-type: none"> <li>• formative or corrective pruning and may be divided into the areas of:                             <ul style="list-style-type: none"> <li>• crown cleaning</li> <li>• crown thinning</li> <li>• crown reduction</li> <li>• crown lifting</li> <li>• crown renewal.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCARB204A Undertake standard climbing techniques

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of climbing small trees with ropes and harness for the purpose of pruning and defines the standard required to: carry out pre-operational and safety checks; identify and report site and tree hazards and implement risk controls; select, prepare and inspect ropes, harnesses and other equipment associated with climbing trees; safely climb/ascend and descend a tree with rope and harness; climb using documented low risk work methods; inspect for faults and store ropes, harnesses and other climbing and safety equipment and record and replace if worn or faulty.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the basic techniques used to climb trees in Arboriculture and applies to a climbing tree worker. This standard involves working under routine supervision with intermittent checking by supervisors or qualified arborists. Climbing techniques follow documented low risk work methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for climbing operations	<p>1.1.Climbing instructions and methods are determined according to enterprise Standard Operating Procedures (SOPs).</p> <p>1.2.Hazards associated with the climb are identified and reported to the supervisor.</p> <p>1.3.Climbing tools and equipment are selected, prepared and used according to supervisor's instructions and manufacturer's guidelines.</p>
2. Tie knots required for tree climbing operations	<p>2.1.Ropes specific to the task are selected and inspected for wear, damage and soundness.</p> <p>2.2.Industry recognised knots are used in accordance with the required application.</p> <p>2.3.All knots are checked on completion in accordance with established workplace practice.</p>
3. Climb trees in a low hazard work environment	<p>3.1.Personal Protective Equipment (PPE) and safety equipment is selected, maintained and used according to enterprise procedures.</p> <p>3.2.Climbing is undertaken using standard industry methods, enterprise SOPs and according to Occupational Health and Safety (OHS) requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and report risks
- select and prepare climbing tools and equipment
- select and inspect ropes
- use industry recognised knots
- climb trees and use ropes
- estimate tree heights and loads
- interpret supervisors directions and communicate with fellow team members
- minimise noise, dust, and high activity vehicle traffic to prevent nuisance-level environmental disturbance
- follow guidelines, instructions and supervision
- participate and contribute to team objectives
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic climbing principles and preparation procedures
- basic climbing techniques and planning
- safe working limit of ropes
- safe work practices relevant to tree climbing activities
- tree anatomy and physiology
- local government tree protection and preservation regulations
- AS4373-2007 Pruning of amenity trees
- relevant Code of Practice.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• carry out pre-operational and safety checks</li> <li>• identify and report site and tree hazards, and implement risk controls</li> <li>• select, prepare and inspect ropes, harnesses and other equipment associated with climbing trees</li> <li>• safely climb/ascend and descend a tree with rope and harness</li> <li>• climb using documented low risk work methods</li> <li>• inspect for faults and store ropes, harnesses and other climbing and safety equipment and record and replace if worn or faulty.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>• all species of trees and woody tree like vegetation forms where trees are healthy, free from decay, disease and pests, and are free from embedded objects such as wire, nails or spikes and are NOT prone to branch failure.</li> </ul>

<b>RANGE STATEMENT</b>	
Knots may include knots such as:	<ul style="list-style-type: none"> <li>• bowline</li> <li>• bowline on a bight</li> <li>• tautline</li> <li>• prussik</li> <li>• figure 8</li> <li>• clove hitch</li> <li>• half hitch.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCARB205A Operate and maintain chainsaws

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining, preparing and operating hand-held chainsaws in a work environment and defines the standard required to: select, use, maintain and store suitable personal protective equipment; carry out routine checks and maintenance on chainsaw; apply appropriate chainsaw technique and cutting methods according to manufacturer's specifications and documented low risk work procedures; assess and minimise environmental impacts of chainsaw use; maintain records of chainsaw training and certification, risk assessment and use.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to cross-cutting fallen timber using safe cutting techniques.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Recognise and apply workplace safety procedures	<p>1.1. Occupational Health and Safety (OHS) procedures relevant to the maintenance and operation of chainsaws are recognised and applied.</p> <p>1.2. OHS hazards are identified, risks assessed and risk controls are implemented.</p> <p>1.3. Personal Protective Equipment (PPE) is selected and used.</p> <p>1.4. Relevant licensing and legislative requirements with regard to the operation of chainsaws are recognised, accessed and applied.</p>
2. Check and maintain chainsaw	<p>2.1. Tools and materials required for maintenance procedures are selected, checked and confirmed against maintenance plan.</p> <p>2.2. Routine checks and maintenance procedures are conducted prior to operation and according to manufacturer's specifications and maintenance plan.</p> <p>2.3. Chainsaw faults or malfunctions are identified, tagged and reported for repair according to manufacturer's specifications and enterprise requirements.</p> <p>2.4. Completed chainsaw maintenance procedures are detailed and recorded.</p>
3. Operate chainsaw	<p>3.1. Sawing materials are identified and positioned for operation according to documented low risk work procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Cutting methods are determined appropriate to type of material and risk controls implemented.</p> <p>3.3. Chainsaw is operated according to manufacturer's specifications and operator's manual.</p> <p>3.4. Effective worksite communication is maintained to ensure efficient workflow and address immediate problems.</p> <p>3.5. Environmental implications associated with chainsaw operation are identified, assessed and controlled according to documented requirements.</p>
4. Complete and check chainsaw operation	<p>4.1. Chainsaw damage, malfunctions or irregular performance are recorded and reported according to enterprise requirements.</p> <p>4.2. Chainsaw is cleaned, maintained and stored according to manufacturer's specifications and enterprise requirements.</p> <p>4.3. Relevant reports are maintained to industry standards according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- safely cross-cut fallen timber using compression and tension cuts with a hand held chainsaw
- maximise volume and quality of recovery
- demonstrate safe and environmentally responsible workplace practices
- obtain relevant licenses and permits
- read and interpret manufacturer's specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs).
- effectively communicate information, interpret and apply task instructions, and maintain records and reports
- estimate and measure dimensions, and calculate volumes
- recognise caution or hazard signs and symbols
- interpret tasks or information from labels, manuals or written instructions

## REQUIRED SKILLS AND KNOWLEDGE

- record information accurately or verbally report information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- relevant State/Territory legislation and regulations with regard to the operation of chainsaws
- OHS legislative requirements and Codes of Practice
- hazards and risks when using chainsaws
- operating principles and operating methods
- various types of chainsaws and respective functions
- effects of timber defects on recovery
- environment Codes of Practice with regard to chainsaw operation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select, use, maintain and store suitable personal protective equipment
- carry out routine checks and maintenance on chainsaw
- apply appropriate chainsaw technique and cutting

<b>EVIDENCE GUIDE</b>	
	<p>methods according to manufacturer's specifications and documented low risk work procedures</p> <ul style="list-style-type: none"> <li>• assess and minimise environmental impacts of chainsaw use</li> <li>• maintain records of chainsaw training and certification, risk assessment and use.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Chainsaws may include:	<ul style="list-style-type: none"> <li>• all types and models of hand-held chainsaws in a work environment.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Arboriculture
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCARB206A Undertake stump removal

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of removing tree stumps from the ground with the aid of motorised stump grinders and defines the standard required to: conduct pre-operational and safety checks on machinery and equipment; perform hazard identification and risk control procedures; inspect the work area to determine method of removal using the risk controls; select and safely use a range of stump removal machinery and equipment; perform operational maintenance on stump removal machinery and equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the mechanical removal of tree stumps using a stump grinding machine.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for stump removal operations	<p>1.1.Site location and details regarding the removal of stumps is collected and interpreted.</p> <p>1.2.All underground services are located according to supply authorities' guidelines.</p> <p>1.3.Tools and equipment are selected according to supervisor's instructions and manufacturer's guidelines.</p> <p>1.4.Site and work zone hazards are identified and recorded, risk level established, and controls checked against the safety plan or safe work method statement.</p> <p>1.5.Suitable Personal Protective Equipment (PPE) is selected, used and maintained such as safety glasses for eye protection.</p>
2. Undertake removal operations	<p>2.1.Pre-operational and safety checks are carried out on stump removing tools and equipment, according to documented guidelines.</p> <p>2.2.Tools and equipment appropriate to the task being undertaken are used according to documented Occupational Health and Safety (OHS) requirements and to manufacturer's specifications.</p> <p>2.3.Stump is removed to agreed depth and spread without damage to underground services and surrounding areas.</p> <p>2.4.Stump hole is back-filled and consolidated to original ground level according to enterprise policy.</p>
3. Complete stump	<p>3.1.Waste material is collected and disposed of and/or recycled in a manner that causes minimal damage to</p>

ELEMENT	PERFORMANCE CRITERIA
removal operation	<p>the environment.</p> <p>3.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and enterprise guidelines.</p> <p>3.3. A clean and safe work area is maintained throughout and upon completion of work according to enterprise Standard Operating Procedures (SOPs).</p> <p>3.4. Relevant records are maintained according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conduct pre-operational and safety checks on machinery and equipment
- perform hazard identification and risk control procedures
- inspect the work area to determine method of removal using the risk controls
- select and safely use a range of stump removal machinery and equipment
- perform operational maintenance on stump removal machinery and equipment
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturer guidelines for operating stump grinding machinery
- environmental implications of removal activities including run off, drainage, salinity and soil erosion, and soil disturbance
- removal practices associated with different soil types
- the effect of adverse outdoor climatic conditions.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• transport stump removal equipment to and from a work site</li> <li>• safety glasses must be worn as well as other appropriate personal protective equipment (PPE)</li> <li>• inspect a job to determine appropriate removal techniques</li> <li>• select and safely use a range of stump removal machinery and equipment</li> <li>• perform operational maintenance on stump removal machinery and equipment.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>• all species of trees and woody tree like vegetation forms.</li> </ul>
Machinery may include:	<ul style="list-style-type: none"> <li>• all machinery and equipment used in commercial stump removal.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCARB207A Perform ground based rigging

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit of competency covers the process of rigging on the ground and defines the standard required to: select and examine ropes and equipment; select and use a rigging system as directed; assist with tree operations; use established methods of rigging and communicate effectively with work crew.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to work crew engaged in the process of ground based rigging and applies to the appropriate selection and use of rigging equipment and methods. Ground based rigging work requires the application of arboricultural knowledge and skills including different techniques of rigging to raise, lower, control or redirect a load in undertaking tree pruning and /or tree removal. Some discretion and judgement is required. Ground based rigging is likely to be performed under routine supervision with periodic checking by supervisors or qualified arborists and is usually done within established routines, using documented low risk work methods and procedures and according to stringent Occupational Health and Safety (OHS) guidelines. Interactive communications within the work crew are integral to the rigging process. Equipment is used and maintained in accordance with the manufacturer's specifications. Work practices are in accordance with relevant legislation and contract requirements. This unit does not cover crane operations.</p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assist in the preparation of the work site	1.1.Assistance is provided to confirm the location of worksite and location of the correct tree as per the scope of works. 1.2.Required site permits and licences are obtained. 1.3.Assistance is provided to a qualified arborist in the inspection of the tree for structural defects. 1.4.Site hazards are identified; risks assessed and reported to the supervisor or qualified arborist. 1.5.The work zone is confirmed with the work crew and is monitored. 1.6.Traffic management plans for the work site are implemented as instructed.

ELEMENT	PERFORMANCE CRITERIA
2. Prepare for rigging	2.1. Rigging method is discussed by the work crew and determined by supervisor or qualified arborist. 2.2. Rigging method confirms the risk controls selected in accordance with established and documented low risk work methods. 2.3. Appropriate rigging equipment is selected as directed. 2.4. Rigging equipment is examined, assembled, installed and checked for equipment defects.
3. Perform rigging operations	3.1. Communication with the person cutting is commenced, instructions are received and appropriate responses are provided. 3.2. Appropriate knots are selected and tied as required. 3.3. Rigging system and environmental conditions are monitored. 3.4. Rigging is adjusted as instructed. 3.5. Load is controlled and raised, lowered or re-directed as instructed. 3.6. Load is disconnected from the rigging system and rigging equipment is checked. 3.7. The appropriate component of the rigging system is returned to the person cutting.
4. Complete rigging operations	4.1. The load is removed from the drop zone. 4.2. Rigging operations are completed as per scope of works. 4.3. Tools, equipment and machinery are cleaned, checked, and replaced if faulty or worn, and stored.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- technical skills sufficient to:
  - identify, use and maintain rigging equipment and devices on the ground
  - examine equipment before and during use and identify problems, defects and



**REQUIRED SKILLS AND KNOWLEDGE**

- faults
- select rigging equipment as directed
  - assemble a range of rigging equipment
  - safely operate and maintain rigging equipment
  - carry out rigging operations appropriate to site conditions
  - identify unsafe rigging practices
  - understand equipment terminology and names
  - select and tie essential knots required for rigging
  - operate lowering devices as required
  - practice rescue techniques
  - store and maintain rigging equipment
  - install a rope in a tree.
  - communication skills sufficient to:
    - use and respond to appropriate communication and interpersonal techniques and methods with colleagues and others; and,
    - use voice, hand and whistle signals with other operators to maintain effective and low risk rigging operations
    - report information about problems, defects and faults.
  - literacy skills sufficient to:
    - accurately locate and report information;
    - interpret written text material; and,
    - interpret, apply and convey information in written, diagrammatic and/or verbal form.
  - spatial skills sufficient to:
    - estimate distances and dimensions of trees and equipment
    - estimate the centre of gravity for balancing a load
    - estimate areas for safe work zones.
  - numeracy skills to:
    - understand and recognise numerical terms of equipment breaking strains, safe working loads, manufacturer's specifications and labeling
    - use basic geometry to measure distances and dimensions
  - problem solving skills sufficient to:
    - identify work requirements;
    - identifying any faults in tools, equipment or materials
    - recognise own limitations in identifying problems in conditions and trees for rigging
    - demonstrate appropriate response procedures following identification of problems; and, provide alternative rigging solutions
    - apply low risk work practices including the use of personal and protective

## REQUIRED SKILLS AND KNOWLEDGE

- equipment and control of hazards
  - identify hazards, assess risk and report to supervisor.
- teamwork skills sufficient to:
  - use communications to complete complex tasks efficiently and safely
  - coordinate own work with others to action tasks;
  - to relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- the ability to comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for rigging.

### Required knowledge

- organisational and site standards, requirements, policies and procedures for rigging
- types and purposes of a range of rigging equipment and devices
- the use, operation and maintenance of rigging equipment in accordance with the manufacturer's specifications and recommendations
- common problems with rigging and their potential consequences and solutions
- established communication and management channels and protocols
- the recognition of structural defects in trees
- methods of using and operational principles and limitations of friction devices
- procedures for recording and reporting workplace information
- appropriate mathematical procedures for estimating and measuring
- common rigging hazards
- basic physics for load distribution, gravity, heat, potential and kinetic energy, mass, force and leverage
- basic knowledge and understanding of applicable standards and Code of Practice relevant to the full range of processes for rigging
- environmental protection requirements
- basic anatomy, physiology and nomenclature of trees
- safe working load of rigging equipment
- awareness of breaking strength, safety factor and cycles to failure
- signals and communication systems
- first aid and rescue procedures
- use of personal protection equipment.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select and examine ropes and equipment;</li> <li>• select and use a rigging system as directed;</li> <li>• assist with tree operations;</li> <li>• use established methods of rigging</li> <li>• communicate effectively with work crew.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some work sites may differ due to the regional or enterprise circumstances. There is an industry expectation for refresher training and assessment.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Tree may include:	<ul style="list-style-type: none"> <li>• the range of tree species that are: <ul style="list-style-type: none"> <li>• hardwood</li> <li>• softwood</li> <li>• palms and palm-like</li> </ul> </li> <li>• trees that are: <ul style="list-style-type: none"> <li>• alive</li> <li>• dead</li> <li>• single or multi-stemmed</li> <li>• leaning or straight.</li> </ul> </li> </ul>
Structural defects may include:	<ul style="list-style-type: none"> <li>• cracks</li> <li>• splits</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• cavities</li> <li>• decay and inclusions.</li> </ul>
Site hazards may include:	<ul style="list-style-type: none"> <li>• aspects of terrain such as:               <ul style="list-style-type: none"> <li>• ground slope</li> <li>• uneven/unstable surfaces</li> <li>• high risk trees and tree parts</li> <li>• tree species characteristics</li> <li>• lean of tree</li> <li>• canopy attributes</li> <li>• overhead and underground services</li> <li>• adjacent objects such as infrastructure</li> <li>• existing vegetation such as ground vegetation density</li> </ul> </li> <li>• excavations</li> <li>• traffic</li> <li>• hazardous materials</li> <li>• fires</li> <li>• insects and animals</li> <li>• other personnel and machinery.</li> </ul>
Work zone may include:	<ul style="list-style-type: none"> <li>• the exclusion zone</li> <li>• safe drop zone</li> <li>• safe fall zone</li> <li>• traffic management zone</li> <li>• asset management zone area under the load</li> <li>• the area that the load is directed to.</li> </ul>
Traffic may include:	<ul style="list-style-type: none"> <li>• pedestrian</li> <li>• vehicle.</li> </ul>
Rigging method may include:	<ul style="list-style-type: none"> <li>• simple rope</li> <li>• taut line</li> <li>• speed line</li> <li>• tag-pull line</li> <li>• lowering</li> <li>• raising</li> <li>• cradling</li> <li>• tip or butt lowering</li> <li>• false crotch.</li> </ul>
Rigging equipment may include:	<ul style="list-style-type: none"> <li>• ropes, including aspects of rope such as:               <ul style="list-style-type: none"> <li>• materials</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• construction</li> <li>• diameter</li> <li>• limits</li> <li>• terminations</li> <li>• karabiners</li> <li>• pulleys</li> <li>• slings</li> <li>• shackles</li> <li>• rapids.</li> <li>• Slings may be:               <ul style="list-style-type: none"> <li>• spliced, sewn or swaged; and may be adjustable, continuous or fixed length.</li> </ul> </li> <li>• Slinging configurations could include choke or basket.</li> </ul>
Equipment defects may include:	<ul style="list-style-type: none"> <li>• signs of wear, melting, burning, stretching, cracking, incompatibility, overload failure, or equipment that is cut, bent, broken or faulty.</li> </ul>
Communication may include:	<ul style="list-style-type: none"> <li>• voice communications</li> <li>• whistles</li> <li>• hand signals.</li> </ul>
Knots may include:	<ul style="list-style-type: none"> <li>• bowline</li> <li>• running bowline</li> <li>• bowline on a bight</li> <li>• blood knot</li> <li>• tautline</li> <li>• sheet bend</li> <li>• Prussik</li> <li>• figure 8</li> <li>• friction</li> <li>• alpine</li> <li>• timber hitch</li> <li>• clove hitch</li> <li>• half hitch.</li> </ul>
Rigging system includes:	<ul style="list-style-type: none"> <li>• the assembly of all the component parts of rigging equipment. This may include mechanical advantage and friction from tree or friction devices or other fixed objects.</li> </ul>
Environmental conditions may include:	<ul style="list-style-type: none"> <li>• the range of variations in weather such as wind speed and direction.</li> </ul>

<b>RANGE STATEMENT</b>	
Load may include:	<ul style="list-style-type: none"> <li>• tree</li> <li>• tree parts</li> <li>• rigging equipment</li> <li>• tools.</li> </ul>
Disconnected may include:	<ul style="list-style-type: none"> <li>• the method of removing the rigging such as un-clipped, untied, unscrewed, unshackled or un-hitched.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Arboriculture
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCARB301A Implement a tree maintenance program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the work undertaken to implement a tree maintenance program and describes the standard to: determine the annual maintenance requirements for trees; prepare a comprehensive tree maintenance program; apply a range of tree maintenance techniques; monitor and review the maintenance program over the course of a season.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the application of extensive arboricultural knowledge and a broad range of arboricultural skills.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Contribute to a tree assessment	<p>1.1.Site assessment is undertaken to identify conditions which may impact upon the health and vigour of the tree.</p> <p>1.2. Stress inducing factors are identified according to published characteristics of the species.</p> <p>1.3.Specimens of stressed material are collected to enable diagnosis of stress according to enterprise guidelines.</p> <p>1.4.Environmental issues that could affect the health and vigour of the tree are assessed for impact on growth according to published data and species characteristics.</p> <p>1.5.Information relating to the tree assessment is recorded and reported according to enterprise guidelines.</p>
2. Prepare to undertake a treatment program	<p>2.1.Treatment program is interpreted and confirmed with management.</p> <p>2.2.Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>2.3.Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p> <p>2.4.Treatment methods and equipment are selected according to published data and enterprise guidelines.</p> <p>2.5.Environmental implications of undertaking the treatment program are identified, likely outcomes assessed and, if necessary, responsible action taken.</p>



ELEMENT	PERFORMANCE CRITERIA
3. Undertake a treatment program	<p>3.1. Equipment is prepared and used according to enterprise guidelines, OHS requirements and with due regard for environmental implications.</p> <p>3.2. Physical and/or chemical treatments are undertaken according to treatment program specifications, OHS requirements, and with due regard for environmental implications.</p> <p>3.3. Growing environment is maintained according to the needs of the species.</p>
4. Complete treatment program activities	<p>4.1. Infected plant material is disposed of according to enterprise hygiene guidelines.</p> <p>4.2. Equipment is sterilised in accordance with enterprise hygiene guidelines.</p> <p>4.3. Physical and/or chemical treatments are followed up according to treatment program specifications and/or manufacturers recommendation.</p> <p>4.4. Timetables for follow up treatments are determined and communicated as per enterprise guidelines.</p> <p>4.5. Records are maintained in accordance with enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- work using a variety of chemical application tools and pieces of equipment that are suitable for the task, while minimising environmental impact
- dispose of plant and equipment debris in an environmentally aware and sensitive manner, such as sorting plant and paper-based waste for recycling
- dispose of chemical substances and their containers to minimise environmental impact
- calibrate chemical application equipment
- measure quantities, area and distance and time
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks

## REQUIRED SKILLS AND KNOWLEDGE

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- the environmental implications of implementing a tree maintenance program in a range of locations such as urban, rural - farming, rural - native vegetation, seaside, and water catchment area
- AS1742 Pt 3 1985 - Australian Standard Code of Practice, Work Site Traffic Management
- industry code of practice
- identification and evaluation of structural defects in trees
- the principles of identifying pests, diseases and physiological damage to trees
- methods of attack of tree pests and diseases
- methods of analysing the nutritional status of trees
- statutory requirements relating to the use of pesticides and herbicides and the environmental implications of using chemicals
- recognition and identification of a range of tree species
- treatments and treatment methods commonly used with trees
- methods of collecting and storing specimens for identification and diagnostic tests
- methods of recording, storing and processing data.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• determine the annual maintenance requirements for trees</li> <li>• prepare a comprehensive tree maintenance program</li> <li>• apply a range of tree maintenance techniques</li> <li>• monitor and review the maintenance program over the course of a season.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The variables for this unit may include:	<ul style="list-style-type: none"> <li>• trees in amenity and urban environments.</li> </ul>
Treatment methods may include:	<ul style="list-style-type: none"> <li>• pruning</li> <li>• repair of damaged material</li> <li>• application of pesticides</li> <li>• application of fertilizers</li> <li>• treatment of soil</li> <li>• reducing compaction/improving aeration and drainage.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Arboriculture
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCARB302A Conduct tree inspections

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of inspecting trees, and informing a client on general tree health and condition and defines the standard required to: act on a request to inspect a tree; perform site, equipment and administration preparations and checks; inspect trees for general condition, structural defects, damage and disease; conduct a site and tree hazard identification and risk control assessment; document the hazards identified and the risk controls selected; record findings and inform client.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the evaluation of trees for the purpose of work proposed in a local government area including parks and gardens, building and construction sites and public and private environments.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare tree inspection requirements	<p>1.1.Scope of inspection is identified in line with client-stakeholder needs and local regulations.</p> <p>1.2.All requirements for inspection are identified and prepared.</p> <p>1.3.Methods and forms for recording inspection are planned and available for use.</p> <p>1.4.Equipment for tree inspection and personal protection is checked, appropriate for the tree and site conditions and prepared for use.</p> <p>1.5.Traffic management requirements are documented and implemented where required.</p> <p>1.6.Environmental conditions are evaluated in relation to relevant legislation and/or regulations.</p>
2. Inspect the tree	<p>2.1.Site specific hazards are documented in appropriate risk control forms.</p> <p>2.2.Trees are inspected to determine the type, location, condition and hazard status.</p> <p>2.3.Trees are visually inspected for structural damage, defects, signs of disease and fauna.</p> <p>2.4.Branches are examined for vitality and integrity of attachment.</p> <p>2.5.Tree hazards identified and recorded in the inspection form.</p> <p>2.6.Scope of work is determined.</p> <p>2.7.Methods of work are selected and tests may be</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>conducted to confirm selections.</p> <p>2.8.Method of treatment of risk is selected and controls applied.</p> <p>2.9.Toolbox meeting record confirms work team agreement and understanding of the work methods selected.</p>
3. Record findings and advise client	<p>3.1.Site details, site and tree hazards, and risk controls are recorded in the inspection form.</p> <p>3.2.Trees identified as hazardous are recorded.</p> <p>3.3.Appropriate remedial action is recommended.</p> <p>3.4.Forms for recording inspection are completed and client-stakeholder is advised.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify a range of tree species and cultivars common to the region
- recognise tree problems and defects
- perform hazard identification and risk control assessment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- recognition of a wide range of trees common to the region
- signs of structural defects, decay, damage and stress in trees
- botany and tree physiology
- methods of low risk work
- methods of determining tree dimensions

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
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- |   |
|---|
| <ul style="list-style-type: none"> <li>• local government tree protection and preservation regulations</li> <li>• AS4373-2007 Pruning of amenity trees</li> <li>• relevant Code of Practice.</li> </ul> |
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## Evidence Guide

<b>EVIDENCE GUIDE</b>
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<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>
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<b>Overview of assessment</b>	
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<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• act on a request to inspect a tree</li> <li>• perform site, equipment and administration preparations and checks</li> <li>• inspect trees for general condition, structural defects, damage and disease</li> <li>• conduct a site and tree hazard identification and risk control assessment</li> <li>• document the hazards identified and the risk controls selected</li> <li>• record findings and inform client.</li> </ul>
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<b>Context of and specific resources for assessment</b>	<p>The candidate is to be assessed against the relevant types of systems and processes applicable in the Arboriculture sector. Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>
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## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Species may include:	<ul style="list-style-type: none"> <li>tree species and tree like vegetation forms.</li> </ul>
Inspections may include:	<ul style="list-style-type: none"> <li>tree inspections are included as a standard form for recording and reports undertaken within the fields of arboriculture and horticulture and are conducted in all areas of urban and regional settings such as residential areas and public open spaces.</li> </ul>
Reports may include:	<ul style="list-style-type: none"> <li>botanical and common names, age, health, types of defects, problems and conditions are required information for each specific tree in an inspection report.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Arboriculture
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCARB303A Implement a tree pruning program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a tree pruning program and defines the standard required to conduct tree inspections, implement pruning to AS4373-2007 pruning of amenity trees as required, assess and rectify pruning quality and record work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to an arborists engaged in implementing a tree pruning program.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Prepare for tree pruning</p>	<p>1.1. Trees are visually inspected and all branches to be removed are identified according to the pruning requirements of the program.</p> <p>1.2. Removal stages are nominated to ensure the program is undertaken without unnecessary damage to the trees.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed and suitable controls implemented.</p> <p>1.4. Pruning tools and equipment are selected and prepared according to the extent of the pruning program.</p> <p>1.5. Climbing equipment and machinery is selected, checked for damage or imperfections and prepared according to documented low risk work procedures and manufacturers specifications.</p> <p>1.6. Identification and establishment of work exclusion zone is implemented.</p>
<p>2. Implement tree pruning</p>	<p>2.1. Climbing equipment and machinery is operated according to documented low risk work procedures and manufacturers' specifications.</p> <p>2.2. Pruning cuts are implemented according to established pruning techniques and AS4373 Pruning of Amenity Trees as required.</p> <p>2.3. Program is implemented in such a way that no damage occurs to equipment, property or personnel.</p> <p>2.4. Site environmental concerns are adhered to in accordance with relevant legislation and/or regulations.</p> <p>2.5. Waste material is mechanically processed according to documented guidelines and manufacturers'</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>specifications.</p> <p>2.6. Site is cleared and cleaned according to documented guidelines.</p>
3. Assess pruning quality	<p>3.1. Trees selected for the pruning program are visually checked to ensure that the appropriate trees have been pruned to specifications.</p> <p>3.2. Stub length and pruned height are checked to ensure that they meet the pruning requirements of the program and AS4373 Pruning of amenity trees.</p> <p>3.3. Any incorrect pruning is rectified to ensure the tree is able to sustain its growth, natural habit and form.</p> <p>3.4. Completed program of pruning is recorded and communicated to management and/or the client.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- recognise common diseases, pests and nutrition deficiencies in trees
- select and inspect appropriate equipment
- operate chainsaws and pole saws
- sharpen and maintain tools required for pruning
- implement pruning techniques to AS4373 Pruning of amenity trees
- conduct operations in such a way that no damage occurs to equipment, property, environment, trees or personnel
- aerial rescue techniques
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- identification of tree species and their pruning requirements
- tree pruning techniques appropriate to the pruning requirements of the species
- principles and methods of pruning
- effect of pruning on tree growth and habit
- tree morphology and physiology
- Compartmentalisation of Decay in Trees (CODIT) principles
- implications of pruning cuts and the way trees respond
- climbing or elevated work platform operations
- capability of lifting and lowering equipment
- awareness of powerline clearances
- chainsaw and polesaw techniques
- relevant legislation that may impact on a tree pruning program
- local government tree protection and preservation regulations
- AS4373-2007 Pruning of amenity trees
- relevant Code of Practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- conduct tree inspections
- implement pruning to AS4373-2007 Pruning of amenity trees
- assess and rectify pruning quality
- record work activities in enterprise forms.

#### Context of and specific resources for

Competency requires the application of work practices

**EVIDENCE GUIDE**

<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Pruning techniques may include:	<ul style="list-style-type: none"> <li>• cleaning out</li> <li>• crown lifting</li> <li>• crown reduction</li> <li>• structural integrity</li> <li>• crown renewal</li> <li>• crown thinning</li> <li>• dead wooding</li> <li>• hedging</li> <li>• branch</li> <li>• epicormic and green shoot removal.</li> </ul>
Programs activities may include:	<ul style="list-style-type: none"> <li>• site inspection details</li> <li>• special instructions and/or conditions</li> <li>• OHS risks and controls</li> <li>• environmental considerations</li> <li>• pruning methods and techniques</li> <li>• tools, equipment and machinery requirements</li> <li>• access and exit details</li> <li>• personnel requirements</li> <li>• waste, organic waste and debris disposal</li> <li>• recycling and re-use opportunities.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCARB304A Fell trees with advanced techniques

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of felling trees with advanced techniques and defines the standard required to: conduct a site and tree hazard identification and risk control assessment; prepare materials and equipment to specifications; set up safe fall and exclusion zones; use low risk dismantling procedures to fell a tree; fell wind thrown and suspended trees; use documented low risk work procedures and record worksite activities according to documented guidelines.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of removal of trees of substantial height, of complex nature or in complex situations in an urban environment.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for tree removal	<p>1.1. Trees are assessed for size, structural defects, weight distribution, spread/width, wind loading and canopy.</p> <p>1.2. The fall site is assessed considering wind speed and direction, topography, safe fall zone, exclusion zone, any potential danger to the public or property, and environmental implications.</p> <p>1.3. Tools, equipment and machinery are selected according to appropriate removal methods.</p> <p>1.4. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise guidelines.</p> <p>1.5. OHS hazards are identified, risks assessed and risk controls are implemented.</p> <p>1.6. Risk controls selected determine work method to cut and drop, or use rigging techniques.</p> <p>1.7. Suitable safety equipment and Personal Protective Equipment (PPE) is selected, used and maintained.</p>
2. Coordinate site preparation	<p>2.1. A safe fall zone and exclusion zone are determined considering tree characteristics, degree of lean of tree, and site, environmental, and safety assessments.</p> <p>2.2. A planned escape route, noting debris and other potential hazards is determined.</p> <p>2.3. Fall zone and escape route are cleared and surrounding features/structures are protected from damage.</p> <p>2.4. Exclusion zone is identified, appropriate safety barriers erected and safety procedures implemented</p>

ELEMENT	PERFORMANCE CRITERIA
	and monitored.
3. Dismantle branches	<p>3.1. Weights of tree branches are ascertained so that they do not exceed the safe working limit of equipment.</p> <p>3.2. Branches are dismantled using the "cut and drop" method, or cut and lowered by ropes in accordance with accepted rigging techniques.</p> <p>3.3. Dismantling techniques are employed to ensure branches fall or are lowered safely into the determined drop zone with no damage to property and equipment, or injury to personnel.</p>
4. Dismantle tree	<p>4.1. A safety lanyard and climbing spurs are used to ascend tree to perform sectional felling.</p> <p>4.2. An elevated platform is used for access to assist sectional felling.</p> <p>4.3. Sections are cut and thrown using a directional scarf and back cut with an accepted industry method.</p> <p>4.4. Sections are cut and dropped using a horizontal cut and appropriate hinge wood.</p> <p>4.5. A pull rope is used to control fall of tree sections.</p> <p>4.6. Industry standard hitches and knots are used in rope lowering of cut tree sections.</p>
5. Fell wind thrown and suspended trees	<p>5.1. The risk potential of wind thrown or suspended tree is assessed.</p> <p>5.2. Safe work methods which apply to the removal of wind thrown or suspended trees are adopted.</p> <p>5.3. Hand or power winches are used to pull out the suspended tree as necessary.</p> <p>5.4. The root system of a wind thrown tree lying on the ground is propped.</p> <p>5.5. Wind thrown tree is crosscut in correct position to reduce trunk movement and prepare it for removal.</p>
6. Complete felling operations	<p>6.1. Felled trunks and branches are crosscut and trimmed to manoeuvrable lengths ready for disposal.</p> <p>6.2. The site is cleared of trunk, branches and tree debris.</p> <p>6.3. Timber disposal methods and equipment are used in accordance with the manufacturer's specifications and documented low risk work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify site and tree hazards and assess and control risk
- select low risk tree removal methods
- interpret felling plans, work procedure documents, and survey symbols and information
- select and tie appropriate knots
- use advanced climbing, rope handling and rigging techniques or an EWP
- calculate tree dimensions, angles of direction, mass of tree section and balance of load
- coordinate and sequence the work team activities
- use personal protection equipment
- rescue techniques
- operate lowering devices where required by low risk work method statements
- operate elevated work platforms where required by low risk work method statements
- operate a chainsaw
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- safe tree removal methods based on results of tree, site and safety assessments
- maintenance, operation and Safe Working Loads of the tools, equipment and machinery required for given removal methods
- safe working practices for chainsaw operation
- safety procedures and potential hazards for working safely in the amenity tree industry
- emergency and first aid procedures
- environmental implications of tree removal, including National, State and local legislation and/or regulations
- natural heritage, cultural heritage and community use issues that impact on tree removal programs

**REQUIRED SKILLS AND KNOWLEDGE**

- principles and methods of inspecting trees to identify structural defects.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- conduct a site and tree hazard identification and risk control assessment
- prepare materials and equipment to specifications
- set up safe fall and exclusion zones
- use low risk dismantling procedures to fell a tree
- fell wind thrown and suspended trees
- use documented low risk work procedures
- record worksite activities according to documented guidelines.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Removal methods may include:	<ul style="list-style-type: none"> <li>• felling</li> <li>• dismantling.</li> </ul>
Impacting factors may include:	<ul style="list-style-type: none"> <li>• site and location plans</li> <li>• site assessment details</li> <li>• tree characteristics</li> <li>• special instructions and/or conditions</li> <li>• Occupational Health and Safety (OHS) risks and controls</li> <li>• environmental considerations</li> <li>• removal methods and techniques</li> <li>• tools, equipment and machinery requirements</li> <li>• access and exit details</li> <li>• personnel requirements</li> <li>• waste, organic waste and debris disposal</li> <li>• recycling and re-use guidelines</li> <li>• traffic control and management.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCARB305A Remove trees in confined spaces

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of removing trees in confined spaces and in difficult/hazardous circumstances and defines the standard required to: conduct a site and tree hazard identification and risk control assessment; safely climb, ascend and descend a tree; dismantle a tree according to industry practice; use appropriate methods of rigging tree sections for load and balance; and coordinate dismantling operation with team members.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to arborists engaged in the process of removing trees in confined spaces and in difficult and hazardous circumstances and applies to appropriate selection of removal method and safe removal where clear felling techniques are not applicable.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for tree removal	<p>1.1.Site and tree hazards are identified, risks assessed and suitable controls implemented.</p> <p>1.2.Tree is inspected to ensure the appropriate removal method is planned that confirms the risk controls selected and is in accordance with the documented low risk work methods.</p> <p>1.3.Access to site is determined and approved by owner/site management.</p> <p>1.4.Site preparations include notification of local residents and authorities where necessary.</p> <p>1.5.Signage, barriers, warning devices and traffic management equipment are erected as necessary.</p> <p>1.6.The drop zone is determined and communicated to all personnel.</p> <p>1.7.Assets, property and vegetation related to work zone activities are protected, relocated, and/or secured from potential damage during tree removal.</p> <p>1.8.Tools, equipment and machinery necessary to implement tree removal are selected, prepared, checked and used according to documented guidelines and manufacturer recommendations.</p>
2. Implement dismantling of trees	<p>2.1.Suspended, wind thrown or damaged trees are stabilised to ensure trunk movement does not occur, and are brought down safely and efficiently according to documented low risk work methods.</p> <p>2.2.Mass of tree sections is calculated and does not</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>exceed the safe working limit of equipment.</p> <p>2.3.Branches and trunk sections are dismantled using the 'cut and drop' method, and cut and lowered by ropes and other lowering devices according to documented low risk work methods.</p> <p>2.4.Dismantling techniques are employed to ensure branches and trunk sections fall or are lowered safely into the determined drop zone, with no damage to property and equipment or injury to personnel.</p> <p>2.5.Direction felling techniques are employed to ensure trunk of dismantled tree falls safely into the determined drop zone with no damage to property and equipment or injury to personnel.</p> <p>2.6.Friction devices are used and controlled where required by documented low risk work methods.</p> <p>2.7.Elevated work platforms are used and controlled where required by documented low risk work methods.</p>
3. Complete tree removal	<p>3.1.Felled trunks are trimmed to manoeuvrable lengths without injury to the operator.</p> <p>3.2.Sufficient material is removed from the stump to prevent re-growth and/or the stump is treated to prevent regrowth.</p> <p>3.3.Plant material and debris is processed and removed from site according to documented guidelines.</p> <p>3.4.Tools, equipment and machinery are cleaned, checked, replaced if faulty or worn, and stored according to documented guidelines and manufacturer recommendations.</p> <p>3.5.Completed tree removal is recorded and communicated to management and/or the client.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify site and tree hazards and assess and control risk

## REQUIRED SKILLS AND KNOWLEDGE

- select low risk tree removal methods
- select and tie appropriate knots
- use advanced climbing, rope handling and rigging techniques
- calculate tree dimensions, mass of tree section and balance of load
- coordinate and sequence the work team activities
- use personal protective equipment (PPE)
- rescue techniques
- operate lowering devices where required by enterprise guidelines
- operate elevated work platforms where required by enterprise guidelines
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- identification and evaluation of structural defects in trees
- safe working limit of all climbing, rigging and lowering equipment
- methods of estimation of mass and balance of load
- density of tree sections
- methods of lowering including friction devices
- awareness of the impact of force, breaking strength, safety factor and cycles to failure
- first aid and rescue procedures
- methods minimising environmental impact
- legislation and local regulations governing tree removal
- relevant codes of practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• conduct a site and tree hazard identification and risk control assessment</li> <li>• safely climb, ascend and descend a tree</li> <li>• dismantle a tree according to industry practice</li> <li>• use appropriate methods of rigging tree sections for load and balance</li> <li>• coordinate dismantling operation with team members.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Dismantling may involve:	<ul style="list-style-type: none"> <li>• the use of elevated platforms or tree climbers</li> <li>• cutting sections of branches and trunks and throwing them into a drop zone</li> <li>• lowering branches and trunk sections to ground level using ropes</li> <li>• NB: tree dismantling may be employed where a tree is too high or wide, or directly above a target.</li> </ul>
Felling may be employed where:	<ul style="list-style-type: none"> <li>• a tree can be felled without damaging or getting hung up in another tree</li> <li>• causing damage to a target (e.g. a building)</li> <li>• in a confined situation this may entail the rigging of 'head' and 'stay' ropes to keep positive control of the felled tree and to ensure</li> </ul>

**RANGE STATEMENT**

	it lands into its designated drop zone.
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**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCARB306A Undertake aerial rescue

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of aerial rescue where an injured or unconscious person is safely brought to the ground from a tree or aerial lift and defines the standard required to: carry out preparation for an aerial rescue; assess and respond to an aerial emergency situation; evaluate the need for additional or specialist assistance; carry out the required aerial rescue or response to an aerial emergency; use a dedicated rescue kit for an aerial rescue; implement the documented rescue plan and implement appropriate post incident responses.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to arborists preparing and planning for the coordination and execution of rescue operations and the implementation of safety and first aid requirements covering hazard identification, basic first aid and emergency procedures, tree climbing and aerial rescue techniques. Aerial rescue is likely to be undertaken in emergency situations with little or no supervision.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan for aerial rescue	<p>1.1. Rescue equipment and first aid kit are checked to ensure they are complete and placed within easy access.</p> <p>1.2. Suitable safety equipment, dedicated rescue kit and Personal Protective Equipment (PPE) are selected and checked.</p> <p>1.3. Emergency communication system used to summon emergency services is checked according to manufacturer's specifications and enterprise work procedures.</p> <p>1.4. Documented rescue plan is confirmed and clarified with work team prior to work being undertaken.</p>
2. Assess and respond to an aerial emergency situation	<p>2.1. Casualty response is determined.</p> <p>2.2. Emergency plan is activated and assistance requested from work team and/or public according to documented rescue plan.</p> <p>2.3. Hazards associated with the rescue are identified, risks assessed and suitable controls implemented.</p> <p>2.4. Appropriate access equipment to affect rescue is used according to rescue plan.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Assess nature of injury	3.1. Casualty and rescuer are safely secured according to enterprise standards. 3.2. Injuries are assessed to determine whether or not to move casualty based on standard first aid procedures and risk assessment. 3.3. Casualty with possible neck or spinal injuries is supported (but not moved) to await expert medical treatment. 3.4. First aid able to be performed above ground is applied, as required, in line with standard procedures. 3.5. Instructions to ground staff and climbers are communicated clearly and concisely.
4. Lower casualty to ground	4.1. Casualty is prepared for descent according to first aid and risk assessments. 4.2. Casualty is lowered safely to the ground with support of rescuer.
5. Complete rescue operations	5.1. First aid is applied on the ground according to need. 5.2. Emergency assistance is obtained as per rescue plan. 5.3. Records of aerial rescue are maintained in the appropriate format.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- coordinate work group, equipment and own activities to sequentially and effectively complete rescue operations safely
- apply rigging and rope handling techniques in aerial rescue operations
- apply tree climbing techniques necessary for aerial rescue operations
- administer first aid to injured climbers
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required

## REQUIRED SKILLS AND KNOWLEDGE

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- senior First Aid Certificate or equivalent
- safety ropes and equipment
- dealing with electrical emergencies
- operational hazards of tree work
- relevant industry codes of practice
- principles of hazard and risk analysis
- statutory requirements relating to Occupational Health and Safety (OHS) records (Incident Notification) required for rescue operations
- selected Australian Standards.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out preparation for an aerial rescue
- assess and respond to an aerial emergency situation
- evaluate the need for additional or specialist assistance
- carry out the required aerial rescue or response to an aerial emergency
- use a dedicated rescue kit for an aerial rescue
- implement the documented rescue plan
- implement appropriate post incident responses.



**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Aerial rescue may include:

- rescue, safety and emergency communications
- equipment and standard operating procedures for dealing with hazards
- personal safety.

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCARB307A Undertake complex tree climbing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers tree climbing and rigging associated with tree operations such as tree pruning and tree removal in complex situations and defines the standard required to: carry out and record pre-operational and safety checks; conduct a site and tree hazard identification and risk control assessment; inspect a tree and determine safest and best work method using risk controls established; select, inspect and prepare ropes, harnesses and other equipment associated with climbing trees; safely climb/ascend and descend large, hazardous and complex trees using a number of anchor points; climb using documented low risk work methods; inspect for faults and store ropes, harnesses and other climbing and safety equipment and replace if worn or faulty; practice an aerial rescue and document the hazards identified and the risk controls selected.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to advanced techniques used to climb trees in arboriculture and applies to a climbing arborist.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for climbing and tree operations	1.1. Team members are informed of their role and duties in the climbing and tree operations. 1.2. Ropes are selected according to industry specifications and required tree works. 1.3. Ropes are assessed prior to use with damaged and faulty ropes discarded according to enterprise policy. 1.4. Appropriate climbing tools and equipment are selected. 1.5. Ropes, tools and equipment are checked. 1.6. Tree is inspected for safe ascension route.
2. Ascend and descend from trees	2.1. Occupational Health and Safety (OHS) hazards are identified risks assessed and appropriate controls are documented and implemented. 2.2. Personal protective and safety equipment is used and adjusted. 2.3. Trees are ascended using appropriate techniques and equipment. 2.4. Safe anchor points are selected according to strength

ELEMENT	PERFORMANCE CRITERIA
	<p>and suitability requirements.</p> <p>2.5. Tree is descended in a controlled manner according to industry practice.</p>
3. Undertake tree operations	<p>3.1. Required tree operations are carried out according to treatment plans, work procedures and rigging techniques.</p> <p>3.2. Load is balanced, tensioned and lowered in a staged controlled manner using appropriate crane points according to safe work practices, branch weight and rope characteristics.</p> <p>3.3. Staff are communicated with during operations, as required, verbally and by hand signals.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- climb trees and use twin ropes
- select and inspect appropriate equipment
- select and tie a wide range of knots
- select low risk anchor points
- apply a range of tree treatments
- attach and use rigging equipment
- balance and tension a load
- operate chainsaws and pole-saws
- perform aerial rescue techniques
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- identification of tree species and their pruning requirements
- tree pruning techniques appropriate to the pruning requirements of the species
- tree morphology, physiology and Compartmentalisation of Decay in Trees (CODIT) principles
- advanced tree climbing practices and principles including the use of Personal Protective Equipment (PPE) and secondary attachments
- types, uses and safe working limit of ropes and all other equipment
- impact of force under normal/failure conditions
- capability of lifting and lowering equipment
- Safe Working Loads (SWL) relationship between Breaking Strength (BS), Safety Factor (SF), Working Load Limit (WLL) and Cycles to Failure (CTF)
- awareness of power line clearances
- first aid and rescue procedures applicable to tree work
- industry codes of practice
- a broad range of trees and treatments
- advanced chainsaw techniques
- local government tree protection and preservation regulations
- AS4373-2007 Pruning of amenity trees
- relevant Code of Practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out and record pre-operational and safety checks
- conduct a site and tree hazard identification and risk

<b>EVIDENCE GUIDE</b>	
	<p>control assessment</p> <ul style="list-style-type: none"> <li>• inspect a tree and determine safest and best work method using risk controls established</li> <li>• select, inspect and prepare ropes, harnesses and other equipment associated with climbing trees</li> <li>• safely climb, ascend and descend large, hazardous and complex trees using a number of anchor points</li> <li>• climb using documented safe work methods</li> <li>• inspect for faults and store ropes, harnesses and other climbing and safety equipment and replace if worn or faulty.</li> <li>• document the hazards identified and the risk controls selected.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Situations may include:	<ul style="list-style-type: none"> <li>• complex tree climbing incorporates situations made hazardous by tree branches vulnerable to failure under a load</li> <li>• trees affected by decay, disease and/or pests, trees with embedded objects such as wire, nails or spikes</li> <li>• proximity of power lines</li> <li>• adjacent property or intruding branches</li> <li>• the tree's height, size, trunk characteristics, shape and weight distribution of the crown may contribute to making conditions hazardous to a climber or a felling or trimming operation</li> <li>• inclement weather may also contribute to making working conditions difficult and hazardous.</li> </ul>

**RANGE STATEMENT**

Climbing tools and equipment may include:

- ropes
- safety harnesses
- ascending and descending devices
- ladders
- safety equipment (helmets, ear and eye protection, gloves, boots, etc.)
- pulleys and blocks
- shackles and karabiners.

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCARB308A Install cable and bracing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing cable and bracing and defines the standard to: interpret a cable and bracing plan; examine the structural integrity of tree components and install cable and bracing in a manner that achieves the intended purpose.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of installing hardware into the structure of a tree.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Read and interpret a plan for cable and bracing	1.1.Cable and bracing plan is read and understood. 1.2.Materials required for installing cable and bracing are determined from the plan and obtained with adequate lead time for the proposed work. 1.3.Tools and equipment are selected according to enterprise guidelines. 1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed and suitable controls implemented.
2. Prepare trees for cable and bracing	2.1.Branches are examined and their vitality and integrity of attachment ascertained to ensure the bracing can be safely implemented according to the provided plan. 2.2.Preliminary pruning is undertaken to aid cable and bracing installation.
3. Install cable and bracing	3.1.Planned approach to cable and bracing is communicated to other members in the work team in a clear and concise manner. 3.2.Cable and bracing is installed in line with the provided plan and enterprise guidelines. 3.3.Completed program is checked for quality of work and recorded. 3.4.Further pruning is carried out to ensure the tree is able to sustain its growth and be restored to its natural habit and form.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- climb trees or operate elevated work platforms
- identify OHS hazards in relation to specific trees and situations
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- cable and bracing techniques appropriate to the tree species
- identification of tree species
- structure of trees
- tree pruning techniques appropriate to the requirements of the species
- principles and methods of pruning
- effect of pruning on tree growth and habit
- tree anatomy and physiology
- Compartmentalisation of Decay in Trees (CODIT) principles
- implications of pruning cuts and the way trees respond
- climbing or elevated work platform operations
- OHS issues in hazardous situations with trees
- relevant legislation that may impact on a tree pruning program
- local government tree protection and preservation regulations
- AS4373-2007 Pruning of amenity trees
- relevant Code of Practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret a cable and bracing plan</li> <li>• examine the structural integrity of tree components</li> <li>• install cable and bracing in a manner that achieves the intended purpose.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Cable and bracing may include:	<ul style="list-style-type: none"> <li>• cable and bracing plans</li> <li>• a wide range of tree hardware</li> <li>• methods that cause minimal stress to the tree in accordance with the principles of compartmentalisation of decay in trees</li> <li>• pruning requirements</li> <li>• appropriate tools and equipment</li> <li>• OHS requirement and</li> <li>• any legislation or regulations that may need to be observed.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCARB309A Implement a tree protection program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the work undertaken to implement a tree protection program and defines the standard required to: determine the protection requirements of trees consistent with recognised industry practice; construct protective devices appropriate to the needs of the tree and site restrictions: comply with public safety and environmental guidelines on completion of tree protection activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the recognition of the need for tree protection and the construction or installation of protective devices.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine the implementation requirements of the tree protection program	<p>1.1. Trees to be protected, reason for protection and type of protection methods are identified according to the tree protection plan and enterprise work procedures.</p> <p>1.2. Any Occupational Health and Safety (OHS) controls necessary to ensure the safety of operators, the public and property throughout the tree protection program are identified and taken into account during implementation planning.</p> <p>1.3. Any environmental implications of the tree protection program are assessed and taken into account during implementation planning.</p> <p>1.4. Resources required to implement the tree protection program are identified from the plan, and availability confirmed with relevant personnel or suppliers.</p> <p>1.5. Implementation tasks are determined, scheduled, tasks allocated, and allowance made for contingencies.</p> <p>1.6. Information relating to the implementation of the tree protection program is communicated to appropriate personnel in accordance with enterprise guidelines.</p>
2. Make site preparations	<p>2.1. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p> <p>2.2. Location of protection areas are marked out on the site according to protection plan and specifications.</p> <p>2.3. Safety barriers and signage are erected around holes, other disturbed surfaces and hazardous areas during and between work periods to ensure public and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>operator safety.</p> <p>2.4.Pre-operational and safety checks are carried out on all tools, equipment and materials with defective, faulty or out-of-standard components discarded and replaced.</p>
3. Construct protective devices	<p>3.1.Tools, equipment and materials appropriate to the task are used according to enterprise work procedures.</p> <p>3.2.Tree protection devices are constructed and/or assembled according to tree protection plan and any needs specific to the species or individual tree.</p> <p>3.3.Protection devices are installed according to enterprise work procedures and protection program.</p> <p>3.4.Completed protection devices are inspected for viability and remedial action undertaken when necessary.</p>
4. Monitor protection program	<p>4.1.Tree health is monitored during the protection program and remedial action taken to ensure the health and vigour of the tree is maintained.</p> <p>4.2.Protection devices are periodically checked for their effectiveness according to protection plan requirements.</p> <p>4.3.Broken, damaged or ineffective components are reported and/or repaired according to enterprise guidelines.</p> <p>4.4.Damaged trees are repaired and/or replaced according to protection plan requirements.</p> <p>4.5.Protection devices are dismantled and removed according to protection plan requirements.</p> <p>4.6.Tools and equipment are cleaned, maintained and stored consistent with enterprise guidelines.</p> <p>4.7.Records are maintained in accordance with enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.



## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- build protection devices
- recognise healthy/stressed and damaged trees
- participate in a team working situation
- work in chemical, toxic or hazardous areas
- dispose of chemical substances and their containers to minimise environmental impact
- disposal of plant and equipment debris in an environmentally aware and sensitive manner, such as sorting plant and paper-based waste for recycling
- minimise noise, dust, high activity vehicle traffic and water run-off to prevent nuisance-level environmental disturbance
- construct and install protection devices
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- protection requirements in relation to tree species, position, location and potential threats
- principles of evaluating the effect of damage to trees during construction programs
- environmental factors that may affect individual and plantation trees
- improvements to tree health that can be achieved through modifying environmental influences
- principles, regulations and practices relating to restricting access
- AS4373-2007 Pruning of amenity trees
- AS1742 Pt 3 1985 - Australian Standard Code of Practice, Work Site Traffic Management
- industry codes of practice
- specifications and construction methods when installing protection devices
- local tree protection and preservation regulations
- relevant Code of Practice.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the protection requirements of trees consistent with recognised industry practice</li> <li>• construct protective devices appropriate to the needs of the tree and site restrictions</li> <li>• comply with public safety and environmental guidelines on completion of tree protection activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Protection methods may include installation of:	<ul style="list-style-type: none"> <li>• fences</li> <li>• tree guards</li> <li>• tree plantings</li> <li>• barriers</li> <li>• retaining walls and soil coverings</li> <li>• erection of signs and bunting</li> <li>• traffic re-direction.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCARB310A Perform aerial rigging

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the process of rigging and defines the standard required to: design and implement a rigging system; use established and documented methods of rigging; perform rigging operations and communicate effectively with work crew.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to climbing Arborists and elevated work platform Arborists engaged in the process of rigging and applies to the appropriate selection and use of rigging equipment and methods. Aerial rigging work requires the application of extensive arboricultural knowledge and skills including different techniques of rigging to raise, lower, control or redirect a load in undertaking tree pruning and /or tree removal. Discretion and judgement is required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare work site	1.1.The location of worksite and location of the correct tree is confirmed as per the scope of works. 1.2.Required site permits and licences are obtained. 1.3.Tree is inspected for structural defects. 1.4.Site hazards are identified, risks assessed and suitable controls implemented. 1.5.The work zone is confirmed with the work crew and is monitored. 1.6.Traffic management plans for the work site are implemented. 1.7.Communications are initiated, received and confirmed as an ongoing process.
2. Prepare rigging	2.1.Rigging method is determined and communicated to work crew. 2.2.Rigging method confirms the risk controls selected in accordance with established and documented low risk work methods. 2.3.Appropriate rigging equipment is selected. 2.4. Rigging equipment is inspected for equipment defects assembled and installed.
3. Design the rigging system	3.1.The load limit of the rigging system is determined. 3.2.Appropriate anchor and attachment points are selected.

ELEMENT	PERFORMANCE CRITERIA
	3.3. Load and balance calculations are performed. 3.4. The impact of force under normal/failure conditions is determined and a safety factor is applied. 3.5. Rigging system is designed to allow for the load and impact of the forces. 3.6. Rigging system is communicated to work crew.
4. Perform rigging operations	4.1. Effective communications are maintained between the work crew during the sequence of the rigging process. 4.2. Rigging is attached. 4.3. Appropriate knots are used where required. 4.4. Rigging system is monitored and adjusted in accordance with environmental conditions. 4.5. Load is tensioned and tested. 4.6. Load is controlled and raised, lowered or re-directed. 4.7. The appropriate components of the rigging system are retrieved.
5. Complete tree rigging operations	5.1. Load frequency and size matches the process capacity of the ground crew. 5.2. Rigging operations are completed as per scope of works. 5.3. Tools, equipment and machinery are cleaned, checked, and replaced if faulty or worn, and stored.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- technical skills sufficient to:
  - identify, select, assemble, use and maintain a range of rigging equipment and devices in a range of contexts and conditions
  - inspect equipment before and during use and identify problems, defects and faults
  - select appropriate anchor and attachment points
  - perform tip lowering, butt lowering, horizontal lowering or unchanged lowering

**REQUIRED SKILLS AND KNOWLEDGE**

- safely operate rigging equipment
- carry out rigging operations appropriate to site conditions
- identify unsafe rigging practices
- understand equipment terminology and names
- select and tie a wide range of knots required for rigging
- operate lowering devices as required
- practice rescue techniques
- perform rigging from an elevated work platform (EWP) where an EWP is being used
- store and maintain rigging equipment
- communication skills sufficient to:
  - use and respond to appropriate communication and interpersonal techniques and methods with colleagues and others
  - use voice, hand and whistle signals with other operators to maintain effective and low risk rigging operations
  - report information about problems, defects and faults.
- literacy skills sufficient to:
  - accurately locate and report information;
  - interpret written text material; and,
  - interpret, apply and convey information in written, diagrammatic and/or verbal form.
- spatial skills sufficient to:
  - estimate distances and dimensions of trees and equipment
  - estimate the centre of gravity for balancing a load
  - estimate areas for safe work zones.
- numeracy skills to:
  - understand and recognise numerical terms of equipment breaking strains, safe working loads, manufacturer's specifications and labeling
  - use basic geometry to measure distances and dimensions
- problem solving skills sufficient to:
  - identify work requirements;
  - identifying any faults in tools, equipment or materials
  - recognise own limitations in identifying problems in conditions and trees for rigging
  - demonstrate appropriate response procedures following identification of problems; and, provide alternative rigging solutions
  - identify hazards, assess risk and implement risk controls
  - apply low risk work practices including the use of personal and protective equipment and control of hazards

## REQUIRED SKILLS AND KNOWLEDGE

- teamwork skills sufficient to:
  - use communications to complete complex tasks efficiently and safely
  - coordinate own work with others to action tasks and sequence the work team activities;
  - to relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- the ability to comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for rigging.

### Required knowledge

- organisational and site standards, requirements, policies and procedures for rigging
- types and purposes of a range of rigging equipment and devices
- the use, operation and maintenance of rigging equipment in accordance with the manufacturer's specifications and recommendations
- common problems with rigging and their potential consequences and solutions
- established communication and management channels and protocols
- identification and evaluation of structural defects in trees
- methods of using and operational principles and limitations of friction devices
- procedures for recording and reporting workplace information
- appropriate mathematical procedures for estimating and measuring
- common rigging hazards
- basic physics for load distribution, gravity, heat, potential and kinetic energy, mass, force and leverage
- knowledge and understanding of AS4373-2007 Pruning of amenity trees
- Code of Practice relevant to the full range of processes for rigging
- environmental protection requirements
- tree anatomy, physiology, nomenclature and taxonomy
- safe working load of rigging equipment
- awareness of breaking strength, safety factor and cycles to failure
- signals and communication systems
- first aid and rescue procedures
- use of personal protection equipment.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the



<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• design and implement a rigging system;</li> <li>• use established and documented methods of rigging;</li> <li>• perform rigging operations and</li> <li>• communicate effectively with work crew.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some work sites may differ due to the regional or enterprise circumstances. There is an industry expectation for refresher training and assessment.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees include:	<ul style="list-style-type: none"> <li>• hardwood</li> <li>• softwood</li> <li>• palms and palm-like</li> <li>• trees that are alive, dead, single or multi-stemmed, leaning or straight.</li> </ul>
Structural defects may include:	<ul style="list-style-type: none"> <li>• cracks</li> <li>• splits</li> <li>• cavities</li> <li>• decay</li> <li>• inclusions.</li> </ul>
Site hazards may include:	<ul style="list-style-type: none"> <li>• uneven/unstable terrain</li> <li>• high risk trees and tree parts</li> <li>• overhead and underground services</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• excavations</li> <li>• traffic</li> <li>• structures</li> <li>• hazardous materials</li> <li>• fires</li> <li>• insects and animals</li> <li>• other personnel and machinery.</li> </ul>
Traffic may include:	<ul style="list-style-type: none"> <li>• pedestrian</li> <li>• vehicle.</li> </ul>
Communication may include:	<ul style="list-style-type: none"> <li>• voice communications</li> <li>• whistles</li> <li>• hand signals.</li> </ul>
Work zone may include:	<ul style="list-style-type: none"> <li>• the exclusion zone</li> <li>• safe drop zone</li> <li>• safe fall zone</li> <li>• traffic management zone</li> <li>• asset management zone</li> <li>• the area under the load</li> <li>• the area that the load is directed to.</li> </ul>
Rigging method may include:	<ul style="list-style-type: none"> <li>• simple rope</li> <li>• taut line</li> <li>• speed line</li> <li>• tag-pull line</li> <li>• lowering</li> <li>• raising</li> <li>• cradling</li> <li>• tip or butt lowering</li> <li>• false crotch.</li> </ul>
Rigging equipment may include:	<ul style="list-style-type: none"> <li>• ropes including aspects of rope such as: <ul style="list-style-type: none"> <li>• materials</li> <li>• construction</li> <li>• diameter</li> <li>• limits</li> <li>• terminations</li> </ul> </li> <li>• karabiners</li> <li>• pulleys</li> <li>• slings</li> <li>• shackles</li> <li>• rapids.</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• Slings may be:               <ul style="list-style-type: none"> <li>• spliced</li> <li>• sewn</li> <li>• swaged</li> <li>• adjustable</li> <li>• continuous</li> <li>• fixed length.</li> </ul> </li> <li>• Slinging configurations could include choke or basket.</li> </ul>
Equipment defects may include:	<ul style="list-style-type: none"> <li>• signs of:               <ul style="list-style-type: none"> <li>• wear</li> <li>• melting</li> <li>• burning</li> <li>• stretching</li> <li>• cracking</li> <li>• incompatibility</li> <li>• overload failure</li> </ul> </li> <li>• equipment that is:               <ul style="list-style-type: none"> <li>• cut</li> <li>• bent</li> <li>• broken</li> <li>• faulty.</li> </ul> </li> </ul>
Rigging system includes:	<ul style="list-style-type: none"> <li>• the assembly of all the component parts of rigging equipment. This may include mechanical advantage and friction from tree or friction devices or other fixed objects.</li> </ul>
Anchor and attachment points may include:	<ul style="list-style-type: none"> <li>• a fork</li> <li>• a false crotch made from a sling and pulley</li> <li>• a cambium saver.</li> </ul>
Load may include:	<ul style="list-style-type: none"> <li>• tree</li> <li>• tree parts</li> <li>• rigging equipment or tools.</li> </ul>
Knots may include:	<ul style="list-style-type: none"> <li>• bowline</li> <li>• running bowline</li> <li>• bowline on a bight</li> <li>• blood knot</li> <li>• tautline</li> <li>• sheet bend</li> <li>• Prussik</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• figure 8</li> <li>• friction</li> <li>• alpine</li> <li>• timber hitch</li> <li>• clove hitch</li> <li>• half hitch.</li> </ul>
Environmental conditions may include:	<ul style="list-style-type: none"> <li>• the range of variations in weather such as wind speed and direction.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	Arboriculture
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## AHCARB501A Assess trees

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assessing trees to make recommendations on tree health and condition and defines the standard required to consult with clients and provide a service to assess the health of trees; inspect and assess trees for general condition and diseases; diagnose and determine treatment protocols; record assessment data; assess trees for identification of defects and assess risk of harm; document data and recommendations in an assessment report; and maintain assessment data records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the job role of a consulting arborist in the provision of professional services in evaluation of tree pathology and structural tree problems in a wide range of amenity trees and sites in urban and regional settings and to the production of professional documentation to inform and advise a client.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine tree survey program requirements	<p>1.1.Scope of survey is identified in line with client needs and statutory requirements.</p> <p>1.2.All current data research relevant to survey requirements is identified, sourced and recorded.</p> <p>1.3.Processes for data capture are documented.</p> <p>1.4.Methods of recording assessment data are prepared.</p> <p>1.5.Equipment for tree assessment is checked and prepared for use.</p>
2. Inspect and assess trees	<p>2.1.Trees are assessed to determine their identification, location, health, growth habit, structure and stability.</p> <p>2.2.Consideration is given to the tree's age, condition, habitats, wind loading, distribution of foliage, wound size and potential impacts of proposed recommendations.</p> <p>2.3.Tree locations are identified from a plan according to the size and extent of the project and according to common industry practice.</p> <p>2.4.Testing equipment is used, where required, to determine age, decay, disease and scope of tree problems.</p> <p>2.5.Individual trees are assessed and, where required, their value calculated and recorded.</p> <p>2.6.Observed indications of disease are diagnosed and results recorded.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Assess risk of harm	3.1. Trees are assessed to determine their identification of defects. 3.2. Trees are assessed to determine their risk potential and suitable controls are recommended to the client or organisation. 3.3. Hazardous trees are assessed to determine their risk of harm. 3.4. Risk controls are documented and recommended to the client or organisation.
4. Compile a tree assessment report	4.1. Diagnosis of any tree problem relevant to the scope of survey is documented. 4.2. Specific recommendations of remedial action for tree problems are provided and recorded. 4.3. Identification of hazardous trees, recommendations for appropriate remedial actions and appropriate risk controls are recommended and documented, and applied. 4.4. Tree assessment report incorporates all relevant data from the survey in line with client needs. 4.5. Survey and assessment data are stored and maintained as part of professional practice. 4.6. Client is informed and advised of the content and implications of the report and a copy is presented.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify trees
- locate trees from a survey plan
- assess tree health, identify defects, structural issues
- assess individual trees and groups of trees
- identify hazards and assess risk potential
- assess the risk of harm associated with a tree
- diagnose diseases and health issues
- use testing equipment

## REQUIRED SKILLS AND KNOWLEDGE

- analyse assessment and testing results
- determine management/treatment protocols
- exhibit professional work practices
- capture assessment data
- maintain data records
- value trees
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- identification of a wide range of trees common within the region
- methods of tree assessment, including the visual tree assessment (VTA) method
- methods for the detection of decay and structural defects in trees
- causes of instability, decay, damage and stress in trees
- interpretation of results from assessment and testing
- tree physiology and pathology
- principles of tree selection
- methods of tree protection
- methods of determining tree heights
- application of current tree valuation formulae
- provision of expert witness statements
- legal requirements relating to development and existing structures
- local tree protection and preservation laws
- low risk arboricultural work practices
- AS 4373-2007 Pruning of amenity trees
- relevant codes of practice.

## Evidence Guide

### EVIDENCE GUIDE



<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• consult with clients and provide a service to assess the health of trees</li> <li>• inspect and assess trees for general condition and diseases</li> <li>• diagnose and determine treatment protocols</li> <li>• record assessment data</li> <li>• assess trees for identification of defects and assess risk of harm</li> <li>• document data and recommendations in an assessment report</li> <li>• maintain assessment data records.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>• all species of trees and woody tree-like vegetation forms.</li> </ul>
Assessment may include:	<ul style="list-style-type: none"> <li>• forensic investigation and analysis of data and observation resulting in a judgment.</li> </ul>
Assessment reports may include:	<ul style="list-style-type: none"> <li>• visual tree assessments (VTA)</li> <li>• tree audits</li> <li>• development applications</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• health assessment</li> <li>• management reports</li> <li>• biodiversity assessments</li> <li>• expert witness statements.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCARB502A Identify, select and specify trees

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of identifying, selecting and specifying trees and defines the standard required to: inspect and identify an extensive range of trees; determine the suitability of a tree for a purpose; evaluate and document the selection of trees; specification of replacement tree plantings; monitor and record quality control of selections; document a report of the identification, evaluation and specification process.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to a wide range of applications in urban and regional areas and in local government and legal contexts in the specification of replacement trees in residential, commercial public open spaces and amenity areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify a tree	<p>1.1.Client is consulted and a brief developed and agreed.</p> <p>1.2.Trees are identified for the purpose of the project/client brief.</p>
2. Determine the suitability of a tree for a purpose	<p>2.1.Site inspection is undertaken according to the client brief and legislative and regulatory requirements.</p> <p>2.2.Planting area dimensions are estimated for the tree species or cultivar.</p> <p>2.3.Species and cultivar selection is appropriate to the available dimensions of the aspect and the site.</p> <p>2.4.Soil volume is proportioned to the size of tree in consideration.</p> <p>2.5.Environmental conditions are considered and applied to the functional characteristics of the tree.</p> <p>2.6.The existing soil is appraised for suitability as a growth medium appropriate to the tree species or cultivar.</p> <p>2.7.Functional life expectancy of site and plantings is determined.</p> <p>2.8.The selection of the tree is evaluated and the rationale for tree selection is documented.</p>
3. Select trees	<p>3.1.Trees are selected as per the client brief and their suitability for the intended purpose.</p> <p>3.2.Tree function is determined for the precise location within the plan.</p> <p>3.3.Recommendations are made for soil improvements</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>in accordance with the tree species selected.</p> <p>3.4. Species and cultivars are matched appropriately to the determined selection criteria for species specific characteristics.</p> <p>3.5. Tree species or cultivars for replacement or new plantings are recommended.</p> <p>3.6. Tree selections, selection criteria and notes on quality expectations are documented as specifications.</p>
4. Specify trees	<p>4.1. Criteria determined for size of stock selection are incorporated to the specifications.</p> <p>4.2. Selection criteria for mature trees are evaluated against capability for transplanted trees.</p> <p>4.3. Final selections are assessed against the specified soil, site location and client brief and confirmed.</p> <p>4.4. Selected plants are monitored for quality and quantities according to the specifications.</p> <p>4.5. Materials, soils and growing media are monitored for quality according to the specifications.</p> <p>4.6. Records of quality checks on delivered plants and product are documented.</p>
5. Correlate and present a report	<p>5.1. A report of the process is documented and the correlated records are incorporated.</p> <p>5.2. The client or organisation is presented with the report.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify and select an extensive range of trees common to the region
- select and appraise a wide range of soils and growing media
- conduct site inspections and site assessments
- evaluate tree selections
- use comparative techniques

## REQUIRED SKILLS AND KNOWLEDGE

- research multiple sources of reference material and taxonomic keys
- compile a database of tree specimens and characteristics
- monitor quality
- apply quality controls
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## Required knowledge

- tree identification techniques
- ethnobotany, plant morphology, physiology, taxonomy and nomenclature
- soil characteristics particularly in relation to the local region
- soils appraisal techniques
- methods of data capture
- surface hydrology
- problem-solving techniques
- methods of quality control
- symptoms of tree pests and diseases
- basic physiology and life cycle of pests and diseases
- AS4419-2003 and AS4454-2003
- specific legislation and regulations for arboriculture and development relevant Occupational Health and Safety (OHS)
- legislation and regulations.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• inspect and identify an extensive range of trees</li> <li>• determine the suitability of a tree for a purpose</li> <li>• evaluate and document the selection of trees</li> <li>• specification of replacement tree plantings</li> <li>• monitor and record quality control of selections</li> <li>• document a report of the identification, evaluation and specification process.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>• the range of all tree species and cultivars.</li> </ul>
Sources of knowledge may include:	<ul style="list-style-type: none"> <li>• reference books</li> <li>• photo collections</li> <li>• field guides</li> <li>• networking</li> <li>• internet</li> <li>• identified specimens</li> <li>• software programs</li> <li>• collaboration</li> <li>• electronic storage</li> <li>• taxonomic keys</li> <li>• drawings</li> <li>• herbarium collections</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• colleagues</li> <li>• botanical gardens and other readily available sources.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Arboriculture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCARB503A Diagnose tree diseases

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of diagnosing tree diseases (including diseases of palms and other woody monocotyledons) and defines the standard required to: describe the growing requirements and characteristics of trees; determine the impact of the growing environment on the health of a tree; determine the mode of damage; diagnose and record tree diseases; formulate disease management program including the use of Integrated Pest Management (IPM); provide a reasoned prognosis; document a management program report; monitor and recommend changes to the management program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of diagnosing tree diseases and is likely to be undertaken without supervision. Responsibility for and organisation of the work of others involved in the diagnosis and management of tree diseases may be required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess environmental impact	<p>1.1.The tree is identified to the lowest taxonomic level, and its region of origin determined.</p> <p>1.2.The seasonal growth stages of the tree are determined.</p> <p>1.3.Any regular cultural practices are identified where appropriate.</p> <p>1.4.Characteristics of the growing environment that affect the growth of a specific tree species are determined.</p> <p>1.5.Environmental and cultural factors that predispose the tree to diseases are identified.</p> <p>1.6.Relevant physical and chemical properties of the soil or growing media are determined and assessed.</p>
2. Identify diseased trees	<p>2.1.Impact of disease type on tree parts and systems is determined.</p> <p>2.2.Natural defence systems of the trees against major disease types are considered.</p> <p>2.3.Disease groups are determined according to a disease classification guide.</p> <p>2.4.Signs and symptoms of disease are used to identify</p>

ELEMENT	PERFORMANCE CRITERIA
	which trees are diseased.
3. Diagnose tree disease	<p>3.1.Symptoms and signs of disease are recorded using accepted nomenclature.</p> <p>3.2.Samples and evidence are collated into a reference collection.</p> <p>3.3.Disease type is determined according a disease classification guide.</p> <p>3.4.Identification of macro biotic disease is determined to genus level.</p> <p>3.5.Specimens are prepared for microscopic examination of micro biotic diseases.</p> <p>3.6.Specialist services are determined and consulted in complex or indeterminate cases.</p> <p>3.7.Specimens are correctly collected, packaged and dispatched for specialist diagnosis or laboratory testing where required.</p>
4. Provide a prognosis	<p>4.1.The current health and energy reserves of the tree are determined.</p> <p>4.2.The severity and extent of the disease is assessed.</p> <p>4.3.The virulence of the disease on the specific host is researched.</p> <p>4.4.The phenology of the host and the disease are determined.</p> <p>4.5.Lag time of management options is researched and considered.</p> <p>4.6.Influences of environmental conditions on host, disease and management options are considered.</p> <p>4.7.An informed prognosis is provided in writing and verbally.</p>
5. Develop, document and monitor the management program	<p>5.1.Management options are researched and appropriate options are recommended.</p> <p>5.2.A disease management program is developed within IPM guidelines.</p> <p>5.3.Tree diseases and management programs are recorded and documented in a report.</p> <p>5.4.Management plans are monitored and modified or refined as needed.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- differentiate between biotic and abiotic symptoms in trees
- research information about tree health problems, their diagnosis and remedial treatments available
- identify signs and symptoms of tree health problems
- determine possible causes of the problem
- assess the severity, extent and speed of onset of the problem
- determine the possible and probable physiological, anatomical, biochemical and physiological impact on the tree
- document management programs for the diseases diagnosed
- compile a disease reference collection
- comply with legislative requirements
- provide a reasoned prognosis
- monitor diseases on an ongoing basis
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- tree anatomy, biochemistry, physiology, histology, pathology and taxonomy
- function of the anatomical parts of the tree, palm etc
- the primary cellular and anatomical structures of the tree
- the critical systems in the tree; physiologically, anatomically and biochemically
- horticultural function, cultural and performance requirements and characteristics of the trees or other woody plants being considered
- tree nutrition issues associated with the soil or media present
- disease detection methods, taxonomic identification, life cycle stages and characteristic symptoms for the specific horticultural trees of the enterprise
- patterns of host - disease interaction for each major disease type
- chemical, cultural and biological control methods as parts of an IPM strategy
- chemical use, toxicity and compatibility with target trees, soil, and environmental

**REQUIRED SKILLS AND KNOWLEDGE**

characteristics of the horticultural region.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- describe the growing requirements and characteristics of trees
- determine the impact of the growing environment on the health of a tree
- determine the mode of damage
- diagnose and record tree diseases
- formulate disease management program including the use of IPM
- provide a reasoned prognosis
- document a management program report
- monitor and recommend changes to the management program.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>all species of trees and woody tree like vegetation forms.</li> </ul>
Disease may include;	<ul style="list-style-type: none"> <li>both biotic and abiotic diseases and their mode of impact on trees, palms and woody monocotyledons along with a variety of management protocols.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Arboriculture
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCARB504A Develop a tree protection program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing a program for the protection of trees and defines the standard required to: assess condition of trees on site; assess impacts of development on trees; determine tree protection zones; determine suitable protection methods; document arboriculture assessment report; develop a tree protection plan and guidelines; develop/document tree management guidelines.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of planning and developing a tree protection program for trees on development sites. Responsibility for, and limited organisation of the work of others in the tree protection program, may be involved. Developing tree protection programs requires a broad range of skills, and the application of extensive horticultural knowledge in areas such as tree protection.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Undertake assessment of trees on site	1.1.Relevant legislation is identified and researched. 1.2.Site is inspected. 1.3.Trees are located from site plans or working drawings to enable their identification. 1.4.Each tree in the program is assessed.
2. Provide design input	2.1.Trees are assessed for suitability for retention for the purpose of site design. 2.2.Optimal tree protection zone is determined for trees to be retained. 2.3.Design input relevant to retained trees is provided to the client or management.
3. Assess impact of development on trees	3.1.Existing plans and working drawings are interpreted. 3.2.Impact of proposed development on trees is determined. 3.3.Trees to be retained and removed are finalised and recorded.
4. Determine tree protection zones	4.1.Optimal tree protection zone is re-evaluated. 4.2.Site access and relevant logistics are assessed. 4.3.Available/actual tree protection zone is defined and



ELEMENT	PERFORMANCE CRITERIA
	<p>recorded.</p> <p>4.4. Additional remedial measures required are determined.</p>
5. Develop protection measures and advise client	<p>5.1. Appropriate protection measure techniques/systems to minimise impact are designed or developed.</p> <p>5.2. Advice on tree removal and tree pruning is provided to client or management.</p>
6. Document the relevant reports	<p>6.1. An arboriculture assessment report is prepared.</p> <p>6.2. Tree protection plans and guidelines are developed.</p> <p>6.3. Tree management guidelines are prepared and documented.</p> <p>6.4. Relevant reports, plans and guidelines are consolidated and presented to the client, management or relevant stakeholders.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify an extensive range of trees
- assess trees
- interpret plans
- determine tree protection zones
- determine suitable protection methods
- assess condition of trees on site
- assess impacts of development on trees
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- effects on trees due to permanent and temporary changes in their environment
- principles and techniques relating to the selection and implementation of protection programs
- principles of tree protection devices
- principles and methods of mechanical and chemical damage control
- principles and methods relating to protecting trees from human activities
- anatomy and physiology of trees
- diseases of trees
- development and design language
- relevant legislation that may impact on a tree pruning program \
- local government tree protection and preservation regulations
- AS4373-2007 Pruning of amenity trees
- relevant Code of Practice
- Draft AS 4970 Protection of Trees on Development sites
- requirements of Statutory authorities relevant to trees on the development site.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess condition of trees on site
- assess impacts of development on trees
- determine tree protection zones
- determine suitable protection methods
- document arboriculture assessment report
- develop a tree protection plan and guidelines

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• develop/document tree management guidelines.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>• all species of trees and woody tree like vegetation forms that require protection from chemical, environmental, physical or other threats.</li> </ul>
Protection devices may include:	<ul style="list-style-type: none"> <li>• tree guards</li> <li>• root barriers</li> <li>• other plantings</li> <li>• soil covering</li> <li>• traffic re-direction</li> <li>• barriers, bunting and flagging</li> <li>• temporary fencing, bollards and vehicle barriers.</li> </ul>
Protection program may include:	<ul style="list-style-type: none"> <li>• location and site plans</li> <li>• drawings</li> <li>• equipment requirements</li> <li>• access details</li> <li>• species requirements</li> <li>• installation and construction plans</li> <li>• maintenance requirements</li> <li>• protection methods</li> <li>• personnel requirements</li> <li>• location of services</li> <li>• work schedules</li> <li>• timeframes</li> <li>• budgets</li> <li>• debris disposal procedures</li> <li>• Occupational Health and Safety (OHS) issues.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Arboriculture
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCARB505A Document and audit tree work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of documenting and auditing tree work and defines the standard required to: identify and gather relevant documentation and standards; inspect works against documentation/legislation/standards; determine conformance and non-conformance; document inspection and feedback/recommendations; provide feedback to contractors, clients, management and stakeholders.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes of documenting and auditing the tree operations of tree pruning, removal, transplanting, planting and tree protection and the inspection and assessment of non arboricultural works that may impact on the tree or its environment. This standard relates to the process of inspection, assessment against documentation and legislation/standards and documentation of findings and recommendations.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify and gather information	1.1. A range of potential sources of information is identified. 1.2. Appropriate persons are interviewed. 1.3. Relevant information and sample documentation is gathered.
2. Audit tree works	2.1. Onsite inspection is organised. 2.2. Work is inspected in relation to relevant documentation/legislation. 2.3. The extent of work conformance to relevant documentation/legislation is determined. 2.4. All non-conformances are identified and recorded. 2.5. Extent or manner of non-conformance is assessed. 2.6. Findings and relevant field notes are documented.
3. Assess impact of non-arboricultural works	3.1. Non-arboricultural works that may impact on the tree or its environment are inspected and assessed. 3.2. Impact of non-arboricultural works of clients, contractors and stakeholders is determined. 3.3. Feedback on non-arboricultural works is provided to clients, contractors and stakeholders.

ELEMENT	PERFORMANCE CRITERIA
4. Provide feedback to contractors, clients and stakeholders	4.1. Feedback on findings of inspection is provided to client, contractors and/or stakeholders. 4.2. Provide advice for improvement, rectification and/or management of non-conformances. 4.3. Prioritize ongoing management required.
5. Document inspection and feedback and/or recommendations	5.1. Audit report and non-conformance notifications are documented. 5.2. Statutory authorities are advised where required. 5.3. An ongoing management plan and/or rectification plan is documented and presented to the client or management.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- apply audit process to tree pruning, removal, transplant, planting and tree protection
- research and determine documentation including legislation
- understand and apply contract terms
- understand and apply relevant standards and codes of practice
- read and interpret plans
- problem-solving
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- legal issues and terminology relating to quality auditing

## REQUIRED SKILLS AND KNOWLEDGE

- audit methods and techniques
- relevant codes of practice, regulations and standards
- product and/or service knowledge
- quality principles and techniques
- relevant legislation
- pruning, removal, transplant, planting and tree protection techniques and practices
- tree physiology, anatomy and pathology
- tree management techniques/practices
- impact of non-arboricultural activities on trees
- AS4373-2007 pruning of amenity trees
- relevant Code of Practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify and gather relevant documentation and standards
- Inspect works against documentation/legislation/standards
- determine conformance and non-conformance
- document inspection and feedback/recommendations
- provide feedback to contractors, clients, management and stakeholders.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>all species of trees and woody tree like vegetation forms.</li> </ul>
Audits may include:	<ul style="list-style-type: none"> <li>the evaluation of a person, organisation, system, process, enterprise, project or product.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Arboriculture
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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# AHCASW301A Protect places of Aboriginal cultural significance

## Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

## Unit Descriptor

This unit covers the protection of places of cultural significance to Aboriginal people. It requires following Aboriginal cultural protocols and details the specific cultural, gender and kinship sensitivities of working in Aboriginal communities and on Country with diverse cultural requirements.

## Application of the Unit

This unit applies to those whose work on Country and in cultural keeping places and includes protecting cultural places, sites and objects often in co-operation with a range of stakeholders and with reference to Aboriginal communities and/or line management. The unit involves and requires a high level of awareness and experience with Aboriginal culture and communities and the need to observe Aboriginal cultural protocols. This unit is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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### Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and communicate with key stakeholders	<p>1.1 Appropriate persons within communities who hold cultural knowledge relevant to determining the <i>cultural significance</i> of Aboriginal places and heritage are identified</p> <p>1.2 Working relationships with key <i>stakeholders</i> that assist in the management of culturally significant places are developed</p> <p>1.3 Communication approaches that place <i>Aboriginal cultural protocols</i> and values at the forefront and accommodate stakeholder concerns and interests are developed</p> <p>1.4 Views on the way in which the cultural significance and resource can be conserved and used are regularly sought and obtained</p> <p>1.5 Views obtained are included in organisational planning processes</p> <p>1.6 Research on the <i>Burra Charter process</i> and on other <i>existing industry guidelines</i> is undertaken to ensure proper processes are planned for and applied to protection processes</p>
2. Define cultural significance	<p>2.1 Cultural knowledge holders inform the decision-making process to determine the cultural significance of places</p> <p>2.2 Traditional Aboriginal knowledge and practices in managing Country and environment are acknowledged and respected</p> <p>2.3 <i>Aboriginal beliefs</i> embedded in a place of cultural significance are determined</p> <p>2.4 The embodiment of cultural significance in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects is recognised</p> <p>2.5 An assessment of cultural significance is conducted</p>

ELEMENT	PERFORMANCE CRITERIA
	2.6 A statement of cultural significance is documented
3. Identify threats to Aboriginal cultural places	3.1 Threats to <i>culturally significant places</i> , both external and internal to the area under consideration, are identified 3.2 Details of evidence of land degradation are observed, described and recorded 3.3 A risk assessment of all threats to determine potential impact on sites and associated cultural landscape is undertaken 3.4 Protection/conservation measures to control potential and actual threats are determined
4. Conserve significance	4.1 Conservation policies and plans are used along with stakeholder views to plan ongoing conservation actions 4.2 Conservation activities are implemented in culturally sensitive ways 4.3 Current mainstream protection practices are compared with those of pre-European settlement in order to consider culturally appropriate alternative practices 4.4 Resources are obtained for conservation and restoration activities, along with any associated ceremonial/cultural activity

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

**Required skills include:****Ability to:**

- respect cultural diversity and demonstrate sensitivity to social, cultural and professional values and beliefs
- use technology to access written, oral or visual source material
- plan ongoing conservation actions
- conserve significance of place of culture
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- exercise discretion and confidentiality

**Required knowledge includes:****Knowledge of:**

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- industry, organisational and enterprise policies and procedures for conservation of places of cultural significance
- core sections of Burra Charter and Guidelines
- Cultural and Heritage Legislation or relevant NPWS legislation
- sustainable environmental practices
- occupational health and safety requirements

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.</p> <p>In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of <i>Cultural Units</i> to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.</p> <p>Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• identify appropriate cultural authorities for a Community, place or for a Site</li> <li>• develop working relationships with Aboriginal and non-Aboriginal stakeholders in cultural sites</li> <li>• canvass views in determining the cultural significance and heritage value and preservation issues of an Aboriginal cultural site</li> <li>• plan for the protection of an Aboriginal cultural site including resources required and submissions to be completed</li> <li>• observe Aboriginal cultural protocols in dealing with stakeholders and land managers</li> <li>• identify threats and develop action and emergency plans to mitigate and manage the risk of damaging incidents or loss of cultural integrity</li> <li>• document the submissions to implement conservation and restoration activities and support the incident management activities</li> <li>• identify natural resources and how they relate to cultural protocol, spirituality, art, environment, values, beliefs and lore/law</li> <li>• identify cultural rights and responsibilities when using Community knowledge, information and material</li> <li>• identify groups to be consulted in relation to owners/custodians of cultural and Community knowledge, information and/or material</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p>

	<ul style="list-style-type: none"> <li>• on Country, a Community, educational or workplace setting including Aboriginal cultural keeping places</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> </ul>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in protecting Aboriginal places of cultural significance. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate on Country and/or in Aboriginal cultural keeping places protecting cultural sites and/or cultural material and objects</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in Ceremony and/or Sites work related to the knowledge and skills outlined in this unit</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <p>AHCILM306A      Follow Aboriginal cultural protocols</p> <p>AHCASW308A      Apply cultural significance to Aboriginal sites and landscapes</p> <p>AHCASW310A      Move and store Aboriginal cultural material</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Cultural significance</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• aesthetic, historic, scientific, social or spiritual value for past, present or future generations</li> <li>• significance embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects</li> </ul>
<p><b><i>Stakeholders</i></b> may include</p>	<ul style="list-style-type: none"> <li>• Aboriginal Land Councils</li> <li>• Indigenous Ranger groups</li> <li>• Traditional Owners and Cultural managers</li> <li>• Aboriginal communities and Clans</li> <li>• museums</li> <li>• Culture and Heritage government departments and representatives</li> <li>• National Parks personnel</li> <li>• sites workers</li> <li>• archaeologists</li> <li>• anthropologists</li> </ul>
<p><b><i>Aboriginal cultural protocols</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law.</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> </ul>



	<ul style="list-style-type: none"> <li>occasions when consultation is required</li> <li>ways in which consultations should be conducted</li> </ul>
<b><i>Burra Charter process</i></b> includes:	<ul style="list-style-type: none"> <li>the cultural significance of a place and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions. Understanding cultural significance comes first, then development of policy and finally management of the place in accordance with the policy</li> <li>the policy for managing a place must be based on an understanding of its cultural significance</li> <li>policy development should also include consideration of other factors affecting the future of a place such as the owner's needs, resources, external constraints and its physical condition</li> </ul>
<b><i>Existing industry guidelines</i></b> may include:	<ul style="list-style-type: none"> <li>the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places</li> </ul>
<b><i>Aboriginal beliefs</i></b> may refer to	<ul style="list-style-type: none"> <li>connection to Country</li> <li>creation events</li> <li>structure of Community such as lore/law men and women, elders and custodians</li> <li>practicality and purpose</li> <li>appropriate behaviour, protocols and restrictions</li> <li>spiritual value of knowledge and stories</li> <li>communal ownership of some knowledge and material</li> <li>intergenerational ownership of some knowledge and material</li> <li>oral tradition of passing on knowledge and responsibilities</li> <li>roles as custodians of specified knowledge, ceremony, designs, information</li> <li>kinship and relationships</li> <li>storytelling</li> </ul>
<b><i>Culturally significant places</i></b> may include	<ul style="list-style-type: none"> <li>areas of non-Aboriginal activity</li> <li>Aboriginal-sites</li> <li>landscapes</li> <li>buildings and other structures</li> <li>natural areas of Aboriginal cultural significance</li> <li>historical events and monuments</li> <li>areas of Aboriginal activity such as: <ul style="list-style-type: none"> <li>burial</li> <li>occupation and contact sites</li> <li>engravings</li> <li>grinding grooves</li> <li>rock pictures</li> </ul> </li> </ul>

	<ul style="list-style-type: none"><li>• fish traps</li><li>• middens</li><li>• mounds</li></ul>
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## Unit Sector(s)

Aboriginal-sites work

## AHCASW302A Relate Aboriginal culture to sites work

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Unit Descriptor

This unit covers the cultural and ceremonial worldviews necessary to understand cultural landscapes from Aboriginal perspectives. The unit introduces overarching belief systems that operate where Aboriginal-Sites work takes place. This unit provides a conceptual foundation for understanding Aboriginal cultural protocols, cultural customs and cultural practices that the Aboriginal-Sites worker is likely to encounter in daily work routines.

### Application of the Unit

This unit applies to Aboriginal worldviews and beliefs as they impact and affect Aboriginal-sites work on Country. The unit applies to working either as an autonomous Sites worker or under the supervision and cultural authority of a Traditional owner and/or Elder for specific Country and is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

### Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Use an understanding of traditional cultural frameworks for Aboriginal peoples at work	1.1 Relationship to the land is integrated into daily work routines
	1.2 Relationships of Aboriginal <i>objects</i> , features and <i>cultural landscapes</i> to <i>Aboriginal beliefs</i> are determined
	1.3 The interrelationship of discrete <i>Aboriginal-sites</i> to cultural frameworks is determined
	1.4 Traditional knowledge, customs and cultural practices in managing Country are acknowledged and respected
2. Recognise the traditional social frameworks for Aboriginal peoples	2.1 Language groups and general lore/laws and customs are shared
	2.2 Extended family structures and clans in physical and geographical locations are identified
	2.3 Totemic structures and associated stories that relate to ancestral beings from the <i>Creation Period</i> are related to landscape features and sites
	2.4 Social structures that define the social positions, behaviours and obligations are classified in kinship names, sections and networks
	2.5 The kinship system determining roles and responsibilities, marriage unions, ceremonial relationships, funeral roles and behaviour patterns with other kin are identified
	2.6 Marriage relationships resulting from the union of two moieties and/or skin names are determined
	2.7 Gender roles are recognised and respected
3. Relate Aboriginal spirituality to the landscape	3.1 <i>Aboriginal beliefs</i> that determine <i>Aboriginal cultural protocols</i> are acknowledged and recorded
	3.2 The connection between spirituality and the land is defined in

ELEMENT	PERFORMANCE CRITERIA
	<p>local and trans-local terms of identity, culture and food</p> <p>3.3 The historical and present living environments are related to <i>Dreaming</i> stories and <i>cultural knowledge</i></p> <p>3.4 Cultural language and customs embedded in the relationship to the land and <i>Aboriginal-sites</i> are recounted</p> <p>3.5 Creation stories, oral histories, kinship and totemic relationships to the cultural landscape are defined</p> <p>3.6 The sense of belonging to the land and culture embedded in landscape are recounted in culturally appropriate ways</p> <p>3.7 Elements of spirituality are expressed in ceremony, rituals, stories, dance, song, art and language</p>
<p>4. Relate the interactions between Dreaming, traditional beliefs and ceremonies to Aboriginal-sites work</p>	<p>4.1 Variable <i>cultural disintegration</i> in modern evolving <i>cultural landscapes</i> is identified</p> <p>4.2 The effects of <i>cultural disconnection</i> with the land, spirituality and ceremonial expressions of culture are recorded</p> <p>4.3 <i>Impacts</i> of disintegration and disconnection on Aboriginal-sites are recorded</p> <p>4.4 The evolving nature of Dreaming is acknowledged and respected</p> <p>4.5 Current trends in <i>mainstream culture and heritage</i> and opportunities and threats to the Aboriginal-sites work sector are identified and documented</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

**Required skills include:****Ability to:**

- interconnect diverse elements of Aboriginal culture and societies
- relate and recount Aboriginal spirituality
- recognise and apply Aboriginal beliefs and protocols
- use oral communication skills/language competence to question, actively listen, ask for clarification and seek advice from Traditional Owners, and/or Elders
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
- research skills to source information orally from Elders, from records in archives, archival programs, archival principles and processes

**Required knowledge includes:****Knowledge of:**

- how to source appropriate cultural and lore/law authority for specific Country and/or sites
- protocols and customs relating to disclosure of knowledge about Country
- Aboriginal cultural and social frameworks
- ancestral beliefs
- genealogy
- kinship names, sections and networks
- totems, moieties, skin names
- Dreaming
- rules and access to cultural knowledge limitations
- indigenous communities and social structures
- indigenous cultural customs and heritage
- history of Aboriginal dispossession in Australia
- dispossession and land rights legislation
- Community guidelines and protocols
- information collection and documentation procedures
- Cultural and Heritage Legislation or relevant NPWS legislation

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and participation with Traditional Owners and/or Elders and custodians of that specific Country.</p> <p>In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of <i>Cultural Units</i> to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.</p> <p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge. Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• explain traditional Aboriginal belief systems</li> <li>• identify examples and impacts of disintegration and disconnection with Aboriginal culture</li> <li>• describe the relationship between the land and environment and Aboriginal peoples in culturally relevant ways</li> <li>• explain the relationship between Dreaming, Traditional beliefs, Ceremony and Sites</li> <li>• demonstrate application of conceptual Aboriginal worldview knowledge to practical Sites work under observation</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of conceptual knowledge of traditional beliefs in work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p> <p>Assessment must ensure access to and observation by recognised cultural lore/law men and/or women who hold the Certificate III in Aboriginal-sites Work</p>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess comprehension and the application of Aboriginal worldviews and beliefs to practical skills.</p> <p>The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• assessment of written reports</li> </ul>

	<ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• Observation of participation in Ceremony and/or Sites work related to the knowledge and skills outlined in this unit</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, etc.).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• AHCILM306A Follow Aboriginal cultural protocols</li> <li>• AHCASW308A Apply cultural significance to Aboriginal-sites and landscapes</li> </ul> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Aboriginal objects*** may include:

- physical objects such as stone tools, Aboriginal-built fences and stockyards, scarred trees, the remains of fringe camps
- material deposited on the land, such as middens
- the ancestral remains of Aboriginal people
- art and artworks
- shells
- non-human bones and organic materials



<p><i>cultural landscapes</i> may include:</p>	<ul style="list-style-type: none"> <li>• places and areas made up of living stories that have connections to the past and can include natural resources, objects, customs and traditions (and their contexts)</li> <li>• places of land, sea and air where cultural and natural elements are considered together</li> </ul>
<p><i>Aboriginal beliefs</i> may refer to:</p>	<ul style="list-style-type: none"> <li>• connection to Country</li> <li>• creation events</li> <li>• structure of Community such as lore/law men and women, elders and custodians</li> <li>• practicality and purpose</li> <li>• appropriate behaviour, protocols and restrictions</li> <li>• spiritual value of knowledge and stories</li> <li>• communal ownership of some knowledge and material</li> <li>• intergenerational ownership of some knowledge and material</li> <li>• oral tradition of passing on knowledge and responsibilities</li> <li>• roles as custodians of specified knowledge, ceremony, designs, information</li> <li>• kinship and relationships</li> <li>• storytelling</li> </ul>
<p><i>Aboriginal-sites</i> may include:</p>	<ul style="list-style-type: none"> <li>• shelters with deposits</li> <li>• open camp site</li> <li>• midden</li> <li>• shelter with midden</li> <li>• shelter with art</li> <li>• isolated find</li> <li>• undefined sites</li> <li>• axe grinding grooves</li> <li>• bora/ceremonial ring</li> <li>• burial site</li> <li>• rock engraving</li> <li>• scarred tree</li> <li>• carved tree</li> <li>• natural mythological site</li> <li>• restricted site</li> <li>• quarry</li> <li>• ochre quarry</li> <li>• fish trap</li> <li>• stone arrangement</li> <li>• mound (oven)</li> <li>• mia mia</li> </ul>

	<ul style="list-style-type: none"> <li>• waterhole (well)</li> <li>• contact/mission</li> <li>• abraded grooves</li> <li>• Aboriginal Place (declared under NPW Act)</li> <li>• Aboriginal Area (declared under NPW Act)</li> <li>• protected archaeological site</li> <li>• conservation agreement</li> <li>• massacre</li> <li>• reserve</li> </ul>
<p><b><i>Dreaming and Creation Period</i></b> may be described as:</p>	<ul style="list-style-type: none"> <li>• This is a Western term. According to Aboriginal belief, all life as it is today - Human, Animal, Bird and Fish is part of one vast unchanging network of relationships which can be traced to the Great Spirit Ancestors of the Dreamtime. The Dreamtime is the Aboriginal understanding of the world, of its creation, and its great stories. The Dreamtime is the beginning of knowledge, from which came the laws of existence. For survival these laws must be observed. The Dreaming world was the old time of the Ancestor Beings. They emerged from the earth at the time of the creation. Time began in the world the moment these supernatural beings were "born out of their own Eternity". The Dreamtime continues as the "Dreaming" in the spiritual lives of aboriginal people today. The events of the ancient era of creation are enacted in ceremonies and danced in mime form. Song lines and song chant relates the story of events of those early times and brings the power of the dreaming to bear of life today.</li> </ul>
<p><b><i>Aboriginal cultural protocols</i></b> may include</p>	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of objects and human remains</li> <li>• issues of ownership (clans/nations)</li> </ul>

	<ul style="list-style-type: none"> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• ways in which consultations should be conducted</li> </ul>
<b><i>Cultural knowledge</i></b> may include:	<ul style="list-style-type: none"> <li>• aboriginal land, landscape features, rivers, lakes and sea resources and their uses, and the relationships between plants, animals and individuals, clans and Community</li> <li>• aboriginal beliefs, values, spirituality, language, lore/law, customs, gender roles, kinship networks, factions, moieties, and speaking rights</li> <li>• ceremonies, rituals, stories, song, dance and art</li> <li>• traditional and current land management practices</li> <li>• aboriginal-sites, places, objects, material and landscapes</li> <li>• names, locations and meanings</li> <li>• aboriginal cultural protocols</li> <li>• aboriginal cultural heritage</li> <li>• the cultural significance of Aboriginal knowledge</li> </ul>
<b><i>Cultural disintegration</i></b> may include:	<ul style="list-style-type: none"> <li>• total loss of languages and/or cultural stories and ceremony for a specific area</li> <li>• non-existence of Aboriginal people groups who formerly lived and/or accessed specific lands</li> </ul>
<b><i>Cultural disconnection</i></b> may include:	<ul style="list-style-type: none"> <li>• aboriginal people who have little or no cultural and/or language knowledge</li> <li>• aboriginal people who may experience varying levels of a lack of knowing of their cultural, language and skin group and associated cultural practices</li> </ul>
<b><i>Impacts of disintegration and disconnection</i></b> may include:	<ul style="list-style-type: none"> <li>• social, cultural, religious, economic, spiritual, language factors and outcomes</li> <li>• aboriginal perspectives</li> </ul>
<b><i>Mainstream culture and heritage trends</i></b> may be governed by:	<ul style="list-style-type: none"> <li>• all States and Territories</li> <li>• a range of industry sectors including non-specific sites sectors such as museums.</li> <li>• National Parks and Wildlife jurisdictions - state and federal</li> <li>• Catchment Management and Authority contexts</li> <li>• Office of Environment and Heritage contexts</li> </ul>

## **Unit Sector(s)**

Aboriginal-sites work

# AHCASW303A Identify and record Aboriginal-sites, objects and cultural landscapes

## Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

## Unit Descriptor

This unit covers the process of recording information and knowledge on Country from both an Aboriginal and non-Aboriginal perspective.

## Application of the Unit

This unit applies to working on Country and the identification and recording of Aboriginal-sites, objects and cultural landscapes on Country. The unit applies to working with lore/law men and women either as an autonomous Sites worker or under the supervision and cultural authority of Traditional Owner/s and/or Elder/s for specific Country and is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify Aboriginal-sites, objects and materials and cultural landscapes on Country	1.1 Appropriate <i>cultural authorities</i> are identified and consulted 1.2 Approval to be on Country and perform identification and recording work is obtained 1.3 Boundaries and extent of Country are determined according to Community guidelines and <i>Aboriginal cultural protocols</i> 1.4 Determine details of land management and maintenance practices 1.5 Aboriginal <i>materials</i> and <i>objects</i> are identified accurately 1.6 Aboriginal <i>cultural landscapes</i> and <i>Aboriginal-sites</i> are identified accurately 1.7 The interrelationship of discrete Aboriginal-sites to cultural landscapes and Indigenous land management is determined
2. Utilise the relevant Information Management System (IMS)	2.1 The relevant government jurisdiction is determined 2.2 The relevant <i>Information Management System</i> (IMS) in operation and the organisation responsible for maintaining the system are researched and determined 2.3 Access restrictions to the IMS and confidentiality measures for recording secret, sacred materials are applied 2.4 The IMS is accessed and relevant options are selected 2.5 Transfer of site, feature and/or cultural landscape information is initiated and maintained over time
3. Record information on Aboriginal-sites, objects and cultural landscapes	3.1 Information and data collected about the Aboriginal site, feature or landscape is used according to Community guidelines and Aboriginal cultural protocols 3.2 Practices which could damage the level of trust and respect between stakeholders, negotiating parties and the Community are acknowledged and avoided 3.3 <i>Site context</i> , location and <i>information data</i> is categorised and recorded accurately 3.4 <i>Feature data</i> is categorised and recorded accurately

**ELEMENT**

**PERFORMANCE CRITERIA**

3.5 Aboriginal Community interpretations and recommendations are recorded

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- collect site, feature and cultural landscape information and data
- identify, describe and document site, feature and cultural landscape information
- perform Information Management System (IMS) operations
- operate according to Community guidelines and Aboriginal cultural protocols
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from Traditional Owners/s, Elders, Supervisor, etc.
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
- exercise discretion and confidentiality

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- designated cultural areas and features, boundaries and extent of Country
- local Aboriginal names for plants, animals and landscape features
- basic ecological concepts
- Cultural and Heritage Legislation or relevant NPWS legislation
- protocols and customs relating to disclosure of knowledge about Country
- sustainable environmental practices
- legislative and enterprise requirements relative to workplace health and safety and the environment

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.

In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of *Cultural Units* to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.

The evidence required to demonstrate competency in this unit must be relevant to workplace operations on Country and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge. Candidates must demonstrate evidence of the ability to:

- record details of Aboriginal-sites, objects and cultural landscapes consistent with the requirements of the relevant IMS
- record and collate information on Aboriginal culture and history for Country whilst following Aboriginal cultural protocols
- use information on sites, objects and cultural landscapes according to Community guidelines and Aboriginal cultural protocols
- identify appropriate cultural authorities for a Community, Site and/or story and/or ceremony
- identify cultural information, material and cultural expression appropriate to be shared
- determine how natural resources relate to cultural protocol, spirituality, art, environment, values, beliefs and lore/law
- understand the cultural rights and responsibilities when using Community knowledge, information and material



	<ul style="list-style-type: none"> <li>• identify groups to be consulted in relation to owners/custodians of cultural and Community knowledge, information and/or material</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting on Country</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• Candidates who have gained relevant knowledge and skills through their life experience</li> <li>• Access restrictions to IMS and confidentiality measures for recording secret, sacred materials</li> <li>• Use of the jurisdictional IMS and/or handheld PDA devices may be included as assessment resources</li> </ul>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in recognising and recording Aboriginal-sites, objects and cultural landscapes. The primary method of assessment for this unit should include participation on Country by candidates in simulated or actual work practices relevant to Sites work.</p> <p>The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate on Country identifying sites, objects and describing cultural landscapes</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in Ceremony and/or Sites work related to the knowledge and skills outlined in this unit.</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <p>AHCASW305A Work with Aboriginal ceremonial</p>

	<p>secret sacred materials</p> <p>AHCASW308A Apply cultural significance to Aboriginal-sites and landscapes</p> <p>AHCASW310A Move and store Aboriginal cultural material</p> <p>AHCASW301A Protect places of Aboriginal cultural significance</p> <p>AHCASW311A Apply relevant legislation in Aboriginal-sites work</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>
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## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>cultural authorities</i> may include:</p>	<p>Cultural authority refers to the most appropriate senior person/s that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder, Aboriginal Land Council, etc.</p> <p>A ceremonial/cultural manager in terms of Aboriginal customary law means someone who does the work either under the direct supervision of the Aboriginal Owner or does the work that is authorised by the Owner. In a ceremony for example, the ceremonial manager(s) may provide the food and do the performance (work). Traditional roles and responsibilities swap over depending on a person’s status in any given situation – i.e.– whose land / estate one is on for business.</p>
<p>Aboriginal <i>cultural protocols</i> may include:</p>	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> </ul>

	<ul style="list-style-type: none"> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• Interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• ways in which consultations should be conducted</li> </ul>
<p><b><i>Aboriginal materials and objects</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• physical objects such as stone tools, Aboriginal-built fences and stockyards, scarred trees, the remains of fringe camps</li> <li>• material deposited on the land, such as middens</li> <li>• the ancestral remains of Aboriginal people</li> <li>• stones and stone tools</li> <li>• art and artworks</li> <li>• shells</li> <li>• non-human bones and organic materials</li> </ul>
<p><b><i>cultural landscapes</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• places and areas made up of living stories that have connections to the past and can include natural resources, objects, customs and traditions (and their contexts)</li> <li>• places of land, sea and air where cultural and natural elements are considered together</li> </ul>
<p><b><i>Aboriginal-sites</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• shelters with deposits</li> <li>• open camp site</li> <li>• midden</li> <li>• shelter with midden</li> <li>• shelter with art</li> <li>• isolated find</li> <li>• undefined sites</li> <li>• axe grinding grooves</li> </ul>

	<ul style="list-style-type: none"> <li>• bora/ceremonial ring</li> <li>• burial site</li> <li>• rock engraving</li> <li>• scarred tree</li> <li>• carved tree</li> <li>• natural mythological site</li> <li>• restricted site</li> <li>• quarry</li> <li>• ochre quarry</li> <li>• fish trap</li> <li>• stone arrangement</li> <li>• mound (oven)</li> <li>• mia mia</li> <li>• waterhole (well)</li> <li>• contact/mission</li> <li>• abraded grooves</li> <li>• Aboriginal Place (declared under NPW Act)</li> <li>• Aboriginal Area (declared under NPW Act)</li> <li>• protected archaeological site</li> <li>• conservation agreement</li> <li>• massacre</li> <li>• reserve</li> </ul>
<p><b><i>Information Management System (IMS)</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• Region or State based sites information management systems</li> <li>• Aboriginal Heritage Information Management System (AHIMS)</li> <li>• Aboriginal Cultural Heritage Register and Information System (ACHRIS)</li> <li>• Aboriginal Information Management System (AIMS)</li> <li>• Aboriginal Heritage Management System (AHMS)</li> <li>• Cultural Site Management System</li> </ul>
<p><b><i>Site context</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• landform</li> <li>• landform unit</li> <li>• vegetation</li> <li>• land use</li> <li>• proximity to water</li> <li>• open</li> <li>• closed</li> </ul>
<p><b><i>Site information</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• general information</li> <li>• datum</li> <li>• zone</li> <li>• date recorded</li> </ul>

	<ul style="list-style-type: none"> <li>• site context</li> <li>• Aboriginal features</li> <li>• site dimensions</li> <li>• site plan</li> <li>• story</li> <li>• ceremony</li> <li>• site Aboriginal Community interpretation</li> <li>• site Aboriginal Community recommendations</li> <li>• site assessment</li> <li>• cultural analysis</li> <li>• scientific analysis</li> <li>• management recommendations</li> <li>• endorsement by cultural authority</li> </ul>
<i>Site data</i> may include:	<ul style="list-style-type: none"> <li>• location map</li> <li>• black and white or colour photographs</li> <li>• aerial photographs</li> <li>• slides or videos</li> <li>• Site plans</li> <li>• Site drawings</li> <li>• recording tables</li> <li>• presentations</li> </ul>
<i>Features data</i> may include:	<ul style="list-style-type: none"> <li>• type</li> <li>• material</li> <li>• description</li> <li>• dimensions</li> <li>• context</li> <li>• condition</li> <li>• site name</li> <li>• environment</li> <li>• plan</li> <li>• importance</li> <li>• recommended action</li> </ul>

## Unit Sector(s)

Aboriginal-sites work

## AHCASW304A Identify Indigenous culturally significant plants

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Unit Descriptor

This unit covers the process of observing, recording and reporting on the presence of Indigenous plants against criteria provided by a supervisor or as required under legislation, regulations, and or community protocols. This unit involves the recognition of Indigenous plants that are commonly encountered in land management situations and covers knowledge of Indigenous plant identification techniques, Indigenous plant names, community/organisational procedures for obtaining and supplying advice and information about Indigenous plants, and community/organisational expectations about the range and number of Indigenous plants to be recognised. This unit has a particular focus on culturally significant Indigenous plants, management and conservation.

### Application of the Unit

This unit applies to the identification and recording of Indigenous plants, local bushland and bush foods on Country. The unit applies to working with lore/law men and women either as an autonomous worker or under the supervision and cultural authority of Traditional Owner(s) and/or Elder(s) for specific Country. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

### Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for plant recognition	1.1 Identify <i>range of Indigenous plants</i> according to job or client needs 1.2 Identify and locate <i>resources</i> required for use in recognition activity 1.3 Identify, select and prepare <i>processes</i> for Indigenous plant recognition including consultation and seeking approval from relevant cultural authorities to be on specific Country
2. Recognise specified Indigenous plants	2.1 Name specified Indigenous plants according to their identifiable characteristics and by their <i>Indigenous name</i> 2.2 Determine plant habits, <i>characteristics</i> and significant features according to enterprise requirements 2.3 Seek advice from <i>cultural authorities</i> and/or supervisors when necessary and where appropriate in the recognition activity 2.4 Observation activities minimise degradation and disturbance and comply with legislation and workplace health and safety requirements
3. Record recognition of Indigenous plants	3.1 Determine cultural uses and/or significance of specified Indigenous plants 3.2 <i>Document</i> information about Indigenous plants and add to reference collection according to organisational requirements 3.3 Update reference collection if new Indigenous plants are recognised 3.4 Determine disposal techniques for plant debris if specimen collection is necessary
4. Identify local	4.1 Determine the relationship between local foods, general

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
<i>bushland and/or bush foods</i> and their uses	health and the land in Aboriginal culture 4.2 Locate and gather information from a range of sources about access to bush foods 4.3 Identify local Indigenous plants using their common and/or cultural names 4.4 Identify Indigenous cultural uses of available bush resources for food and medicine 4.5 Identify <i>land management practices and conservation of Indigenous species</i>



## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- plan and organise observations
- recognise flora
- collect and record information
- interpret data
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
- recognise the range of Indigenous plants specific to the enterprise or locality
- describe plant attributes
- describe main purpose of species identified within the organisational or cultural context
- describe any specific handling requirements and/or growth requirements to facilitate management and conservation of the species
- use simple keys to identify and describe Indigenous plants
- communicate with customers and clients
- understand cultural protocols in relation to accessing and using information about culturally significant species
- interpret questions effectively
- explain information about the Indigenous plants specific to the organisation

### Required knowledge includes:

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#### Knowledge of:

- criteria used to group species
- common and scientific names of Indigenous plants and animals
- biological species occurring in the study area
- the importance, value or potential impact of the species in a designated area
- rare and endangered species
- undesirable Indigenous plants (weeds) and animals
- maps and grid references
- a range of plant identification techniques and plant names
- enterprise procedures for obtaining and supplying advice and information about Indigenous plants
- organisational expectations relating to the range and number of Indigenous plants to be recognised

- cultural protocols for obtaining and utilising information about Indigenous plants
- nutritional and medicinal purposes of bushland and/or bush foods
- land management and conservation techniques

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The delivery and assessment against this unit must comply with Community protocols and be carried out in consultation with and participation with Traditional Owners and/or Elders and custodians of that specific Country.</p> <p>In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of <i>Cultural Units</i> to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.</p> <p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge. Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• observe and accurately identify species of Indigenous plants in a natural area</li> <li>• record and report observations in required format</li> <li>• carry out a survey of Indigenous plants in a natural area causing minimal disruption to the environment</li> <li>• explain and/or demonstrate uses of available bush resources for food and medicine</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>This is a practical unit utilising the local bushland and/or coastal areas and the knowledge of experts and where available, of local Aboriginal Traditional Owners and/or Elders.</p>

	<p>The focus of assessment for this unit will depend on the industry, workplace, or Community setting. Assessment must be contextualised to meet the needs of the particular group. Assessment context must provide for:</p> <ul style="list-style-type: none"> <li>• an appropriate Community or workplace setting</li> <li>• involvement of people approved by Traditional Owners and/or Elders of the relevant local Aboriginal Community</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> </ul> <p>Competence in recognising Indigenous plants requires evidence that a person can identify and utilise available resources and equipment to identify Indigenous plants accurately. The skills and knowledge required to recognise Indigenous plants must be transferable to different work environments. For example, this could include different Indigenous plants, workplace settings, and different cultural experiences.</p>
<b>Method of assessment</b>	<p>Competency requires the application of work practices under work conditions. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate on Country identifying Indigenous plants and describing food, medicinal and cultural relationships</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• portfolio of evidence, including items such as third party reports; relevant experience; employer or client statements; work documentation; written or visual representations of stories; audio or video tape recordings; photographs; PowerPoint presentations; art works; oral presentations or written reports; glossary of terminology</li> </ul> <p><b>Assessment methods</b> should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English), remote communities and those with interrupted schooling.</p>
<b>Guidance information for</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is</p>

<b>assessment</b>	recommended, for example AHCILM306A Follow Aboriginal cultural protocols  Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country and/or in a keeping place facility for this unit.
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## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Range of Indigenous plants</i></b> may include:	<ul style="list-style-type: none"> <li>• native or introduced species including weeds</li> <li>• indigenous plants will comprise those commonly encountered within the industry workplace</li> </ul>
<b><i>Resources</i></b> may include:	<ul style="list-style-type: none"> <li>• enterprise or public library</li> <li>• business and research organisation websites</li> <li>• suppliers and contractors</li> <li>• enterprise supervisor and team colleague</li> <li>• experience, and experts in the local area or industry sector</li> <li>• personal or enterprise reference collection</li> </ul>
<b><i>Processes</i></b> may include:	<ul style="list-style-type: none"> <li>• literature searches</li> <li>• internet browsing</li> <li>• personal consultation with experts</li> <li>• oral histories</li> <li>• specimen collections</li> <li>• field guides</li> <li>• workplace notes, and use of simple keys</li> </ul>
<b><i>Indigenous plant names</i></b> may include:	<ul style="list-style-type: none"> <li>• common names</li> <li>• botanical names</li> <li>• in Aboriginal communities, language names can be used in lieu of common names</li> </ul>
<b><i>Plant characteristics</i></b> may include:	<ul style="list-style-type: none"> <li>• shape</li> <li>• size</li> <li>• colour</li> <li>• texture</li> </ul>

	<ul style="list-style-type: none"> <li>• presence of hairs and spikes on leaves</li> <li>• stem, fruit, flower or seed</li> </ul>
<b><i>Cultural authorities</i></b> may include:	<p>Cultural authority refers to the most appropriate senior person(s) that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder, Aboriginal Land Council, etc.</p> <p>A ceremonial/cultural manager in terms of Aboriginal customary law means someone who does the work either under the direct supervision of the Aboriginal Owner or does the work that is authorised by the Owner. In a ceremony for example, the ceremonial manager(s) may provide the food and do the performance (work). Traditional roles and responsibilities swap over depending on a person's status in any given situation, ie, whose land/estate one is on for business.</p>
<b><i>Documentation</i></b> may include:	<ul style="list-style-type: none"> <li>• written description of the plant species including common Aboriginal and/or botanical names</li> <li>• visible characteristics</li> <li>• details of occurrence or origin</li> <li>• optimum growth requirements, and/or a photographic record of the plant</li> <li>• a herbarium of plant samples preserved according to the requirements of the enterprise or industry sector</li> </ul>
<b><i>Bushland and/or bush foods</i></b> may include:	Any plant that grows in the native Australian bush that is edible or partly edible, that may be used for sustenance, seasoning, or preservation, or for medicinal purposes or part of traditional ceremony
<b><i>Land management and conservation techniques</i></b> may include:	<ul style="list-style-type: none"> <li>• understanding individual species and habitat requirements</li> <li>• ensuring the survival of the species through passing down of knowledge</li> <li>• harvesting conservative amounts during an appropriate time of year</li> <li>• not causing damage to surrounding environs when collecting</li> </ul>
<b><i>Indigenous Plant species</i></b> may include:	<ul style="list-style-type: none"> <li>• species covering listed threatened species</li> <li>• listed notifiable or noxious weeds</li> <li>• indigenous plants not previously seen at regularly visited site</li> <li>• indigenous plants to be reported under enterprise or industry guidelines</li> </ul>

## Unit Sector(s)

Aboriginal-sites work

# AHCASW305A Work with Aboriginal ceremonial secret sacred materials

## Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

## Unit Descriptor

This unit provides an awareness of the protocols involved in Aboriginal culture as these relate to individuals and communities, specifically in relation to materials with restrictions on access for cultural reasons. The unit covers Community cultural processes including the need to identify the appropriate person/s when approaching a Community and the cultural and social rules associated with that task.

## Application of the Unit

This unit applies to following Aboriginal cultural protocols when coming into contact and working with cultural materials defined as Aboriginal ceremonial secret sacred objects. The unit applies to working with this material on Country and off Country where rules apply to limited access to the material for cultural and ceremonial reasons. This unit is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

### Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Conduct background research and consultation with Traditional Owners, Community, Cultural Managers/Knowledge holders	<p>1.1 Traditional ownership of <b><i>cultural material</i></b> and <b><i>objects</i></b> is confirmed and appropriate Owners/Cultural Managers and Communities are consulted</p> <p>1.2 Gender requirements for consultations, handling of and access to materials are identified according to <b><i>Aboriginal cultural protocols</i></b></p> <p>1.3 Consultation with Traditional Owner/s, Community groups and experts to determine suitable holding for materials not authorised for general exhibition is undertaken</p> <p>1.4 Permissions from <b><i>cultural authorities</i></b> for access and use of Aboriginal secret, sacred and ceremonial materials are sought and obtained</p> <p>1.5 Consultation with Community to determine culturally appropriate approaches to handling of material and any <b><i>limitations</i></b> on access to materials is undertaken</p> <p>1.6 Confidentiality and neutrality in consultations and dealings with Traditional Owners and Cultural Managers is demonstrated</p>
2. Handle Aboriginal secret sacred cultural material	<p>2.1 Any ceremony and/or procedure associated with seeing, handling and/or moving the material is allowed for and/or carried out</p> <p>2.2 Cultural material is identified, moved, stored, maintained and returned according to <b><i>Aboriginal cultural requirements</i></b> and agreements entered into</p> <p>2.3 Aspects of cultural material requiring repair or attention are noted and passed onto supervisor or person with relevant expertise</p> <p>2.4 Action within scope of own job role is taken or referred to</p>



- relevant personnel as required
- 2.5 Specific Aboriginal cultural requirements are communicated to colleagues
  - 2.6 Appropriate handling and moving equipment is selected and used safely
  - 2.7 Adherence to cultural restrictions and limitations on secret, sacred and ceremonial material is observed
  - 2.8 The handling of cultural material in a manner that protects individual items and assists efficient loading and unloading processes if moving is demonstrated
3. Contribute to a third party storage agreement for holding secret sacred material
    - 3.1 Arrangements for ensuring ongoing consultation and maintenance of relationships with the Traditional Owners/Cultural Managers are established
    - 3.2 The term of the agreement for holding/storing materials is established
    - 3.3 *Specific requirements* for, quarantine procedures, condition reporting and conservation, security arrangements, cyclical auditing, environmental monitoring, database management are established and documented
    - 3.4 An access agreement defining personnel access and conditions of access is established
    - 3.5 Removal of material from the Keeping Place and any cultural and management protocols to be followed are defined in the access agreement and followed
    - 3.6 Confidentiality measures for storage, access, display and use of secret, sacred and ceremonial materials are followed
  4. Contribute to documenting a generational succession plan for passing on ownership of secret sacred material
    - 4.1 Options for inheritance of ownership are discussed with Traditional Owners and/or Elders
    - 4.2 Participate in documenting the process, guidelines and timeframes agreeable to Traditional Owners and Cultural managers for handover of ownership, control and access to secret sacred materials

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- demonstrate respect for cultural diversity and sensitivity to social, cultural and professional values and beliefs
- use cultural sensitivity skills to be sensitive to cultural issues and respectful of different cultural practices
- build and engender trust on sensitive issues with Aboriginal people
- implement Aboriginal cultural protocols
- establish and document agreements
- identify Aboriginal cultural authorities for specific Country in culturally appropriate ways
- use appropriate Aboriginal cultural protocols for Community consultation
- recognise and administer Aboriginal ownership and intellectual property rights
- access, transfer and use cultural information and material
- use appropriate personal and social protocols
- exercise discretion and confidentiality
- enforce access and confidentiality agreements
- use technology to access written, oral or visual source material
- conduct library and internet research
- comprehend and interpret written, oral or visual source material
- exercise judgement on sensitive issues
- apply listening skills
- use oral communication skills
- relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- cultural authority identification for ceremony in a particular area or site
- ownership relationships for secret, sacred material
- genealogy
- contracts and confidentiality agreements
- selection and use of handling, storage and transport systems
- record-keeping
- organisational procedures and guidelines
- Cultural and Heritage Legislation or relevant NPWS legislation
- sustainable environmental practices

- workplace health and safety requirements

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>This unit requires the involvement and participation of the appropriate cultural authority in the training and assessment tasks, i.e. Traditional Owners and/or Cultural Manager and/or Cultural Knowledge holder and/or Custodian/s.</p> <p>The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.</p> <p>In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of <i>Cultural Units</i> to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers. Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• apply knowledge of issues that frame the development of cultural protocols</li> <li>• consult effectively with Traditional Owners and relevant Community representatives about the handling, access to and display of cultural material</li> <li>• observe Aboriginal cultural protocols, follow collection management practices and industry cultural requirements when moving, storing, displaying and maintaining cultural material</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting</li> <li>• involvement of people approved by Cultural managers, custodians and/or Traditional Owners</li> </ul>

	<p>for the materials in question</p> <ul style="list-style-type: none"> <li>• access to: <ul style="list-style-type: none"> <li>• cultural material or information on material when access is not available</li> <li>• information about cultural protocols</li> </ul> </li> <li>• appropriately qualified and experienced museum personnel and cultural heritage curators</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess competency in working with secret, sacred materials. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate working on Country or in a keeping place facility consulting and/or working with ceremonial secret, sacred materials. Prior approval and permission should be obtained for the Assessor from any Traditional Owners and/or Cultural managers involved</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in Ceremony and/or Sites work related to the knowledge and skills outlined in this unit</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• AHCILM306A Follow Aboriginal cultural protocols</li> <li>• AHCASW308A Apply cultural significance to Aboriginal-sites and landscapes</li> </ul> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country and/or in a keeping place facility for this unit.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><b><i>cultural material</i></b> is defined as:</p>	<ul style="list-style-type: none"> <li>• objects, collections, artworks</li> <li>• specimens, structures or sites</li> <li>• archaeological material</li> <li>• books and manuscripts</li> <li>• built heritage</li> <li>• cultural sites and buildings</li> <li>• ethnographic material</li> <li>• film and audio-visual material</li> <li>• flora and fauna</li> <li>• furniture</li> <li>• photographs</li> <li>• technological and industry items</li> <li>• textiles</li> <li>• works on paper and canvas</li> </ul>
<p><b><i>objects</i></b> may include</p>	<ul style="list-style-type: none"> <li>• physical objects such as stone tools, Aboriginal-built fences and stockyards, scarred trees, the remains of fringe camps</li> <li>• material deposited on the land, such as middens</li> <li>• the ancestral remains of Aboriginal people</li> <li>• stones and stone tools</li> <li>• art and artworks</li> <li>• shells</li> <li>• non-human bones and organic materials</li> </ul>
<p><b><i>Aboriginal cultural protocols</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> </ul>

	<ul style="list-style-type: none"> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of objects and human remains</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• ways in which consultations should be conducted</li> </ul>
<b><i>cultural authorities</i></b> may include:	Cultural authority refers to the most appropriate senior person/s that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder, Aboriginal Land Council, etc.
<b><i>limitations</i></b> may relate to:	<ul style="list-style-type: none"> <li>• access issues such as gender</li> <li>• consultation with and involvement of appropriate Community members</li> <li>• descriptive or explanatory writing</li> <li>• fragility of material</li> <li>• identification process</li> <li>• interpretation method</li> </ul>
<b><i>cultural requirements</i></b> may relate to:	<ul style="list-style-type: none"> <li>• access to material and associated research</li> <li>• any ceremony or procedure that should be carried out around the handling and/or moving of material</li> <li>• storage of material</li> <li>• the way material should be transported</li> <li>• use of equipment or tools</li> <li>• who can describe or handle material</li> <li>• who can view or be around material</li> </ul>
<b><i>specific requirements</i></b> may relate to:	<ul style="list-style-type: none"> <li>• additional protection</li> <li>• cultural protocols, including Indigenous protocols</li> <li>• de-acclimatisation periods for sensitive items</li> <li>• environmentally controlled packaging</li> <li>• object moving equipment</li> <li>• object support systems for moving or transfer</li> <li>• preventive pest management processes</li> <li>• use or non-use of certain items</li> </ul>

## **Unit Sector(s)**

Aboriginal-sites work

## AHCASW306A Use technology in Aboriginal-sites work

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Unit Descriptor

This unit will provide participants with an awareness of the technology and tools available to assist them in their role as an Aboriginal-sites worker and defines the standard required to operate handheld PDAs in sites location and recording; map reading; use digital devices to photograph/record sites, landscapes and objects.

### Application of the Unit

This unit applies to Aboriginal-sites workers utilising technology and other tools to assist them in their work. Aboriginal-sites workers will be working on Country using technological tools to locate and record details of Aboriginal cultural sites, cultural landscapes and cultural material, both on-site as well as recording or processing the information data in an office environment. This unit is also applicable to the work of repatriation workers and anthropologists.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

### Employability Skills Information

This unit contains employability skills

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised



unit of competency.

text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Apply information literacy skills to meet needs	<p>1.1 Exact nature and extent of <i>information needs</i> for <i>Aboriginal-sites</i> work undertaken in accordance with <i>Aboriginal cultural protocols</i> are determined</p> <p>1.2 The relevant <i>Information Management Systems (IMS)</i> and their applications for Aboriginal-sites are identified</p> <p>1.3 Effective <i>search strategies</i> are developed and appropriate <i>search tools</i> to locate and record information are selected</p> <p>1.4 Aboriginal <i>cultural requirements</i> are followed for access and handling of Aboriginal <i>cultural material</i> and cultural information</p> <p>1.5 <i>Copyright and licensing issues</i> related to access and use of Aboriginal <i>cultural material</i> and cultural information are recognised and applied</p>
2. Set up and use handheld personal digital assistant (PDA) device	<p>2.1 The basic operating and menu settings are identified and set</p> <p>2.2 The screen environment is navigated and manipulated according to needs</p> <p>2.3 Screen icons and access to applications are customised where applicable</p> <p>2.4 The PDA is used to locate and record location and details of the Site and/or cultural landscape, and the output is saved and edited where applicable</p> <p>2.5 The usefulness and relevance of information resources to the sites work context and client needs is assessed</p> <p>2.6 <i>Search results</i> are evaluated and search strategies are adjusted to meet information needs</p> <p>2.7 More <i>advanced features</i> available are identified and used as required</p>
3. Access and use basic connectivity devices	<p>3.1 The basic operating and menu settings are identified and set</p> <p>3.2 External digital devices, such as <i>computer devices</i> or <i>storage devices</i>, are connected to retrieve, copy, move and save information</p> <p>3.3 Physical <i>connectivity</i> of computer devices or storage devices to ensure operation and performance are checked</p> <p>3.4 A printer is connected either through a computer device or</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>directly and <i>printer settings</i> and print data are used</p> <p>3.5 <i>Audio-visual devices</i> are accessed to view and play a multimedia file</p> <p>3.6 Manuals, training booklets and/or online help or help-desks are used to overcome basic difficulties with applications</p>
<p>4. Maintain and operate UHF/HF radio and compass onsite in the context of sites work</p>	<p>4.1 Suitable radio equipment for communication needs is accessible on-site</p> <p>4.2 Radio devices are used effectively and correctly to meet communication needs of self and team onsite</p> <p>4.3 Any storage and transport requirements for compass equipment are applied</p> <p>4.4 A suitable directional compass is identified for orientation needs on-site</p> <p>4.5 Directional compass is used in conjunction with a geographical and topographical map to accurately move around onsite and map coordinates</p>
<p>5. Maintain knowledge of IMS trends and emerging technologies</p>	<p>5.1 Information about current industry trends and emerging technologies in relation to IMS and data collection methods is sourced</p> <p>5.2 Used <i>technology consumables</i> are identified and replaced in accordance with manufacturer's instructions and organisational requirements</p> <p>5.3 <i>Routine maintenance</i> is carried out and/or arranged to ensure equipment is maintained in accordance with manufacturer's instructions and organisational requirements</p> <p>5.4 <i>Equipment faults</i> are identified accurately and action is taken in accordance with manufacturer's instructions or fault is reported to designated person</p>

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- show respect for cultural diversity and sensitivity to social, cultural and professional values and beliefs
- use cultural sensitivity skills to be sensitive to cultural issues and respectful of different cultural practices
- use technology to access written, oral or visual source material
- conduct library and internet research
- comprehend and interpret written, oral or visual source material
- use literacy skills to interpret user manuals and help functions
- use technical skills to:
  - orient and locate using a compass and map
  - access and use audio-visual devices
  - apply power-management settings
  - back up and save information
  - connect and use peripheral devices
  - input user access details for accessing a personal computer (PC), possibly a networked environment
  - manage mouse (button usage) for different applications
  - navigate a digital graphical user interface (GUI)
  - save and move files to various locations
  - use a keyboard
- exercise discretion and confidentiality
- build and engender trust on sensitive issues with Aboriginal people
- apply sustainable environmental practices
- apply workplace health and safety requirements

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- people who have cultural authority for ceremony in that area or site
- maps and geographic / cultural associations
- audio-visual devices
- basic security functions
- basic software operation and associated applications
- map reading (including topographical maps) and longitudinal and latitudinal coordinates
- digital device functions
- digital device settings
- peripheral devices

- storage devices
- Cultural and Heritage Legislation or relevant NPWS legislation

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The delivery and assessment of this unit must comply with Aboriginal cultural protocols and Community protocols.</p> <p>The following evidence is critical to the judgement of competence in this unit. Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• use a digital device, including a handheld PDA</li> <li>• use menu features and navigate around the PDA and IMS functions</li> <li>• use device features to perform tasks</li> <li>• save results of work</li> <li>• read and understand maps in the context of Aboriginal-sites work, including topography maps</li> <li>• observe Aboriginal cultural protocols in the use of technology on Country</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Resources required for assessment include:</p> <ul style="list-style-type: none"> <li>• digital device</li> <li>• computer device</li> <li>• storage device</li> <li>• printer</li> <li>• use of handheld PDA application currently used in industry</li> <li>• appropriate learning and assessment support when required</li> </ul> <p>Where applicable, physical resources should include equipment modified for people with special needs.</p>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in working with secret sacred materials. The following examples are appropriate for</p>

	<p>this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate working on Country with industry related technological devices and maps</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning to assess candidate's knowledge of digital device operations</li> <li>• direct observation of candidate performing basic device-relevant practical skills</li> <li>• direct observation of candidate performing a sequence of routine tasks following clear directions</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <p>AHCILM306A Follow Aboriginal cultural protocols</p> <p>AHCASW308A Apply cultural significance to Aboriginal sites and landscapes</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country and/or in a keeping place facility for this unit.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Information needs</i></b> may relate to:</p>	<ul style="list-style-type: none"> <li>• authoritative source</li> <li>• currency</li> <li>• format of required information, such as: <ul style="list-style-type: none"> <li>• audio or video recordings</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• electronic files</li> <li>• images</li> <li>• texts</li> <li>• level of readership required, such as suitable for: <ul style="list-style-type: none"> <li>• different age groups</li> <li>• general interest</li> <li>• scholarly and academic research</li> <li>• school assignments</li> </ul> </li> <li>• purpose and intended outcomes of information search</li> </ul>
<i>Aboriginal-sites</i> may include:	<ul style="list-style-type: none"> <li>• shelters with deposits</li> <li>• open camp site</li> <li>• midden</li> <li>• shelter with midden</li> <li>• shelter with art</li> <li>• isolated find</li> <li>• undefined sites</li> <li>• axe grinding grooves</li> <li>• bora/ceremonial ring</li> <li>• burial site</li> <li>• rock engraving</li> <li>• scarred tree</li> <li>• carved tree</li> <li>• natural mythological site</li> <li>• restricted site</li> <li>• quarry</li> <li>• ochre quarry</li> <li>• fish trap</li> <li>• stone arrangement</li> <li>• mound (oven)</li> <li>• mia mia</li> <li>• waterhole (well)</li> <li>• contact/mission</li> <li>• abraded grooves</li> <li>• Aboriginal Place (declared under NPW Act)</li> <li>• Aboriginal Area (declared under NPW Act)</li> <li>• protected archaeological site</li> <li>• Conservation agreement</li> <li>• massacre</li> <li>• reserve</li> </ul>
<i>Aboriginal cultural protocols</i> may include:	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> </ul>

	<ul style="list-style-type: none"> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• ways in which consultations should be conducted</li> </ul>
<p><b><i>Information Management System (IMS)</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• Region or State based sites information management systems</li> <li>• Aboriginal Heritage Information Management System (AHIMS)</li> <li>• Aboriginal Cultural Heritage Register and Information System (ACHRIS)</li> <li>• Aboriginal Information Management System (AIMS)</li> <li>• Aboriginal Heritage Management System (AHMS)</li> <li>• Cultural Site Management System</li> </ul>

<p><i>Search strategies</i> may relate to:</p>	<ul style="list-style-type: none"> <li>• brainstorming keywords and phrases</li> <li>• consulting with colleagues regarding similar searches</li> <li>• consulting with topic experts or external organisations</li> <li>• internet searches</li> <li>• mind mapping</li> <li>• refining or narrowing search terms</li> <li>• searching, such as: <ul style="list-style-type: none"> <li>• electronic databases</li> <li>• external organisations' websites or remote databases</li> <li>• other library catalogues</li> <li>• own library catalogue</li> </ul> </li> <li>• subject headings</li> <li>• topics</li> <li>• use of Boolean operators</li> </ul>
<p><i>Search tools</i> may include:</p>	<ul style="list-style-type: none"> <li>• card/paper indexes</li> <li>• datasets</li> <li>• electronic databases</li> <li>• internet</li> <li>• online catalogues</li> <li>• print or online indexing services.</li> <li>• GPS and topography maps</li> </ul>
<p><i>Cultural requirements</i> may relate to:</p>	<ul style="list-style-type: none"> <li>• access to material and associated research</li> <li>• any ceremony or procedure that should be carried out around the handling and/or moving of material</li> <li>• storage of material</li> <li>• the way material should be transported</li> <li>• use of equipment or tools</li> <li>• who can describe or handle material</li> <li>• who can view or be around material.</li> </ul>
<p><i>Cultural material</i> is defined as objects, collections, artworks, specimens, structures or sites, and includes:</p>	<ul style="list-style-type: none"> <li>• archaeological material</li> <li>• books and manuscripts</li> <li>• built heritage</li> <li>• cultural sites and buildings</li> <li>• ethnographic material</li> <li>• film and audio-visual material</li> <li>• flora and fauna</li> <li>• furniture</li> <li>• photographs</li> <li>• technological and industry items</li> <li>• textiles</li> <li>• works on paper and canvas</li> </ul>



<b>Copyright and licensing issues</b> may include:	<ul style="list-style-type: none"> <li>• conditions of licensing agreements for digital resources</li> <li>• copyright declarations</li> <li>• copyright warnings</li> <li>• restrictions on access and use of electronic resources</li> <li>• restrictions regarding reproduction of works or parts of works</li> <li>• cultural intellectual copyright</li> <li>• protection of cultural knowledge</li> </ul>
<b>Search results</b> may include	<ul style="list-style-type: none"> <li>• bibliographic citations</li> <li>• explanation of search strategy used</li> <li>• information obtained from websites or external organisations</li> <li>• list of records retrieved from internet search</li> <li>• list of records retrieved from searching electronic databases</li> <li>• results of catalogue search</li> </ul>
<b>advanced features</b> may include:	<ul style="list-style-type: none"> <li>• advanced operations</li> <li>• customising standard settings</li> <li>• integrating with other devices</li> </ul>
<b>Computer devices</b> may include:	<ul style="list-style-type: none"> <li>• tablet</li> <li>• laptop</li> <li>• notebook</li> <li>• PDA</li> <li>• PC</li> </ul>
<b>Storage devices</b> may include:	<ul style="list-style-type: none"> <li>• disks: <ul style="list-style-type: none"> <li>• CD</li> <li>• DVD</li> <li>• Blu-Ray</li> </ul> </li> <li>• flash drives</li> <li>• server</li> <li>• solid-state hard drives</li> <li>• virtual devices</li> </ul>
<b>Connectivity</b> may include:	<ul style="list-style-type: none"> <li>• audio-visual</li> <li>• cable, wireless, infra-red or Bluetooth</li> <li>• internal or via universal serial bus (USB) dongle</li> <li>• network or stand-alone computer</li> <li>• ports: <ul style="list-style-type: none"> <li>• Firewire</li> <li>• high definition multimedia interface (HDMI)</li> <li>• printer</li> <li>• USB</li> </ul> </li> </ul>

<i>Printer settings</i> may include:	<ul style="list-style-type: none"> <li>• cartridge type</li> <li>• layout</li> <li>• number of copies</li> <li>• orientation</li> <li>• paper size</li> <li>• paper tray</li> </ul>
<i>Audio visual devices</i> may include:	<ul style="list-style-type: none"> <li>• data projector</li> <li>• external monitor</li> <li>• headset</li> <li>• microphone</li> <li>• speakers</li> <li>• webcam or digital camera</li> </ul>
<i>technology consumables</i> may include:	<ul style="list-style-type: none"> <li>• back-up tapes</li> <li>• CD-ROM</li> <li>• USB drives</li> <li>• print heads</li> <li>• printer ribbons and cartridges</li> <li>• toner cartridges</li> <li>• zip disks</li> </ul>
<i>routine maintenance</i> refers to:	<ul style="list-style-type: none"> <li>• in-house cleaning and servicing of equipment according to manufacturer's guidelines</li> <li>• periodic servicing by qualified or manufacturer approved, technician</li> <li>• regular checking of equipment</li> <li>• replacing consumables</li> </ul>
<i>Identifying equipment faults</i> refers to:	<ul style="list-style-type: none"> <li>• checking repairs have been carried out</li> <li>• encouraging feedback from work colleagues</li> <li>• keeping a log book of detected faults</li> <li>• preparing a maintenance program</li> <li>• regular back-ups of data</li> <li>• regular OHS inspections</li> <li>• routine checking of equipment</li> </ul>

## Unit Sector(s)

Aboriginal-sites work

## AHCASW307A Map Aboriginal cultural landscapes

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Unit Descriptor

This unit covers the process of mapping an Aboriginal cultural landscape on Country from an Aboriginal perspective.

### Application of the Unit

This unit applies to working on and off Country mapping Aboriginal cultural landscapes. The unit applies to working with lore/law men and women either as an autonomous Sites worker or under the supervision and cultural authority of Traditional Owner/s and/or Elder/s for specific Country and is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

### Employability Skills Information

This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the characteristics of Aboriginal cultural landscapes on Country	<p>1.1 Aboriginal <i>cultural landscapes</i> and associated sites and features of <i>cultural significance</i> are accurately identified</p> <p>1.2 The concept of lore/law in the land is determined and applied</p> <p>1.3 Aboriginal cultural landscapes in ecological and archaeological terms, Aboriginal cultural language and spiritual terms, and traditional Aboriginal economic terms are identified</p>
2. Investigate cultural and historical records of an Aboriginal cultural landscape	<p>2.1 Traditional understanding of the cycle of the seasons and meteorological phenomena, and of landform and vegetation Community types in a cultural landscape are researched</p> <p>2.2 Environmental <i>cultural knowledge, cultural connections</i> and relationships with the landscape that are passed down generationally are determined</p>
3. Identify Aboriginal cultural values links to cultural landscapes	<p>3.1 Cultural landscapes and links with Aboriginal cultural and Community knowledge are identified</p> <p>3.2 Creation stories, oral histories, kinship and totemic relationships to the cultural landscape are recounted</p> <p>3.3 Gender access, roles and usage as this relates to the cultural landscape are identified</p> <p>3.4 Aboriginal <i>cultural values</i> in cultural landscapes are identified</p> <p>3.5 Links between <i>archaeological evidence</i> to cultural landscapes are determined</p> <p>3.6 Indicators in the landscape that reveal traditional Aboriginal land management practices are identified</p>
4. Describe Aboriginal cultural practices and beliefs which maintain cultural connections to cultural landscapes	<p>4.1 The identification by <i>cultural authorities</i> of appropriate persons within Communities who hold cultural knowledge is performed</p> <p>4.2 Appropriate Cultural Knowledge holders and/or Cultural Manager for an Aboriginal cultural landscape are identified</p> <p>4.3 The range and interrelationship of <i>Aboriginal beliefs</i> and</p>

**ELEMENT****PERFORMANCE CRITERIA**

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Aboriginal cultural and ceremonial practices that maintain connection with the cultural landscape are researched and recounted

4.4 The associations of connection to Country through language, stories, song, dance and art is documented if appropriate

4.5 Appropriate measures to ensure adequate cultural maintenance of the cultural landscape are determined

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- collect and document cultural information
- identify cultural Knowledge Holders
- identify cultural value of landform types
- research and recount cultural and ceremonial practices
- operate according to Community guidelines and Aboriginal cultural protocols
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- discuss matters relating to traditional customs with the appropriate people according to Community protocols
- discuss gender roles in a culturally appropriate manner
- recognise general situations in regard to interaction of mainstream law and management with traditional customs
- carry out basic investigative research on areas of use of traditional customs
- observe protocols for entry to traditional lands
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from Traditional Owners/s, Elders, Supervisor, etc.
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.
- exercise discretion and confidentiality

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- designated cultural areas and features of Country, boundaries and extent of Country
- Aboriginal cultural values of landform types
- archaeological evidence of landform types
- creation stories, oral histories, kinship and totemic relationships to the cultural landscape
- key principles, values and practices of Aboriginal cultural knowledge
- Community lore/laws, customs and speaking rights
- connection to Country through stories, song, dance and art
- protocols and customs relating to disclosure of knowledge about Country
- Cultural and Heritage Legislation or relevant NPWS legislation
- sustainable environmental practices
- legislative and enterprise requirements relevant to workplace health and safety and the

environment

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.

In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of *Cultural Units* to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.

The evidence required to demonstrate competency in this unit must be relevant to workplace operations on Country and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge. Candidates must demonstrate evidence of the ability to:

- Explain Aboriginal cultural landscapes in ecological and archaeological terms, Aboriginal cultural, language and spiritual terms and traditional Aboriginal economic terms
- Relate creation stories, oral histories, kinship and totemic relationships to the cultural landscape
- Use information on sites, objects and cultural landscapes according to Community guidelines and Aboriginal cultural protocols
- Identify appropriate cultural authorities for a Community, Site and/or story and/or ceremony
- Research the range and interrelationship of Aboriginal cultural and ceremonial practices whereby connection with the cultural landscape is maintained

<p><b>Context of and specific resources for assessment</b></p>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting on Country</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> </ul> <p>Resources for assessment in this unit may include:</p> <ul style="list-style-type: none"> <li>• Culture and Heritage guidelines and legislation in different jurisdictions</li> <li>• State library and archival information</li> <li>• Burra Charter</li> <li>• Archaeology industry guidelines, procedures and policies</li> </ul>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in recognising and recording Aboriginal-sites, artefacts and cultural landscapes. The primary method of assessment for this unit should include participation on Country by candidates in simulated or actual work practices relevant to Sites work.</p> <p>The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate on Country and in Aboriginal communities describing and mapping Aboriginal cultural landscapes</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in Ceremony and/or Sites work related to the knowledge and skills outlined in this unit</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p>



	<p>AHCILM306A Follow Aboriginal cultural protocols</p> <p>AHCASW305A Work with Aboriginal ceremonial secret sacred materials</p> <p>AHCASW308A Apply cultural significance to Aboriginal-sites and landscapes</p> <p>AHCASW311A Use relevant legislation in Aboriginal-sites work</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>
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## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Cultural landscapes</i></b> may include:	<ul style="list-style-type: none"> <li>• places and areas made up of living stories that have connections to the past and can include natural resources, objects, customs and traditions (and their contexts)</li> <li>• places of land, sea and air where cultural and natural elements are considered together</li> </ul>
<b><i>Cultural significance</i></b> may include:	<ul style="list-style-type: none"> <li>• aesthetic, historic, scientific, social or spiritual value for past, present or future generations</li> <li>• significance embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects</li> </ul>
<b><i>Cultural knowledge</i></b> may include:	<ul style="list-style-type: none"> <li>• Aboriginal land, landscape features, rivers, lakes and sea resources and their uses, and the relationships between plants, animals and individuals, clans and Community</li> <li>• Aboriginal beliefs, values, spirituality, language, lore/law, customs, gender roles, kinship networks, factions, moieties, and speaking rights</li> <li>• ceremonies, rituals, stories, song, dance and art</li> <li>• traditional and current land management practices</li> <li>• Aboriginal-sites, places, objects, material and landscapes</li> <li>• names, locations and meanings</li> <li>• Aboriginal cultural protocols</li> </ul>

	<ul style="list-style-type: none"> <li>• Aboriginal cultural heritage</li> <li>• the cultural significance of Aboriginal knowledge</li> </ul>
<i>Cultural connections</i> may include:	<ul style="list-style-type: none"> <li>• totemic relationships with Ancestral beings which now form part of the cultural landscape</li> <li>• geographical locations</li> <li>• access to cultural sites, land and cultural landscapes</li> <li>• obligation relationships to protect and maintain place, species, sites and landforms</li> <li>• ceremonial duties</li> <li>• cultural knowledge duties</li> </ul>
<i>Aboriginal cultural values</i> may include:	<ul style="list-style-type: none"> <li>• aesthetic aspects</li> <li>• historic aspects</li> <li>• scientific aspects</li> <li>• social and spiritual elements</li> <li>• cultural knowledge</li> <li>• Ceremonial knowledge</li> <li>• lore/law</li> </ul>
<i>Archaeological evidence</i> may include:	<ul style="list-style-type: none"> <li>• Aboriginal material</li> <li>• objects</li> <li>• pigments</li> <li>• pollen</li> <li>• charcoal</li> </ul>
<i>Cultural authorities</i> may include:	<p>Cultural authority refers to the most appropriate senior person/s that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder, Aboriginal Land Council, etc.</p> <p>A ceremonial/cultural manager in terms of Aboriginal customary law means someone who does the work either under the direct supervision of the Aboriginal Owner or does the work that is authorised by the Owner. In a ceremony for example, the ceremonial manager(s) may provide the food and do the performance (work). Traditional roles and responsibilities swap over depending on a person's status in any given situation – i.e. – whose land / estate one is on for business.</p>
<i>Aboriginal beliefs</i> may refer to:	<ul style="list-style-type: none"> <li>• connection to Country</li> <li>• creation events</li> <li>• structure of Community such as lore/law men and women, elders and custodians</li> <li>• practicality and purpose</li> </ul>

	<ul style="list-style-type: none"><li>• appropriate behaviour, protocols and restrictions</li><li>• spiritual value of knowledge and stories</li><li>• communal ownership of some knowledge and material</li><li>• intergenerational ownership of some knowledge and material</li><li>• oral tradition of passing on knowledge and responsibilities</li><li>• roles as custodians of specified knowledge, ceremony, designs, information</li><li>• kinship and relationships</li><li>• storytelling</li></ul>
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## Unit Sector(s)

Aboriginal-sites work

# AHCASW308A Apply cultural significance to Aboriginal-sites and landscapes

## Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

## Unit Descriptor

This unit covers the theoretical and practical concept of cultural significance in relation to Aboriginal cultural sites and landscapes and uses the Burra Charter as the industry benchmark in assessing significance for culture and heritage work.

## Application of the Unit

This unit applies to those who are working on Country finding Aboriginal-sites and working to assess significance in landscapes on Country. The unit applies to working with lore/law men and women either as an autonomous Sites worker or under the supervision and cultural authority of Traditional Owner/s and/or Elder/s for specific Country. This unit is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

- AHCASW302A      Relate Aboriginal culture to sites work
- AHCILM306A      Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define significance within the industry context	<p>1.1 The role and prominence of the Burra Charter in the culture and heritage sector in Australia is investigated</p> <p>1.2 The Burra Charter definition of significance is researched</p> <p>1.3 The <b><i>Burra Charter process</i></b> is applied and the significance features in the process are incorporated in definitions</p>
2. Determine cultural significance	<p>2.1 Cultural Knowledge holders inform the decision-making process to determine the cultural significance of <b><i>Aboriginal-sites</i></b> and places</p> <p>2.2 The determination of Aboriginal people as the primary source of information about the <b><i>cultural significance</i></b> of an Aboriginal site and landscape is acknowledged</p> <p>2.3 Traditional knowledge and practices in managing Country and environment are acknowledged and respected</p> <p>2.4 <b><i>Aboriginal beliefs</i></b> embedded in a place of cultural significance are determined</p> <p>2.5 The embodiment of cultural significance in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects is recognised</p>
3. Conduct a significance assessment on an Aboriginal site	<p>3.1 The difference between an assessment of cultural significance and a statement of cultural significance is determined</p> <p>3.2 In consultation with colleagues, factors that may impact on the assessment are identified and incorporated into planning work</p> <p>3.3 In collaboration with <b><i>relevant experts</i></b>, information relevant to the assessment of cultural significance is collected</p> <p>3.4 The cultural significance of the site is assessed in accordance with the Burra Charter guidelines</p>

**ELEMENT****PERFORMANCE CRITERIA**

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- 3.5 In collaboration with relevant experts, a statement of cultural significance consistent with the assessment of cultural significance findings is prepared
- 3.6 Feedback from colleagues on statement of significance is sought

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- respect cultural diversity and sensitivity to social, cultural and professional values and beliefs
- use technology to access written, oral or visual source material
- conduct library and internet research
- comprehend written, oral or visual source material
- interpret written, oral or visual source material
- apply listening skills
- apply oral communication skills
- relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- exercise discretion and confidentiality
- record information accurately
- make field notes
- collaborate with other professionals in the field
- read maps
- record photographic material
- draw mud maps
- handle field tools
- undertake test pits or collaborate with expertise
- monitor surface disturbance
- apply mitigation skills

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- landscape archaeology (predictive), individual or in collaboration with expert
- Burra Charter
- vegetation identification
- geographic/geological identification features
- orientation and identification of location
- artefacts and stone objects identification
- compass/dumpy level use
- sustainable environmental practices
- workplace health and safety requirements
- Cultural and Heritage Legislation or relevant NPWS legislation

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and participation with Traditional Owners and/or Elders and custodians of that specific Country.</p> <p>In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of <i>Cultural Units</i> to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.</p> <p>Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• identify appropriate cultural authorities for a Community, place or for a Site</li> <li>• collaborate with relevant experts to complete an assessment of cultural significance and involvement in an ACHMP</li> <li>• adhere to Burra Charter process and guidelines</li> <li>• identify cultural information, material and cultural expression appropriate to be shared</li> <li>• identify groups to be consulted in relation to owners/custodians of cultural and Community knowledge, information and/or material</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• experts such as Archaeologists, Researchers, Soil Testers, etc. may provide useful assistance and</li> </ul>



	resources for the assessment of this unit
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess competency in understanding cultural significance. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate on Country identifying sites and collecting information for an assessment</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• examples of completed assessments of cultural significance, statements of significance, field notes, ACHMP reports and/or sections</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• AHCILM306A Follow Aboriginal cultural protocols</li> <li>• AHCILM404A Record and document Community history</li> <li>• AHCASW303A Identify and record Aboriginal-sites, artefacts and cultural landscapes</li> <li>• AHCASW305A Work with Aboriginal ceremonial secret sacred materials</li> </ul> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate,

accessibility of the item, and local industry and regional contexts) may also be included.	
<b><i>Burra Charter process</i></b> includes:	<ul style="list-style-type: none"> <li>• the cultural significance of a place and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions. Understanding cultural significance comes first, then development of policy and finally management of the place in accordance with the policy</li> <li>• the policy for managing a place must be based on an understanding of its cultural significance</li> <li>• policy development should also include consideration of other factors affecting the future of a place such as the owner's needs, resources, external constraints and its physical condition</li> </ul>
<b><i>Aboriginal-sites</i></b> may include	<ul style="list-style-type: none"> <li>• shelters with deposits</li> <li>• open camp site</li> <li>• midden</li> <li>• shelter with midden</li> <li>• shelter with art</li> <li>• isolated find</li> <li>• undefined sites</li> <li>• axe grinding grooves</li> <li>• bora/ceremonial ring</li> <li>• burial site</li> <li>• rock engraving</li> <li>• scarred tree</li> <li>• carved tree</li> <li>• natural mythological site</li> <li>• restricted site</li> <li>• quarry</li> <li>• ochre quarry</li> <li>• fish trap</li> <li>• stone arrangement</li> <li>• mound (oven)</li> <li>• mia mia</li> <li>• waterhole (well)</li> <li>• contact/mission</li> <li>• abraded grooves</li> <li>• Aboriginal Place (declared under NPW Act)</li> <li>• Aboriginal Area (declared under NPW Act)</li> <li>• protected archaeological site</li> <li>• Conservation agreement</li> <li>• massacre</li> </ul>

	<ul style="list-style-type: none"> <li>• reserve</li> </ul>
<i>cultural significance</i> may include:	<ul style="list-style-type: none"> <li>• aesthetic, historic, scientific, social or spiritual value for past, present or future generations</li> <li>• significance embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects</li> </ul>
<i>Aboriginal beliefs</i> may refer to	<ul style="list-style-type: none"> <li>• connection to Country</li> <li>• creation events</li> <li>• structure of Community such as lore/law men and women, elders and custodians</li> <li>• practicality and purpose</li> <li>• appropriate behaviour, protocols and restrictions</li> <li>• spiritual value of knowledge and stories</li> <li>• communal ownership of some knowledge and material</li> <li>• intergenerational ownership of some knowledge and material</li> <li>• oral tradition of passing on knowledge and responsibilities</li> <li>• roles as custodians of specified knowledge, ceremony, designs, information</li> <li>• kinship and relationships</li> <li>• storytelling</li> </ul>
<i>Relevant experts</i> may include	<ul style="list-style-type: none"> <li>• archaeologists</li> <li>• Traditional Owners and/or Elders</li> <li>• surveyors</li> <li>• anthropologists</li> <li>• environmental scientists</li> <li>• historians</li> <li>• researchers</li> </ul>

## Unit Sector(s)

Aboriginal-sites work

## AHCASW309A Interpret Aboriginal cultural landscape

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Unit Descriptor

This unit covers the process of interpreting cultural landscapes from an Aboriginal cultural and spiritual perspective. The unit also covers if and how this knowledge may be collected and provided to others.

### Application of the Unit

This unit applies to working on Country and the interpretation of cultural landscapes. The unit applies to working with lore/law men and women either as an autonomous Sites worker or under the supervision and cultural authority of Traditional Owner/s and/or Elder/s for specific Country. This unit is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

- AHCASW302A      Relate Aboriginal culture to sites work
- AHCILM306A      Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

### Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Investigate cultural knowledge	<p>1.1 The determination of Aboriginal people as the primary source of information about <i>cultural knowledge</i> is acknowledged</p> <p>1.2 The identification by <i>cultural authorities</i> of appropriate persons within communities who hold cultural knowledge is performed</p> <p>1.3 Cultural knowledge is accessed through reference to the appropriate knowledge holders and/or cultural manager</p> <p>1.4 Appropriate cultural authorities are consulted and approval to be on Country is obtained</p> <p>1.5 Boundaries and extent of Country are determined</p> <p>1.6 Ownership rights and intellectual property rights to Aboriginal cultural knowledge are established</p> <p>1.7 Parameters for access and access restrictions in transferring cultural knowledge and information are established</p> <p>1.8 Community lore/laws, customs and speaking rights about cultural knowledge are respected</p> <p>1.9 Key principles, values and practices of Aboriginal cultural knowledge are determined and recorded</p> <p>1.10 Relationships between cultural knowledge and Country are defined according to <i>Aboriginal cultural protocols</i></p> <p>1.11 The acquisition of the history of dispossession from Community sources and available resources is undertaken</p> <p>1.12 Lost connections to Country due to colonisation are recounted</p>
2. Acquire information	<p>2.1 Movement through Country/park/reserve is managed to minimise disturbance and degradation to the park/reserve and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>surrounding environments</p> <p>2.2 The relationships between <i>Aboriginal beliefs</i>, <i>Aboriginal-sites</i>, land features, seasons, artefacts, objects and spirituality are determined</p> <p>2.3 <i>Landscape</i> features and sites on Country, in accordance with their place and role in Dreaming, Aboriginal spirituality and local cultural practices and ceremony, are identified</p> <p>2.4 The association of connection to Country through language, stories, song, dance and art is made</p> <p>2.5 The role of lore and customs in matters of land, family, marriage, kinship, totem, clan and obligation is accounted for</p> <p>2.6 Fauna and flora used for food and medicine are identified and Aboriginal names and common names are used</p> <p>2.7 Knowledge on relationships of plants and animals is investigated from Aboriginal beliefs, land management and cultural perspectives</p> <p>2.8 Simple bush tucker food chains relevant to Country are defined and relationships to the cultural landscape determined</p>
3. Relate information on cultural knowledge to others	<p>3.1 Permissions from cultural authorities, relevant individuals and organisations for access, use and documented Aboriginal cultural information and material are sought and may be obtained or denied</p> <p>3.2 Information on Aboriginal cultural knowledge is provided to those who are authorised to possess that knowledge according to Community guidelines and Aboriginal cultural protocols</p> <p>3.3 Information on cultural knowledge is related in an appropriate format and medium according to Community guidelines and cultural protocols</p> <p>3.4 Requests for disclosure of information on Aboriginal cultural sites, landscapes and cultural material that infringes intellectual property rights of a group or Community are referred to appropriate persons. Requests for disclosure of information on aspects of cultural knowledge by unauthorised individuals are appropriately declined</p>

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- acquire cultural information
- operate according to Community guidelines and Aboriginal cultural protocols
- investigate, use, and document cultural knowledge
- identify locations and patterns of plants and animals in a specific area
- identify plants, animals and resources used for medicine and food
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from Traditional Owners/s, Elders, Supervisor, etc.
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
- exercise discretion and confidentiality

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- Aboriginal cultural customs and heritage
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- designated cultural areas and features of Country, boundaries and extent of Country
- key principles, values and practices of Aboriginal cultural knowledge
- Community lore/laws, customs and speaking rights
- connection to Country through stories, song, dance and art
- role of lore and customs in matters of land, family, marriage, kinship, totem, clan and obligation
- protocols and customs relating to disclosure of knowledge about Country
- when and how to relate and document information and when it is not appropriate according to cultural protocols
- Aboriginal communities and social structures
- history of dispossession in Australia
- Aboriginal history and impact of European colonisation
- dispossession and land rights legislation
- legislation and its impact on Aboriginal communities
- Cultural and Heritage Legislation or relevant NPWS legislation
- Aboriginal names for plants, animals and landscape features
- basic ecological concepts
- cultural knowledge about plant and animals relating to a particular Community, group or

region

- role and rights of indigenous peoples in maintaining and controlling cultural knowledge
- individuals who are authorised to possess cultural knowledge
- intellectual and cultural property rights
- legislative and enterprise requirements relevant to workplace health and safety and the environment
- ownership rights
- intellectual property rights and requirements
- copyright rights and requirements
- sustainable environmental practices
- workplace health and safety requirements

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.</p> <p>In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of <i>Cultural Units</i> to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.</p> <p>Particular care should be exercised in the delivery and assessment of training for this unit in relation to who is authorised to interpret and/or "tell the stories" and share knowledge of particular sites and landscapes.</p> <p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations on Country and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge. Candidates must demonstrate evidence of the ability to:</p>



	<ul style="list-style-type: none"> <li>• identify details of plant and animal species on Country, their Aboriginal names and their roles and place in the cultural landscape</li> <li>• collate information on Aboriginal culture and history for Country in culturally appropriate ways</li> <li>• collect and use information according to Community guidelines and cultural protocols</li> <li>• identify landscape features and sites on Country in accordance with their place and role in Dreaming, Aboriginal spirituality and local cultural practices and ceremony</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting on Country</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community who possess the cultural knowledge required for this unit</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> </ul>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in interpreting cultural landscapes. The primary method of assessment for this unit should include participation on Country by candidates in simulated or actual work practices relevant to Sites work.</p> <p>The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate on Country identifying sites, artefacts and describing cultural landscapes under the supervision of appropriate cultural authority</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in Ceremony and/or interpretation work related to the knowledge and skills outlined in this unit</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>

<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <p>AHCASW308A Apply cultural significance to Aboriginal sites and landscapes</p> <p>AHCASW302A Relate Aboriginal culture to sites work</p> <p>AHCILM306A Follow Aboriginal cultural protocols</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>
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## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Cultural knowledge</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• Aboriginal land, landscape features, rivers, lakes and sea resources and their uses, and the relationships between plants, animals and individuals, clans and Community</li> <li>• Aboriginal beliefs, values, spirituality, language, lore/law, customs, gender roles, kinship networks, factions, moieties, and speaking rights</li> <li>• ceremonies, rituals, stories, song, dance and art</li> <li>• traditional and current land management practices</li> <li>• Aboriginal-sites, places, artefacts, objects, material and landscapes</li> <li>• names, locations and meanings</li> <li>• Aboriginal cultural protocols</li> <li>• Aboriginal cultural heritage</li> <li>• the cultural significance of Aboriginal knowledge</li> </ul>
<p><b><i>Cultural authorities</i></b> may include</p>	<p>Cultural authority refers to the most appropriate senior person/s that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder,</p>

	<p>Aboriginal Land Council, etc.</p> <p>A ceremonial/cultural manager in terms of Aboriginal customary law means someone who does the work either under the direct supervision of the Aboriginal Owner or does the work that is authorised by the Owner. In a ceremony for example, the ceremonial manager(s) may provide the food and do the performance (work). Traditional roles and responsibilities swap over depending on a person's status in any given situation – ie – whose land / estate one is on for business.</p>
<p><b><i>Aboriginal cultural protocols</i></b> may include</p>	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• ways in which consultations should be conducted</li> </ul>
<p><b><i>Aboriginal beliefs</i></b> may refer to:</p>	<ul style="list-style-type: none"> <li>• connection to Country</li> <li>• creation events</li> <li>• structure of Community such as lore/law men and women, elders and custodians</li> <li>• practicality and purpose</li> <li>• appropriate behaviour, protocols and restrictions</li> <li>• spiritual value of knowledge and stories</li> <li>• communal ownership of some knowledge and material</li> <li>• intergenerational ownership of some knowledge and</li> </ul>

	<ul style="list-style-type: none"> <li>material</li> <li>• oral tradition of passing on knowledge and responsibilities</li> <li>• roles as custodians of specified knowledge, ceremony, designs, information</li> <li>• kinship and relationships</li> <li>• storytelling</li> </ul>
<i>Aboriginal-sites</i> may include	<ul style="list-style-type: none"> <li>• shelters with deposits</li> <li>• open camp site</li> <li>• midden</li> <li>• shelter with midden</li> <li>• shelter with art</li> <li>• isolated find</li> <li>• undefined sites</li> <li>• axe grinding grooves</li> <li>• bora/ceremonial ring</li> <li>• burial site</li> <li>• rock engraving</li> <li>• scarred tree</li> <li>• carved tree</li> <li>• natural mythological site</li> <li>• restricted site</li> <li>• quarry</li> <li>• ochre quarry</li> <li>• fish trap</li> <li>• stone arrangement</li> <li>• mound (oven)</li> <li>• mia mia</li> <li>• waterhole (well)</li> <li>• contact/mission</li> <li>• abraded grooves</li> <li>• aboriginal Place (declared under NPW Act)</li> <li>• Aboriginal Area (declared under NPW Act)</li> <li>• protected archaeological site</li> <li>• Conservation agreement</li> <li>• massacre</li> <li>• reserve</li> </ul>
<i>Cultural landscapes</i> may include:	<ul style="list-style-type: none"> <li>• places and areas made up of living stories that have connections to the past and can include natural resources, objects, customs and traditions (and their contexts)</li> <li>• places of land, sea and air where cultural and natural elements are considered together</li> </ul>

## **Unit Sector(s)**

Aboriginal-sites work

## AHCASW310A Move and store Aboriginal cultural material

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Unit Descriptor

This unit covers the protocols involved to handle, pack and unpack Aboriginal cultural material for movement and storage.

### Application of the Unit

This unit applies particularly to working around and with Aboriginal cultural materials and objects and focuses on the specific cultural and consultative requirements for sourcing, handling, and possibly interpreting Aboriginal cultural material. This unit is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

### Employability Skills Information

This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Source Aboriginal cultural material	<p>1.1 Traditional ownership of <i>cultural material</i> is confirmed</p> <p>1.2 The appropriate Traditional custodians and communities to determine suitable keeping places for cultural materials are consulted</p> <p>1.3 The identification by <i>cultural authorities</i> of appropriate persons within communities who hold <i>cultural knowledge</i> relevant to establishing any restrictions on access to materials is performed</p> <p>1.4 Permission and advice for the use of cultural material according to <i>Aboriginal cultural protocols</i> is sought</p> <p>1.5 Cultural material and <i>objects</i> are located, identified and assessed for suitability for moving</p> <p>1.6 Records are completed according to cultural protocols</p> <p>1.7 Issues and protocols in relation to the return of cultural material to local Aboriginal communities are researched</p>
2. Determine movement and storage requirements	<p>2.1 Legislative and occupational health and safety requirements are implemented</p> <p>2.2 The scope of work required for <i>movement and storage</i> of cultural material is assessed and documented</p> <p>2.3 Organisational procedures and guidelines and specific requirements are identified and confirmed with relevant personnel</p> <p>2.4 Future storage requirements are assessed with relevant personnel</p> <p>2.5 The need for specialist expertise is assessed and, if required, access to the expertise is arranged</p>
3. Handle and transfer Aboriginal cultural material	<p>3.1 Cultural material is identified, moved, stored, maintained and returned according to Aboriginal cultural requirements</p> <p>3.2 Aspects of material requiring repair or attention are noted</p> <p>3.3 Action within scope of own job role is taken or <i>relevant personnel</i> are referred to as required</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4 Specific Aboriginal cultural requirements are communicated to colleagues</p> <p>3.5 Appropriate <i>handling and moving</i> equipment is selected, and used safely</p> <p>3.6 Handling of cultural material is performed in a manner that protects individual items and assists efficient loading and unloading processes</p> <p>3.7 <i>Transportation documentation</i> is prepared</p> <p>3.8 Aboriginal cultural material is transferred to approved location</p>
4. Store cultural material according to Aboriginal cultural requirements	<p>4.1 Cultural material is installed, positioned or stored as required</p> <p>4.2 Specific storage needs of cultural material are based on knowledge of requirements for different types of materials</p> <p>4.3 Work areas are cleared and cleaned according to organisational procedures</p> <p>4.4 Feedback on own work is sought and areas for improvement are noted</p> <p>4.5 Records are stored according to organisational policies and procedures</p>



## Required Skills and Knowledge

### Required skills includes:

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#### Ability to:

- respect cultural diversity and sensitivity to social, cultural and professional values and beliefs
- be sensitive to cultural issues and respectful of different cultural practices
- build and engender trust on sensitive issues with Aboriginal people
- handle, transfer and store culturally sensitive material
- pack and unpack materials, artefacts and objects
- load and unload materials, artefacts and objects
- assess suitability of movement of material
- use technology to access written, oral or visual source material
- carry out library and internet research
- comprehend written, oral or visual source material
- interpret written, oral or visual source material
- apply listening skills
- apply oral communication skills
- relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- exercise discretion and confidentiality

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- cultural authority for ceremony in that area or site
- ownership relationships for secret, sacred material
- selection and use of handling, storage and transport systems
- record-keeping
- organisational procedures and guidelines
- Cultural and Heritage Legislation or relevant NPWS legislation
- sustainable environmental practices
- workplace health and safety requirements

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment</p>
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Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.</p> <p>In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of <i>Cultural Units</i> to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.</p> <p>Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• identify appropriate cultural authorities for a Community, place or for a Site</li> <li>• apply knowledge of issues that frame the development of cultural protocols</li> <li>• consult effectively with Traditional Owners, Cultural managers and relevant Community representatives about the handling, access to and display of cultural material</li> <li>• observe Aboriginal cultural protocols, follow collection management practices and industry requirements when moving, storing, displaying and maintaining cultural material</li> <li>• involve and collaborate with other industry experts in the handling, moving and storage of cultural material</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> <li>• appropriately qualified and experienced museum personnel and cultural heritage curators</li> </ul>

<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in moving and storing cultural materials. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate working on Country or in a keeping place facility consulting and/or working with materials. Prior approval and permission should be obtained for the Assessor from any Traditional Owners and/or Cultural managers involved</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in Ceremony and/or Sites work related to the knowledge and skills outlined in this unit</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <p>AHCILM306A Follow Aboriginal cultural protocols</p> <p>AHCASW308A Apply cultural significance to Aboriginal-sites and landscapes</p> <p>AHCILM404A Record and document Community history</p> <p>AHCASW305A Work with Aboriginal ceremonial secret sacred materials</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country and/or in a keeping place facility for this unit.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if

<p>used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Cultural material</i></b> is defined as objects, collections, artworks, specimens, structures or sites, and includes:</p>	<ul style="list-style-type: none"> <li>• archaeological material</li> <li>• books and manuscripts</li> <li>• built heritage</li> <li>• cultural sites and buildings</li> <li>• ethnographic material</li> <li>• film and audio-visual material</li> <li>• flora and fauna</li> <li>• furniture</li> <li>• photographs</li> <li>• technological and industry items</li> <li>• textiles</li> <li>• works on paper and canvas</li> </ul>
<p><b><i>Cultural authorities</i></b> may include:</p>	<p>Cultural authority refers to the most appropriate senior person/s that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder, Aboriginal Land Council, etc.</p> <p>A ceremonial/cultural manager in terms of Aboriginal customary law means someone who does the work either under the direct supervision of the Aboriginal Owner or does the work that is authorised by the Owner. In a ceremony for example, the ceremonial manager(s) may provide the food and do the performance (work). Traditional roles and responsibilities swap over depending on a person's status in any given situation – ie – whose land / estate one is on for business.</p>
<p><b><i>Cultural knowledge</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• Aboriginal land, landscape features, rivers, lakes and sea resources and their uses, and the relationships between plants, animals and individuals, clans and Community</li> <li>• Aboriginal beliefs, values, spirituality, language, lore/law, customs, gender roles, kinship networks, factions, moieties, and speaking rights</li> <li>• ceremonies, rituals, stories, song, dance and art</li> <li>• traditional and current land management practices</li> <li>• Aboriginal-sites, places, artefacts, objects, material and landscapes</li> <li>• names, locations and meanings</li> <li>• Aboriginal cultural protocols</li> </ul>

	<ul style="list-style-type: none"> <li>• Aboriginal cultural heritage</li> <li>• the cultural significance of Aboriginal knowledge</li> </ul>
<i>Aboriginal cultural protocols</i> may include:	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• ways in which consultations should be conducted</li> </ul>
<i>Objects</i> may include	<ul style="list-style-type: none"> <li>• physical objects such as stone tools, Aboriginal-built fences and stockyards, scarred trees, the remains of fringe camps</li> <li>• material deposited on the land, such as middens</li> <li>• the ancestral remains of Aboriginal people</li> <li>• stones and stone tools</li> <li>• art and artworks</li> <li>• shells</li> <li>• non-human bones and organic materials</li> </ul>
<i>Movement and storage</i> may be:	<ul style="list-style-type: none"> <li>• externally</li> <li>• internally (within organisation or same building)</li> <li>• short and long distance</li> <li>• short and long-term storage</li> </ul>
<i>Organisational procedures and guidelines</i> may relate to:	<ul style="list-style-type: none"> <li>• cleaning</li> <li>• conservation</li> <li>• environment</li> </ul>

	<ul style="list-style-type: none"> <li>• handling methods</li> <li>• national and international standards for moving and storing materials</li> <li>• purchasing</li> <li>• security</li> <li>• storage arrangements</li> </ul>
<i>Specific requirements</i> may relate to:	<ul style="list-style-type: none"> <li>• additional protection</li> <li>• cultural protocols, including Indigenous protocols</li> <li>• de-acclimatisation periods for sensitive items</li> <li>• environmentally controlled packaging</li> <li>• object moving equipment</li> <li>• object support systems for moving or transfer</li> <li>• preventive pest management processes</li> <li>• use or non-use of certain items</li> </ul>
<i>Relevant personnel</i> may include:	<ul style="list-style-type: none"> <li>• couriers</li> <li>• destination personnel</li> <li>• owners of collection material</li> <li>• specialist advisers</li> <li>• store staff</li> <li>• transportation personnel</li> </ul>
<i>Handling and moving equipment</i> may include:	<ul style="list-style-type: none"> <li>• acid-free interleaving or wrapping</li> <li>• CD and DVD cases</li> <li>• containers</li> <li>• coverings</li> <li>• cushioning material</li> <li>• enclosures</li> <li>• folders</li> <li>• gloves</li> <li>• negative sleeves</li> <li>• packing/cotton tape and dispenser</li> <li>• protective enclosures, such as: <ul style="list-style-type: none"> <li>• boxes</li> <li>• canisters</li> <li>• crates</li> <li>• tubing</li> </ul> </li> <li>• protective wrapping, such as: <ul style="list-style-type: none"> <li>• bubble wrap</li> <li>• cardboard</li> <li>• foam packaging</li> </ul> </li> <li>• scissors</li> <li>• trolleys</li> </ul>

	<ul style="list-style-type: none"><li>• trucks</li><li>• tools, such as:<ul style="list-style-type: none"><li>• hammers</li><li>• screw drivers</li><li>• utility knives</li></ul></li></ul>
<i>Transportation documentation</i> may include:	<ul style="list-style-type: none"><li>• delivery details</li><li>• cart notes</li><li>• pro-forma</li><li>• packaging and handling notes</li><li>• inventory</li><li>• instructions</li></ul>

## Unit Sector(s)

Aboriginal-sites work

# AHCASW311A Apply relevant legislation in Aboriginal-sites work

## Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

## Unit Descriptor

This unit describes the knowledge and skills required by the Aboriginal-sites worker to work within the constructs of relevant legislation in their work with Aboriginal-sites, cultural materials and cultural landscapes.

## Application of the Unit

This unit applies to Aboriginal-sites workers working on Country or in other culture and heritage contexts where there are legislative requirements in place.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Nil

## Employability Skills Information

This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research the relevant legislation	<p>1.1 The scope and coverage of legislation for the relevant jurisdiction is identified</p> <p>1.2 An understanding of the purpose of legislation and amendments that comply with environmental and sustainability requirements is applied over time</p> <p>1.3 Roles and influences of key stakeholders as outlined in the applicable legislation are defined</p>
2. Identify and interpret relevant legislative provisions	<p>2.1 The provisions of the relevant and applicable legislation and case law precedents are identified and determined</p> <p>2.2 <b>Compliance</b> requirements are clarified to confirm understanding and to ensure consistency of interpretation and application</p> <p>2.3 Any <b>competing interests</b> arising from different pieces of legislation with jurisdiction over the one Aboriginal cultural site, landscape or material are interpreted</p> <p>2.4 <b>Social justice principles</b> are incorporated into interpretation of legislative provisions</p> <p>2.5 Terms and definitions in the legislation are interpreted correctly</p>
3. Identify stakeholder requirements	<p>3.1 Needs of <b>clients and stakeholders</b> in relation to relevant legislation are identified</p> <p>3.2 Client and stakeholder situation is analysed and legislative provisions that apply to the circumstances are identified</p> <p>3.3 Own <b>Aboriginal-sites</b> work is conducted in accordance with legislative requirements and following <b>Aboriginal cultural protocols</b> and values</p> <p>3.4 Own limitations and professional boundaries are recognised</p> <p>3.5 The need for assistance is recognised and referrals to expert advisors or advisory organisations are provided</p>
4. Identify strategies in response to the client's needs	<p>4.1 Strategies to apply legislative provisions to the factual circumstances of the case are identified and provided</p> <p>4.2 A range of legal and non-legal strategies is determined according to the needs of the client and stakeholders and taking into consideration all applicable legislative provisions and regulations</p> <p>4.3 Key concepts and understandings of legislative requirements are related to stakeholders in culturally appropriate ways</p>

**ELEMENT****PERFORMANCE CRITERIA**

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- 4.4 Compliance requirements are communicated to clients and stakeholders
  - 4.5 Options and possible outcomes to clients and stakeholders are communicated clearly in culturally appropriate ways
  - 4.6 Clients and stakeholders are supported to achieve appropriate 'best possible' outcomes

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- read and interpret legislation and legal documents
- communicate legal concepts and legislative language
- provide stakeholders with an understanding of legislative requirements
- advise clients and stakeholders of compliance requirements
- demonstrate understanding of and adherence to own work role and responsibilities
- follow organisation policies, protocols and procedures
- work collaboratively with colleagues, Community services professionals and other services
- respect cultural diversity and sensitivity to social, cultural and professional values and beliefs
- use technology to access written, oral or visual source material
- research library and internet
- comprehend and evaluate written, oral or visual source material
- interpret written, oral or visual source material
- listen effectively
- use oral communication skills
- relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- exercise discretion and confidentiality

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- Cultural and Heritage Legislation or relevant NPWS legislation
- interpretation of legislation including case law precedents
- social justice principles
- organisations to which appropriate referrals can be made
- other legislation that may impact on the situation
- legal system of common law and statute law
- legal structures involving tribunals, local court, district court, supreme court etc.
- sustainable environmental practices

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment</p>
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Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with Traditional Owners and/or Elders and custodians of the Country in question.</p> <p>Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• identify appropriate and relevant legislation and knowledge of relevant compliance requirements affecting Aboriginal-sites work in a specified jurisdiction</li> <li>• apply the relevant legislation to the circumstances appropriately and accurately</li> <li>• use referral options and other expertise to assist in interpreting and applying legislative requirements</li> <li>• communicate legal concepts and legislative language to Aboriginal clients and stakeholders in culturally appropriate way</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• relevant organisational policy, protocols and procedures</li> <li>• relevant legislation</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess competency in applying relevant legislation in Aboriginal-sites work. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate relating to and engaging Aboriginal persons and Aboriginal Community on Country</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in applying relevant legislation in Aboriginal-sites work related to the</li> </ul>

	<p>knowledge and skills outlined in this unit</p> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<b>Guidance information for assessment</b>	<p>This unit can be assessed independently; however holistic assessment practice with other Indigenous Land Management and Aboriginal-sites worker units of competency is encouraged.</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Compliance</i></b> may include:	<ul style="list-style-type: none"> <li>• meeting relevant laws, by laws and regulations or best practice or codes of practice to support compliance in environmental performance and sustainability at each level as required (such as Environmental Protection or Biodiversity Conservation Act):</li> <li>• international</li> <li>• commonwealth</li> <li>• state/territory</li> <li>• industry</li> <li>• organisation</li> </ul>
<b><i>Competing interests</i></b> may include:	<ul style="list-style-type: none"> <li>• application of rights under Native Title legislation versus rights under Aboriginal Land Rights legislation</li> </ul>
<b><i>Social justice principles</i></b> may include:	<ul style="list-style-type: none"> <li>• access</li> <li>• equity</li> <li>• participation</li> <li>• fairness</li> </ul>
<b><i>Clients and stakeholders</i></b>	<ul style="list-style-type: none"> <li>• sites workers</li> <li>• Aboriginal Land Councils</li> </ul>

may refer to:	<ul style="list-style-type: none"> <li>• Traditional Owners</li> <li>• Cultural managers</li> <li>• Aboriginal communities</li> <li>• other culture and heritage providers</li> </ul>
<b>Aboriginal-sites</b> may include	<ul style="list-style-type: none"> <li>• shelters with deposits</li> <li>• open camp site</li> <li>• midden</li> <li>• shelter with midden</li> <li>• shelter with art</li> <li>• isolated find</li> <li>• undefined sites</li> <li>• axe grinding grooves</li> <li>• bora/ceremonial ring</li> <li>• burial site</li> <li>• rock engraving</li> <li>• scarred tree</li> <li>• carved tree</li> <li>• natural mythological site</li> <li>• restricted site</li> <li>• quarry</li> <li>• ochre quarry</li> <li>• fish trap</li> <li>• stone arrangement</li> <li>• mound (oven)</li> <li>• mia mia</li> <li>• waterhole (well)</li> <li>• contact/mission</li> <li>• abraded grooves</li> <li>• Aboriginal Place (declared under NPW Act)</li> <li>• Aboriginal Area (declared under NPW Act)</li> <li>• protected archaeological site</li> <li>• Conservation agreement</li> <li>• massacre</li> <li>• reserve</li> </ul>
<b>Aboriginal cultural protocols</b> may include:	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law</li> </ul>

	<ul style="list-style-type: none"><li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li><li>• interpersonal ways of relating</li><li>• the talking of Community politics</li><li>• repatriation of artefacts</li><li>• issues of ownership (clans/nations)</li><li>• ownership of intellectual property</li><li>• acknowledging participation and ownership</li><li>• communicating about cultural material</li><li>• displaying cultural material</li><li>• handling cultural material</li><li>• identifying appropriate people to be consulted</li><li>• occasions when consultation is required</li><li>• ways in which consultations should be conducted</li></ul>
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## Unit Sector(s)

Aboriginal-sites work

## AHCASW312A Maintain an Aboriginal cultural site

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

### Unit Descriptor

This unit covers the processes and practices required to maintain Aboriginal cultural places.

### Application of the Unit

This unit applies to those working in Aboriginal communities and on Country in cultural landscapes and with cultural sites and objects. The unit applies to working with lore/law men and women, either as an autonomous Sites worker or under the supervision and cultural authority of Traditional Owner/s and/or Elder/s for specific Country. This unit is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

### Employability Skills Information

This unit contains employability skills



## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess maintenance work and relevant cultural protocols required	<p>1.1 Appropriate <i>cultural authorities</i> are identified and consulted according to <i>Aboriginal cultural protocols</i></p> <p>1.2 Approval is obtained from relevant Traditional Owners and Cultural managers for work to be carried out and for access to cultural place and materials for the specific persons who will conduct work</p> <p>1.3 Prior assessment of significance incorporated into strategies and plans for area and place are accessed to determine range of required and appropriate actions</p> <p>1.4 Any prior works not in keeping with significance are identified to determine appropriate maintenance actions</p> <p>1.5 Information on environmental systems and procedures is collected and provided to the work group where appropriate</p> <p>1.6 Machinery, tools and equipment and materials to carry out maintenance works are identified along with appropriate <i>techniques and tools</i></p> <p>1.7 Type and amount of materials required for maintenance work are estimated and documented</p> <p>1.8 Traditional Aboriginal repair/maintenance techniques and relevant <i>archaeological practices</i> and procedures are identified for implementation</p>
2. Prepare for maintenance	<p>2.1 Machinery, equipment and materials to carry out maintenance works are organised and pre-maintenance checks are undertaken</p> <p>2.2 Safety equipment and materials are prepared and assembled according to enterprise workplace health and safety policy</p>
3. Maintain condition of place	<p>3.1 Maintenance work is undertaken and recorded according to Aboriginal cultural protocols and approvals and requirements of work programs</p> <p>3.2 Continuous improvement strategies are applied to own work area of responsibility, including ideas and possible solutions to</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	<p>communicate to the work group and management</p> <p>3.3 Team members are supported to identify possible areas for improved practices in work area on Country</p> <p>3.4 Evidence of deterioration and wear is reported to Traditional Owners, Cultural managers and supervisor</p> <p>3.5 Site is made good on completion of maintenance works according to Aboriginal cultural protocols, supervisor's instructions and enterprise guidelines</p>
4. Protect cultural place	<p>4.1 Any breach of legislation or enterprise regulations is reported to Traditional Owners, Cultural managers and supervisor</p> <p>4.2 Protective barriers and signs are maintained according to enterprise procedures and Aboriginal cultural practices</p> <p>4.3 Workers/contractors are informed to ensure significance of place is maintained in terms of environmental sustainability requirements, no damage to surrounds, fabric or building, and removal of materials, equipment and tools at the completion of work</p>

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- respect cultural diversity and sensitivity to social, cultural and professional values and beliefs
- use machinery, tools and equipment
- carry out maintenance activities
- assess the required level of work
- use technology to access written, oral or visual source material
- research library and internet
- comprehend written, oral or visual source material
- interpret written, oral or visual source material
- listen effectively
- relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- exercise discretion and confidentiality
- identify hazards and adopt safe work practices
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- workplace health and safety requirements and responsibilities
- sustainable environmental practices
- traditional and Western modern techniques of site protection
- range of maintenance works undertaken on cultural sites
- enterprise procedures relating to the reporting of deterioration or damage to place or reporting of incidents
- site recording systems used by the enterprise or Community
- relevant archaeological practices and procedures
- Cultural and Heritage Legislation or relevant NPWS legislation

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The delivery and assessment of this unit must comply with Community protocols and be conducted in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.

In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of *Cultural Units* to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge. Candidates must demonstrate evidence of the ability to:

- identify appropriate cultural authorities for a Community, place or for a cultural site
- consult with appropriate cultural authorities and informed approval obtained for works and access of specific persons
- assess the level of work required to maintain the cultural place
- carry out maintenance activities in accordance with organisational, environmental sustainability and Aboriginal cultural requirements
- report deterioration or damage to place
- report incidents of breaches of legislation including vandalism
- determine the cultural rights and responsibilities when using Community knowledge, information and material
- identify of groups to be consulted in relation to owners/custodians of cultural and Community knowledge, information and/or material

<p><b>Context of and specific resources for assessment</b></p>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• candidates who have gained relevant knowledge and skills through their life and Aboriginal cultural experience</li> </ul> <p>Possible resources for assessment may include:</p> <ul style="list-style-type: none"> <li>• Burra Charter and Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places</li> <li>• enterprise and organisational procedures and policies</li> <li>• jurisdictional culture and heritage legislation</li> </ul>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in maintaining an Aboriginal cultural site. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate relating to and engaging Aboriginal persons and Aboriginal Community on Country</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in Aboriginal Sites maintenance related to the knowledge and skills outlined in this unit</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <p>AHCILM306A Follow Aboriginal cultural protocols</p> <p>AHCASW308A Apply cultural significance to Aboriginal sites and landscapes</p> <p>AHCASW312A Apply relevant legislation in</p>

	<p>Aboriginal sites work</p> <p>AHCASW301A Protect places of Aboriginal cultural significance</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>
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## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Cultural authorities</i></b> may include:</p>	<p>Cultural authority refers to the most appropriate senior person/s that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder, Aboriginal Land Council, etc.</p> <p>A ceremonial/cultural manager in terms of Aboriginal customary law means someone who does the work either under the direct supervision of the Aboriginal Owner or does the work that is authorised by the Owner. In a ceremony for example, the ceremonial manager(s) may provide the food and do the performance (work). Traditional roles and responsibilities swap over depending on a person's status in any given situation – ie – whose land / estate one is on for business.</p>
<p><b><i>Aboriginal cultural protocols</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment,</li> </ul>

	<ul style="list-style-type: none"> <li>values, beliefs and lore/law</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• how consultations should be conducted</li> </ul>
<i>Techniques and tools</i> may include:	<ul style="list-style-type: none"> <li>• traditional Aboriginal knowledge and processes</li> <li>• hand tools and power tools</li> <li>• excavation and construction equipment</li> <li>• surveying and sampling tools</li> <li>• recording and reporting technological equipment</li> <li>• location and geographic equipment</li> <li>• archaeological techniques and equipment</li> <li>• measurements made under different conditions</li> </ul>
<i>Archaeological practices</i> may include:	<ul style="list-style-type: none"> <li>• review of existing knowledge</li> <li>• survey</li> <li>• landscape context</li> <li>• Aboriginal land use</li> <li>• site definition</li> <li>• site recording</li> <li>• location information</li> <li>• geographic reporting</li> <li>• survey analysis</li> <li>• test excavation</li> <li>• artefact recording</li> <li>• attribute recording</li> <li>• archaeological reporting</li> </ul>

## Unit Sector(s)

Aboriginal-sites work





# AHCASW501A Survey and report on Aboriginal cultural sites

## Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

## Unit Descriptor

This unit covers the surveying and reporting of Aboriginal cultural sites.

## Application of the Unit

This unit applies to those working in Aboriginal communities and on Country in cultural landscapes and with cultural sites and objects. The unit applies to working with lore/law men and women either as an autonomous Sites worker or under the supervision and cultural authority of Traditional Owner/s and/or Elder/s for specific Country and is also applicable to the work of repatriation workers and anthropologists. This unit applies to all Aboriginal-sites workers. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify, communicate and consult with key stakeholders	<p>1.1 The identification by <i>cultural authorities</i> of appropriate persons within communities who hold cultural knowledge relevant to determining the <i>cultural significance</i> of Aboriginal places and heritage is applied</p> <p>1.2 Communication and consultation methodologies that place <i>Aboriginal cultural protocols</i> and values at the forefront and accommodate stakeholder concerns and interests are developed and implemented</p> <p>1.3 Traditional ownership of <i>Aboriginal sites, cultural material, and objects</i> is confirmed</p> <p>1.4 Approval is obtained from relevant Traditional Owners and Cultural managers for work to be carried out and for access to the Aboriginal site for the specific persons who will conduct work</p> <p>1.5 Working relationships with <i>key stakeholders</i> that assist in the management of culturally significant places are developed</p> <p>1.6 Client needs for deliverables required in a formal Sites survey report are scoped and documented</p> <p>1.7 Research on the <i>Burra Charter process</i> and on other <i>existing industry guidelines</i> to ensure proper processes are planned for is undertaken and applied to assessment processes</p>
2. Collect initial site data	<p>2.1 Site plans and maps are sourced and verified including topographical maps</p> <p>2.2 Required resources are identified and acquired</p> <p>2.3 A base plan of the site is prepared</p> <p>2.4 Site orientation is undertaken and location, geographic and operational boundaries are defined and verified</p> <p>2.5 Current land use and environmental problems and threats are identified and recorded</p> <p>2.6 Covenants that could affect the site or report are identified and recorded</p>

ELEMENT	PERFORMANCE CRITERIA
3. Compile a site inventory	<p>2.7 Climate and weather conditions are ascertained from historical data</p> <p>3.1 <i>Site context</i>, location and <i>site information data</i> is categorised and recorded accurately</p> <p>3.2 <i>Features data</i> is categorised and recorded accurately</p> <p>3.3 Cultural material, objects, properties and relevant physical characteristics are identified and recorded on site inventory</p> <p>3.4 Relevant <i>field research</i> is undertaken</p> <p>3.5 Appropriate <i>techniques and tools</i> and relevant <i>archaeological practices</i> and procedures are implemented</p> <p>3.6 Structural elements are located and existing services and facilities confirmed</p> <p>3.7 The presence, location and/or extent of other relevant site constraints are recorded</p> <p>3.8 Limits of acceptable change in the forms of deterioration and damage to the places of cultural significance are developed to legislative and enterprise requirements</p>
4. Review, assess and record the site data	<p>4.1 Engagement of <i>relevant expertise</i> and consultant services are obtained when required</p> <p>4.2 An assessment of cultural significance is conducted</p> <p>4.3 A statement of cultural significance is documented</p>
5. Determine the impact of threats to the site	<p>5.1 Threats to <i>culturally significant places</i>, both external and internal to the area under consideration, are identified</p> <p>5.2 A risk assessment of all threats to determine potential impact on sites and associated cultural landscape is undertaken</p> <p>5.3 Risk management strategies and protection/conservation measures to control risks are developed and implemented</p> <p>5.4 A risk management report that incorporates an impact analysis is developed and documented</p> <p>5.5 Policy changes required to address the threats are documented to enterprise requirements</p>
6. Document a site survey report	<p>6.1 Site information is documented into a site assessment report or site survey report</p> <p>6.2 Assessment report incorporates all relevant data from the site assessment in line with client needs and the requirements of relevant legislation and regulations</p> <p>6.3 Specific recommendations for remedial action of site conservation and mitigation of site problems are provided and recorded as appropriate</p> <p>6.4 Recommendations for appropriate risk controls of site hazards are formulated and documented</p>

**ELEMENT****PERFORMANCE CRITERIA**

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- 6.5 Survey and assessment data are stored and maintained as part of professional practice
- 6.6 Client-stakeholder is informed and advised of the content and implications of the report and a copy is presented

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- respect cultural diversity and sensitivity to social, cultural and professional values and beliefs
- perform work operations to Aboriginal Community protocols
- use contemporary mainstream and Aboriginal site surveying and archaeological techniques as required
- develop risk management strategies for a specified area
- engage external expertise and consultants
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading, interpreting following organisational policies and procedures, developing sequenced written instructions, recording information collected accurately and legibly
- use technology for accessing, interpreting and developing a wide range of visual and written information sources to complete written documentation
- co-ordinate and work within teams in Community environments
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, enabling clarification, negotiating and refining solutions and responding to a range of complex views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from diverse cultural, social and religious backgrounds and with a range of physical and mental abilities
- exercise discretion and confidentiality

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- site survey techniques, procedures and processes
- a range of archaeological and scientific concepts
- monitoring including fabric deterioration, damage and likely causes of deterioration and damage
- general understanding of impacts of natural resources, such as geological settings, ecological processes, and interaction between natural and cultural processes
- policies applying across all levels of government and within the specific region
- international treaties, agreements and charters
- Australian Natural Heritage Charter and the Burra Charter and Guidelines
- design, methodology and implementation of consultation processes
- policy analysis and impact statements

- the range of conservation strategies for cultural areas
- data submission systems and report documentation
- Cultural and Heritage Legislation or relevant NPWS legislation
- sustainable environmental practices
- workplace health and safety requirements

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.

In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of *Cultural Units* to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal Sites workers.

Candidates must demonstrate evidence of the ability to:

- identify appropriate Aboriginal cultural authorities for a Community, place or Site
- identify key stakeholders to be consulted in relation to owners/custodians of cultural and Community knowledge, information and/or material and cultural significance
- survey and assess Aboriginal cultural sites
- use appropriate techniques, tools and relevant archaeological practices
- incorporate the cultural significance, heritage values and conservation issues of an Aboriginal cultural site into report documentation
- identify threats and develop controls to mitigate and manage the risk of deterioration, damaging

	<p>incidents or loss of cultural integrity</p> <ul style="list-style-type: none"> <li>• develop a risk management report on Aboriginal cultural sites that incorporates an impact analysis</li> <li>• document a Site survey report on Aboriginal cultural sites including submissions to be completed</li> <li>• observe Aboriginal cultural protocols in dealing with stakeholders and land managers</li> <li>• describe natural resources and how they relate to cultural protocol, spirituality, art, environment, values, beliefs and lore/law</li> <li>• describe the cultural rights and responsibilities when using Community knowledge, information and material</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• on Country, a Community, educational or workplace setting including Aboriginal cultural keeping places</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> </ul> <p>Resources which may be useful in assessment for this unit include:</p> <ul style="list-style-type: none"> <li>• Burra Charter</li> <li>• Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places</li> </ul>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in the surveying and reporting of Aboriginal sites. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate on Country and/or in Aboriginal cultural keeping places protecting cultural sites and/or cultural material and objects</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in Ceremony and/or Sites work related to the knowledge and skills outlined in this unit</li> </ul>

	<p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p> <p>AHCASW312A Maintain an Aboriginal cultural site AHCASW302A Relate Aboriginal culture to sites work AHCILM306A Follow Aboriginal cultural protocols AHCASW303A Identify and record Aboriginal sites, objects and cultural landscapes AHCASW305A Work with Aboriginal ceremonial secret sacred materials AHCASW308A Apply cultural significance to Aboriginal sites and Landscapes</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Cultural authorities</i></b> may include</p>	<p>Cultural authority refers to the most appropriate senior person/s that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder, Aboriginal Land Council, etc.</p> <p>A ceremonial/cultural manager in terms of Aboriginal customary law means someone who does the work either under the direct supervision of the Aboriginal Owner or does the work that is authorised by the Owner. In a ceremony for example, the</p>



	ceremonial manager(s) may provide the food and do the performance (work). Traditional roles and responsibilities swap over depending on a person's status in any given situation – ie – whose land / estate one is on for business.
<b><i>Cultural significance</i></b> may include:	<ul style="list-style-type: none"> <li>• aesthetic, historic, scientific, social or spiritual value for past, present or future generations</li> <li>• significance embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects</li> </ul>
<b><i>Aboriginal cultural protocols</i></b> may include:	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• ways in which consultations should be conducted</li> </ul>
<b><i>Aboriginal sites</i></b> may include:	<ul style="list-style-type: none"> <li>• shelters with deposits</li> <li>• open camp site</li> <li>• midden</li> <li>• shelter with midden</li> <li>• shelter with art</li> <li>• isolated find</li> <li>• undefined sites</li> <li>• axe grinding grooves</li> <li>• bora/ceremonial ring</li> <li>• burial site</li> <li>• rock engraving</li> </ul>

	<ul style="list-style-type: none"> <li>• scarred tree</li> <li>• carved tree</li> <li>• natural mythological site</li> <li>• restricted site</li> <li>• quarry</li> <li>• ochre quarry</li> <li>• fish trap</li> <li>• stone arrangement</li> <li>• mound (oven)</li> <li>• mia mia</li> <li>• waterhole (well)</li> <li>• contact/mission</li> <li>• abraded grooves</li> <li>• Aboriginal Place (declared under NPW Act)</li> <li>• Aboriginal Area (declared under NPW Act)</li> <li>• protected archaeological site</li> <li>• Conservation agreement</li> <li>• massacre</li> <li>• reserve</li> </ul>
<b><i>Aboriginal objects</i></b> may include:	<ul style="list-style-type: none"> <li>• physical objects such as stone tools, Aboriginal-built fences and stockyards, scarred trees, the remains of fringe camps</li> <li>• material deposited on the land, such as middens</li> <li>• the ancestral remains of Aboriginal people</li> <li>• stones and stone tools</li> <li>• art and artworks</li> <li>• shells</li> <li>• non-human bones and organic materials</li> </ul>
<b><i>Key stakeholders</i></b> may include:	<ul style="list-style-type: none"> <li>• Aboriginal Land Councils</li> <li>• Indigenous Ranger groups</li> <li>• Traditional Owners and Cultural managers</li> <li>• Aboriginal communities and Clans</li> <li>• museums</li> <li>• Culture and Heritage government departments and representatives</li> <li>• National Parks personnel</li> <li>• sites workers</li> <li>• archaeologists</li> <li>• anthropologists</li> </ul>
<b><i>Burra Charter process</i></b> includes:	<ul style="list-style-type: none"> <li>• the cultural significance of a place and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions.</li> </ul> <p>Understanding cultural significance comes first, then</p>

	<p>development of policy and finally management of the place in accordance with the policy</p> <ul style="list-style-type: none"> <li>• the policy for managing a place must be based on an understanding of its cultural significance</li> <li>• policy development should also include consideration of other factors affecting the future of a place such as the owner's needs, resources, external constraints and its physical condition</li> </ul>
<b><i>Existing industry guidelines</i></b> may include:	<ul style="list-style-type: none"> <li>• the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places</li> </ul>
<b><i>Site context</i></b> may include:	<ul style="list-style-type: none"> <li>• landform</li> <li>• landform unit</li> <li>• vegetation</li> <li>• land use</li> <li>• proximity to water</li> <li>• open</li> <li>• closed</li> </ul>
<b><i>Site information data</i></b> may include:	<ul style="list-style-type: none"> <li>• general information</li> <li>• datum</li> <li>• zone</li> <li>• date recorded</li> <li>• site context</li> <li>• Aboriginal features</li> <li>• site dimensions</li> <li>• site plan</li> <li>• story</li> <li>• ceremony</li> <li>• site Aboriginal Community interpretation</li> <li>• site Aboriginal Community recommendations</li> <li>• site assessment</li> <li>• cultural analysis</li> <li>• scientific analysis</li> <li>• management recommendations</li> <li>• endorsement by cultural authority</li> </ul>
<b><i>Features data</i></b> may include:	<ul style="list-style-type: none"> <li>• type</li> <li>• material</li> <li>• description</li> <li>• dimensions</li> <li>• context</li> <li>• condition</li> <li>• site name</li> </ul>

	<ul style="list-style-type: none"> <li>• environment</li> <li>• plan</li> <li>• importance</li> <li>• recommended action</li> </ul>
<b>Field research</b> may include:	<ul style="list-style-type: none"> <li>• field observations and manual recording</li> <li>• identification of features</li> <li>• assessing condition</li> <li>• taking, preserving and examining samples</li> <li>• taking photographic records</li> <li>• obtaining geographic/longitudinal data</li> <li>• mapping of cycles of seasons and species</li> <li>• planning information collection to cover specific seasonal impacts</li> <li>• recording species, populations, densities and health of the species</li> <li>• establishing databases and loading records</li> </ul>
<b>Techniques and tools</b> may include:	<ul style="list-style-type: none"> <li>• traditional Aboriginal knowledge and processes</li> <li>• hand tools and power tools</li> <li>• excavation and construction equipment</li> <li>• surveying and sampling tools</li> <li>• recording and reporting technological equipment</li> <li>• location and geographic equipment</li> <li>• archaeological techniques and equipment</li> </ul>
<b>Archaeological practices</b> may include:	<ul style="list-style-type: none"> <li>• review of existing knowledge</li> <li>• survey</li> <li>• landscape context</li> <li>• Aboriginal land use</li> <li>• site definition</li> <li>• site recording</li> <li>• location information</li> <li>• geographic reporting</li> <li>• survey analysis</li> <li>• test excavation</li> <li>• artifact/object recording</li> <li>• attribute recording</li> <li>• archaeological reporting</li> </ul>
<b>Relevant expertise</b> may include	<ul style="list-style-type: none"> <li>• archaeologists</li> <li>• Traditional Owners and/or Elders</li> <li>• surveyors</li> <li>• anthropologists</li> <li>• environmental scientists</li> </ul>

	<ul style="list-style-type: none"> <li>• historians</li> <li>• researchers</li> </ul>
<i>Culturally significant places</i> may include	<ul style="list-style-type: none"> <li>• areas of non-Aboriginal activity</li> <li>• Aboriginal sites</li> <li>• landscapes</li> <li>• buildings and other structures</li> <li>• natural areas of Aboriginal cultural significance</li> <li>• historical events and monuments</li> <li>• areas of Aboriginal activity such as: <ul style="list-style-type: none"> <li>• burial</li> <li>• occupation and contact sites</li> <li>• engravings</li> <li>• grinding grooves</li> <li>• rock pictures</li> <li>• fish traps</li> <li>• middens</li> <li>• mounds</li> </ul> </li> </ul>

## Unit Sector(s)

Aboriginal-sites work

## AHCBA101A Support agricultural crop work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting agricultural crop work and defines the standard required to: prepare tools and equipment; undertake crop support activities; handle basic materials and equipment, and clean up after work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking agricultural cropping activities.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Prepare materials, tools and equipment for agricultural crop work</p>	<p>1.1.The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2.Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3.Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5.Cropping support is provided according to Occupational Health and Safety (OHS) requirements and according to workplace information.</p> <p>1.6.OHS hazards are identified and reported to the supervisor.</p>
<p>2. Undertake agricultural crop work as directed</p>	<p>2.1.Instructions and directions provided by supervisor are followed and clarification sought when necessary.</p> <p>2.2.Cropping work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3.Interactions with other staff and customers are carried out in a positive and professional manner.</p> <p>2.4.Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.</p> <p>2.5.Problems or difficulties in completing work to required standards or timelines are reported to supervisor.</p>
<p>3. Handle materials and</p>	<p>3.1.Waste material produced during cropping work is</p>

ELEMENT	PERFORMANCE CRITERIA
equipment	<p>stored in a designated area according to supervisor's instructions.</p> <p>3.2. Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines.</p> <p>3.3. A clean and safe work site is maintained while completing cropping activities.</p>
4. Clean up on completion of cropping work	<p>4.1. Materials are returned to store or disposed of according to supervisor's instructions.</p> <p>4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions.</p> <p>4.3. Work outcomes are reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safety procedures
- prepare materials, tools and equipment for cropping work
- undertake work as directed
- handle materials and equipment
- clean up on completion of work
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- safe work practices
- farm tools and equipment
- overview of agricultural cropping activities such as land preparation, seeding, fertilising, harvesting, baling, raking and loading.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare tools and equipment</li> <li>• undertake crop support activities</li> <li>• handle basic materials and equipment</li> <li>• clean up after work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Work tasks may include:	<ul style="list-style-type: none"> <li>• assistance with all activities associated with cropping such as:             <ul style="list-style-type: none"> <li>• land preparation</li> <li>• seeding</li> <li>• fertilising</li> <li>• harvesting</li> <li>• baling</li> <li>• raking</li> <li>• loading</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>removing weeds (rouging) or rocks from crops or fields</li> <li>routine maintenance of sheds and other workplaces.</li> </ul>
Tools and equipment may include:	<ul style="list-style-type: none"> <li>knives</li> <li>hand tools</li> <li>rope</li> <li>sack trucks</li> <li>fencing tools</li> <li>augers</li> <li>brooms.</li> </ul>
Hazards may include:	<ul style="list-style-type: none"> <li>solar radiation</li> <li>dust</li> <li>noise</li> <li>air- and soil-borne micro organisms</li> <li>chemicals and hazardous substances</li> <li>sharp hand tools and equipment</li> <li>manual handling</li> <li>holes</li> <li>slippery and uneven surfaces.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Broad acre cropping
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCBC201A Assist agricultural crop establishment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of applying assistance to others in preparing for agricultural crop establishment and defines the standard required to: carry out ground preparation of the area for planting; apply pre-planting soil treatments; calibrate the planting equipment; treat and plant seed; apply fertiliser with seed at sowing or as a separate operation; apply weedicides or herbicides under supervision; record all details of sowing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under close supervision with regular checking. Competency at this level requires the application of limited knowledge and skills to a range of agricultural crop establishment tasks, including assistance with vehicle and machinery preparation. The work undertaken is usually within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for agricultural crop establishment operations	<p>1.1. Instructions about planting are interpreted and clarified with the supervisor.</p> <p>1.2. Machinery, equipment and tools are selected and prepared for the task being undertaken.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.4. The environmental implications of the crop production plan are identified and discussed with the supervisor.</p> <p>1.5. Suitable personal protective equipment is selected, used and maintained.</p>
2. Prepare the site for crop establishment	<p>2.1. Old crop and other waste materials are removed and disposed of in full consideration of environmental implications.</p> <p>2.2. Soil treatment/amendments are applied according to soil test results and the supervisor's instructions.</p> <p>2.3. Site is worked according to the crop production plan.</p> <p>2.4. Crop protection is implemented according to enterprise guidelines.</p> <p>2.5. The planting pattern is marked out according to the crop production plan.</p> <p>2.6. Machinery, equipment and tools are operated according to enterprise guidelines.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Carry out establishment operations	3.1.Planting material is selected according to the type of crop and enterprise quality standards. 3.2.Planting material is treated according to the crop and supervisors instructions. 3.3.Planting material is handled and transported to the site with no signs of transport damage. 3.4.Planting is carried out according to the planting plan.
4. Complete establishment operation	4.1.Tools and equipment are cleaned and sterilised according to the manufacturer's specifications, enterprise procedures and regulations. 4.2.All containers, leftover fluids, waste and debris are disposed of safely and appropriately. 4.3.All required workplace records are completed accurately and promptly in accordance with enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions
- participate in teams and contribute to team objectives
- communicate with team members and supervisor
- read and interpret a range of workplace information
- calibrate equipment
- measure quantities of treatment
- determine spacings and planting patterns
- operate machinery to manufacturers specifications and enterprise procedures
- safely apply appropriate agricultural chemicals
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and

**REQUIRED SKILLS AND KNOWLEDGE**

ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- importance of field hygiene and quality control in regard to crop establishment
- operations of a range of crop establishment machinery
- the importance of correct timing and procedures for crop planting
- range of pre-planting soil treatments and their importance
- methods of waste disposal causing minimal impact on the environment
- OHS and environmental impacts of establishing crops.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out ground preparation of the area for planting
- apply pre-planting soil treatments
- calibrate the planting equipment
- treat and plant seed
- apply fertiliser with seed at sowing or as a separate operation
- apply weedicides or herbicides under supervision
- record all details of sowing.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Agricultural crops may include:	<ul style="list-style-type: none"> <li>• canola</li> <li>• wheat</li> <li>• hay</li> <li>• barley</li> <li>• oats</li> <li>• rice</li> <li>• triticale</li> <li>• maize</li> <li>• millet</li> <li>• chickpeas</li> <li>• cotton</li> <li>• faba beans</li> <li>• lucerne lupins</li> <li>• pigeon peas</li> <li>• sorghum</li> <li>• soybean</li> <li>• sugar</li> <li>• sunflower</li> <li>• other crops grown as part of a broadacre mixed farming enterprise not specifically named as horticultural crops.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Broadacre cropping
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCBC202A Assist agricultural crop maintenance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of providing assistance to others in maintaining agricultural crops and defines the standard required to: prepare machinery, equipment and tools to maintain crops; assist with cropping duties including weed control, pest and disease control, crop nutrition and paddock maintenance; report the presence of weeds, pests and disease in crops; record the details of crop maintenance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking. The work undertaken is usually within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for agricultural crop maintenance operations	<p>1.1. Instructions about crop maintenance activities are interpreted and clarified with the supervisor.</p> <p>1.2. Machinery, equipment and tools are selected and prepared for the task being undertaken.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.4. The environmental implications of the crop maintenance plan are identified and discussed with the supervisor.</p> <p>1.5. Suitable personal protective equipment is selected, used and maintained.</p>
2. Prepare for crop maintenance operations	<p>2.1. Machinery and vehicles are fuelled and routine checks are made for oil levels, tyre pressures, water levels and greasing points.</p> <p>2.2. Instructions are received concerning location of the day's work, special operating instructions or work procedures.</p>
3. Carry out maintenance operations	<p>3.1. Assistance is provided with the crop weed control program.</p> <p>3.2. Assistance is provided with the crop pest and disease control program.</p> <p>3.3. Assistance is provided with the crop nutrition program.</p> <p>3.4. Assistance is provided with paddock maintenance duties.</p> <p>3.5. Assistance is provided with irrigation duties where</p>

ELEMENT	PERFORMANCE CRITERIA
	appropriate.
4. Complete maintenance operation	<p>4.1. Tools and equipment are cleaned and sterilised according to the manufacturer's specifications, enterprise procedures and regulations.</p> <p>4.2. All containers, leftover fluids, waste and debris are disposed of safely and appropriately in accordance with enterprise requirements.</p> <p>4.3. All required workplace records are completed accurately and promptly in accordance with enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions at work
- participate in teams and contribute to team objectives
- communicate with team members and supervisor
- read and interpret a range of workplace information
- calibrate equipment
- measure quantities of treatment
- operate machinery to manufacturer's specifications and enterprise procedures
- safely apply appropriate agricultural chemicals
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- operations of a range of cropping machinery
- the importance of correct timing and procedures for crop maintenance
- weed control in crops

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• pest and disease control</li> <li>• crop nutrition</li> <li>• environmental impacts of crop maintenance</li> <li>• methods of waste disposal causing minimal impact on the environment.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare machinery, equipment and tools to maintain crops</li> <li>• assist with cropping duties including weed control, pest and disease control, crop nutrition and paddock maintenance</li> <li>• report the presence of weeds, pests and disease in crops</li> <li>• record the details of crop maintenance.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>
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<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Agricultural crops may include:	<ul style="list-style-type: none"> <li>• canola</li> <li>• wheat</li> <li>• hay</li> <li>• barley</li> <li>• oats</li> <li>• rice</li> <li>• triticale</li> <li>• maize</li> <li>• millet</li> <li>• chickpeas</li> <li>• cotton</li> <li>• faba beans</li> <li>• lucerne</li> <li>• lupins</li> <li>• pigeon peas</li> <li>• sorghum</li> <li>• soybean</li> <li>• sugar</li> <li>• sunflower</li> <li>• other crops grown as part of a broadacre mixed farming enterprise not specifically named as horticultural crops.</li> </ul>
Crop maintenance activities may include:	<ul style="list-style-type: none"> <li>• soil preparation</li> <li>• weed and pest control</li> <li>• crop nutrition</li> <li>• irrigation</li> <li>• sowing.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Broadacre cropping
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCBAC203A Assist agricultural crop harvesting

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the assistance provided to others in harvesting agricultural crops and defines the standard required to: prepare harvesting machinery and equipment to harvest crops; operate vehicles and machinery safely and as directed to support the harvesting team; carry out routine checks and refuelling of harvesting vehicles and machinery; dispose of waste liquids and harvest debris according to environmental procedures and record information as requested.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking. The work undertaken is usually within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for agricultural crop harvesting operations	<p>1.1. Instructions about crop harvesting activities are interpreted and clarified with the supervisor.</p> <p>1.2. Machinery, equipment and tools are selected and prepared for the task being undertaken.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.4. Suitable personal protective equipment is selected, used and maintained.</p>
2. Prepare harvesting machinery and vehicles for crop harvesting operations	<p>2.1. Harvesting machinery and vehicles are fuelled and routine checks are made for oil levels, tyre pressures, and water levels and greasing points.</p> <p>2.2. Instructions are received concerning location of the day's harvesting program, special operating instructions or work procedures.</p>
3. Complete harvesting operation	<p>3.1. Harvesting machinery and vehicles are cleaned according to enterprise procedures and the manufacturer's specifications.</p> <p>3.2. All containers, leftover fluids, waste and harvest debris is disposed of safely and appropriately.</p> <p>3.3. All required workplace records are completed accurately and promptly in accordance with enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions
- participate in teams and contribute to team objectives
- read and interpret a range of workplace information
- calibrate equipment
- measure quantities of treatment
- operate machinery to manufacturer's specifications and enterprise procedures
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- harvesting machinery and equipment basic maintenance
- harvesting machinery and equipment servicing
- hazard identification and safe work practices in harvesting
- types of crops and their characteristics
- crop hygiene requirements
- OHS requirements
- environmental impacts and procedures for crop harvesting.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare harvesting machinery and equipment to harvest crops</li> <li>• operate vehicles and machinery safely and as directed to support the harvesting team</li> <li>• carry out routine checks and refuelling of harvesting vehicles and machinery</li> <li>• dispose of waste liquids and harvest debris according to environmental procedures</li> <li>• record information as requested.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Agricultural crops may include:	<ul style="list-style-type: none"> <li>• canola</li> <li>• wheat</li> <li>• hay</li> <li>• barley</li> <li>• oats</li> <li>• rice</li> <li>• triticale</li> <li>• maize</li> <li>• millet</li> <li>• chickpeas</li> <li>• cotton</li> <li>• faba beans</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• lucerne</li> <li>• lupins</li> <li>• pigeon peas</li> <li>• sorghum</li> <li>• soybean</li> <li>• sugar</li> <li>• sunflower</li> <li>• other crops grown as part of a broadacre mixed farming enterprise not specifically named as horticultural crops.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Broadacre cropping
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBC204A Prepare grain storages

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of safely preparing storages, surrounding areas and equipment in readiness for receiving grain at an acceptable level of hygiene, and defines the standard required to: prepare the storage area for access by grain carriers; comply with Occupational Health and Safety (OHS) requirements for working in confined spaces; prepare grain storages by removing all residues and checking structures; erect simple temporary bulk material storages; prepare and test grain handling machinery and perform routine safety, servicing and maintenance procedures on tools, equipment and machinery.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in specialist grain storages or on grain farms who would normally operate under routine supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required. Preparing bulk material storages is usually within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to work in bulk material storage area	1.1. Work to be undertaken is interpreted from work program where necessary, and confirmed with supervisor. 1.2. OHS hazards are identified, risk assessed and suitable controls implemented. 1.3. Suitable personal protective equipment is selected, used and maintained. 1.4. Tools and equipment suitable for the work to be undertaken are selected, checked and maintained, if necessary. 1.5. Environmental implications of undertaking work in the bulk material storage area are identified, likely outcomes assessed and, if necessary, responsible action taken.
2. Prepare storage area	2.1. Storage site is cleaned of weeds, dust and spillage to organisation requirements. 2.2. Refuse is disposed of according to regulatory requirements. 2.3. Site is maintained in a clean and tidy condition according to organisation requirements.

ELEMENT	PERFORMANCE CRITERIA
	2.4.Storage site is prepared to meet OHS standards.
3. Prepare storages	3.1.Bulk material storages are prepared according to OHS standards. 3.2.Bulk material storages are cleaned of all residues according to organisation requirements. 3.3.Bulk material storages are checked for structural safety, damage or deterioration, and repaired or reported as required according to organisation requirements. 3.4.Temporary storages are prepared and erected to meet the needs of the organisation according to OHS standards.
4. Prepare bulk material handling machinery	4.1.Bulk material handling machinery is cleaned free of contamination and residues according to organisation requirements. 4.2.Bulk material handling equipment is adjusted and set according to organisation requirements. 4.3.Bulk material handling equipment is prepared ready for use according to manufacturer's instructions and OHS standards.
5. Complete maintenance operation	5.1.Workplace information is recorded clearly and accurately in the format and at the time required by the organisation. 5.2.Waste is collected and disposed of or recycled to minimise damage to the external environment. 5.3.Tools and equipment are cleaned and stored according to organisation work procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work procedures
- erect simple temporary bulk material storages
- check equipment and storage facilities, and identify current or impending faults
- handle and manoeuvre equipment

## REQUIRED SKILLS AND KNOWLEDGE

- complete pre-operational checks on basic tools and equipment
- perform routine safety, service and maintenance procedures on tools, equipment and machinery
- operate hand and independently powered tools and cleaning equipment to industry standards
- clean, secure and store machinery and equipment
- perform basic trouble shooting
- recognise and rectify minor operational faults
- handle hazardous substances (fuels) safely
- work in confined spaces
- use communication systems
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents.
- read and interpret manufacturer's specifications, work and maintenance plans, and Material Safety Data Sheets.

### Required knowledge

- range of construction methods, potential hazards, safety and structural requirements for storage
- erection/dismantling for types of temporary storage used by organisation
- organisation and commodity quality requirements for grain storage
- organisation hygiene requirements
- typical signs of structural damage to be documented and reported
- pre-operational and safety checks, servicing and maintenance procedures for tools and equipment
- general machine maintenance procedures
- machinery operating principles and operating methods
- machinery storage and protection methods
- cleaning and storage of machinery, equipment and materials
- environmental impacts associated with the operation of machinery and equipment
- appropriate action in contingency situations
- organisation requirements for protective equipment and safe practices in relation to OHS
- potential hazards associated with the operation of basic tools and equipment
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, environment and the use and control of machinery and equipment
- appropriate legislative requirements, manufacturer's instructions and organisation procedures/ instructions
- personal protective clothing and equipment and when and how it should be used
- organisational recording and reporting procedures.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare the storage area for access by grain carriers</li> <li>• comply with OHS requirements for working in confined spaces</li> <li>• prepare grain storages by removing all residues and checking structure</li> <li>• erect simple temporary bulk material storages</li> <li>• prepare and test grain handling machinery</li> <li>• perform routine safety, service and maintenance procedures on tools, equipment and machinery.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Storage areas may include:	<ul style="list-style-type: none"> <li>• permanent and/or temporary storages</li> <li>• the surrounding areas</li> <li>• entry, exit and site roads.</li> </ul>
Storage equipment may include:	<ul style="list-style-type: none"> <li>• fixed and/or portable grain handling equipment.</li> </ul>

### Unit Sector(s)

Unit sector	Broadacre cropping
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCBC205A Operate cane haulage vehicle

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing and operating a cane haulage vehicle in the sugar cane production industry and defines the standard required to: check haulage equipment prior to use; determine operating methods and load from farm maps and instructions; haul cane safely and efficiently; identify and report faults or breakdowns; conduct shutdown procedures; maintain records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working with the application of some judgement and discretion, and would be carried out with supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare cane haulage vehicle	<p>1.1. Routine pre-operational checks of cane haulage vehicle are completed to manufacturer's specifications and enterprise requirements.</p> <p>1.2. Cabin drill is carried out according to enterprise instructions and safety routines.</p> <p>1.3. Potential and existing Occupational Health and Safety (OHS) hazards in the workplace are recognised, risk assessed and minimised according to enterprise requirements.</p> <p>1.4. Suitable personal protective equipment is selected, used and maintained according to OHS requirements.</p>
2. Carry out cane haulage operations	<p>2.1. Vehicle is operated in a safe, controlled and correct manner and monitored for performance and efficiency.</p> <p>2.2. Cane is correctly selected, hauled and delivered efficiently, safely and co-operatively.</p> <p>2.3. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly.</p> <p>2.4. Environmental implications associated with cane haulage are identified, assessed and reported to the supervisor.</p>
3. Complete cane haulage operation	<p>3.1. Shut-down procedures for cane haulage vehicle are completed to manufacturer's specifications and enterprise requirements.</p> <p>3.2. Records are completed and maintained according to enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Malfunctions, faults, irregular performance and damage to cane haulage vehicle are identified, detailed and reported according to enterprise requirements.</p> <p>3.4. Cane haulage vehicle is cleaned, secured and stored according to OHS and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and apply safe work practices
- operate a variety of pushing and towing haulage vehicles
- demonstrate emergency operating procedures in normal and adverse conditions
- demonstrate safe and environmentally responsible workplace practices
- obtain relevant licences and permits
- read and interpret farm maps, operators manuals, manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs)
- effectively communicate faults, malfunctions and workplace hazards, report and maintain operational records
- comprehend and apply task instructions
- measure and calculate volumes, load weights, consumption and servicing requirements.

#### Required knowledge

- components, controls and features of cane haulage vehicles and their functions
- operating principles and operating methods for cane haulage vehicles
- principles of weight distribution with regard to load shifting and vehicle movement
- risks associated with the operation of cane haulage vehicles in different weather and difficult terrain conditions
- OHS and environment legislative and enterprise requirements
- environmental codes of practice with regard to the operation of machinery
- legislation and regulations with regard to the operation of cane haulage vehicles and licensing requirements
- cane haulage processes and spillage minimisation techniques
- cane harvesting processes as they relate to collection and haulage of harvests.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• check haulage equipment prior to use</li> <li>• determine operating methods and load from farm maps and instructions</li> <li>• haul cane safely and efficiently</li> <li>• identify and report faults or breakdowns</li> <li>• conduct shutdown procedures</li> <li>• maintain records.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Cane haulage vehicles may include:	<ul style="list-style-type: none"> <li>• trucks</li> <li>• infield transporters</li> <li>• tractor-trailer combinations</li> <li>• other cane transporters.</li> </ul>

### Unit Sector(s)

Unit sector	Broadacre cropping
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCBC301A Conserve forage

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the conservation of forage and defines the standard required to: prepare paddocks for forage conservation; apply forage conservation methods; harvest, prepare and store forage; record work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit is carried out under limited supervision from others with checking only related to overall progress. It is usually done within established routines, methods and procedures where some discretion and judgment is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for forage conservation	1.1. Determine forage conservation options from the production plan. 1.2. Identify risk factors for spoilage in forage conservation such as fire, vermin and air in silage. 1.3. Confirm that paddock conditions are suitable for forage production. 1.4. Prepare forage conservation machinery and equipment in accordance with manufacturer's specifications, Occupational Health and Safety (OHS) requirements and industry practice. 1.5. Ensure clear access to paddocks for harvesting and transport machinery. 1.6. Prepare storage facility for selected forage conservation method.
2. Prepare paddocks for forage conservation	2.1. Close paddock to stock access at appropriate time. 2.2. Report on the growth stage of the crop for harvest. 2.3. Control pests, weeds and diseases to maintain forage bulk and quality.
3. Make forage	3.1. Identify safety hazards and implement OHS procedures for forage conservation. 3.2. Monitor weather conditions to determine optimum time for harvest and to ensure quality. 3.3. Identify dry matter target and assess dry matter content of forage material for the forage operation. 3.4. Mow, condition, tedder and/or rake swaths depending on weather conditions and forage drying targets.

ELEMENT	PERFORMANCE CRITERIA
	3.5. Conduct harvesting activities in a safe, controlled and efficient manner. 3.6. Check equipment during harvesting operations regularly for wear and damage. 3.7. Bale, wrap, compact, seal or store forage in accordance with storage plan. 3.8. Load, transport, and store/compact (if required) forage in accordance with OHS and quality requirements. 3.9. Store forage so as to minimise risk of spoilage and combustion.
4. Complete operations	4.1. Complete records in accordance with quality assurance requirements and industry practice. 4.2. Dispose of all waste and debris to minimise environmental impacts. 4.3. Clean and service machinery and ancillary equipment in accordance with manufacturer's specifications, OHS requirements and industry practice. 4.4. Test or sample stored forage for quality. 4.5. Report on environmental impacts of forage conservation activities such as effluent run off.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret and implement forage conservation requirements
- operate and maintain forage harvesting equipment
- assess risks and implement OHS procedures for forage conservation
- perform harvesting operations
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening,

**REQUIRED SKILLS AND KNOWLEDGE**

clarifying information and consulting with supervisors as required

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- silage and hay conservation systems and methods
- factors affecting the quality of silage and hay
- dry matter content, quality and hygiene requirements
- range and functions of silage and haymaking machinery and equipment
- common weeds, pests and diseases associated with crops and pastures
- types and application of personal protective equipment
- legislation and regulations including licensing requirements in relation to forage operations
- risk factors including animal health and weather
- environmental risks and impacts of forage conservation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare paddocks for forage conservation
- apply forage conservation methods
- harvest, prepare and store forage
- record work activities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Conservation methods may include:	<ul style="list-style-type: none"> <li>• hay</li> <li>• silage</li> <li>• haylage</li> <li>• green chop.</li> </ul>
What safety hazards may be relevant	<ul style="list-style-type: none"> <li>• risk of fire from moisture content creating excessive temperature of hay stacks</li> <li>• overhead powerlines</li> <li>• exposure to noise and dust.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Broad acre cropping
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCBA302A Establish pastures and crops for livestock production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to establish pastures and crops for livestock production and defines the standard required to: assess existing pastures and crops to maximise livestock production; calibrate boom spray; seed drill and fertiliser spreader; identify pests and diseases; sow and monitor new pastures and crops; select pasture species; sowing method and application appropriate for optimal yield; manage grazing systems including weed and stubble control; control pests and weeds without damage to the crop or pasture.
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### Application of the Unit

<b>Application of the unit</b>	The unit applies to preparing machinery and equipment, ploughing, cultivating, seeding, applying any pre-planting treatments, maintaining machinery and equipment, and relevant record keeping. This standard requires the application of skills and knowledge to use specialised equipment to carry out seeding and fertiliser operations appropriate to soil and weather conditions.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for pasture and crop establishment	<p>1.1.Pasture and crop establishment program is sourced to meet production requirements and enterprise objectives.</p> <p>1.2.Pre-treatment (including inoculation) of seed is carried out prior to sowing where required.</p> <p>1.3.Sowing methods are selected appropriate to pasture species to maximise pasture survival.</p> <p>1.4.Fertilisers are applied according to crop/pasture needs and enterprise requirements.</p> <p>1.5.Machinery and equipment are selected for soils of property and operated according to manufacturer's instructions, Occupational Health and Safety (OHS) and enterprise requirements.</p>
2. Implement pasture and crop establishment program	<p>2.1.Machinery and equipment is prepared for sowing.</p> <p>2.2.Seeding and fertilising equipment is calibrated for correct rate and placement.</p> <p>2.3.Pasture and crop is sown for even germination and growth.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Fertilisers and pesticides are applied at correct rate and stage of growth.
3. Manage fodder production	3.1. Livestock are used to control stubble and fallow weeds as part of an integrated pest management program. 3.2. Grazing program ensures high production levels and sound pasture regrowth. 3.3. Grazing of crops and pastures is carefully controlled during pasture and crop establishment. 3.4. Grazing is managed to minimise damage to soil structure and to prevent erosion according to sustainable land management practices.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- operate machinery and equipment
- calibrate boom spray and drill and fertiliser spreader
- identify pests and diseases
- identify pasture and crop species (both seed and seedlings)
- identify and control weeds
- handle chemicals safely
- mix and inoculate seed
- interpret and implement crop and pasture production plans
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge



## REQUIRED SKILLS AND KNOWLEDGE

- types of grasses, legumes and crops
- types of seed inoculants and fertilizers
- seed and fertilizer placement for optimal germination and growth
- integrated weed control including chemical application, cultural practices and grazing management
- relevant provisions of the Native Vegetation Acts with particular attention to potential soil degradation and destruction of flora and fauna
- safe use of chemicals and machinery
- advantages and disadvantages of pasture and crop establishment programs
- timing of pasture and crop establishment
- OHS legislative requirements and safe work procedures
- procedures for minimising environmental impacts.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess existing pastures and crops to maximise livestock production
- calibrate boom spray, seed drill and fertiliser spreader
- identify pests and diseases
- sow and monitor new pastures and crops
- select pasture species, sowing method and application appropriate for optimal yield
- manage grazing systems including weed and stubble control
- control pests and weeds without damage to the crop or pasture.

**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Crop and pasture establishment methods may include:

- methods covering establishment in virgin ground
- establishment after a cropping program
- replacement of run down pasture
- changing the composition of pastures
- growing fodder crops
- growing cash crops
- re-establishing pastures after earthworks.

Sowing methods may include

- under sowing
- direct drilling
- band seeding
- broadcasting seed into stubbles or on to existing pasture.

**Unit Sector(s)**

**Unit sector**

Broad acre cropping

**Co-requisite units**

**Co-requisite units**

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCBC303A Prepare to receive grains/seeds

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing to test grains/seeds at receipt facilities and defines the standard required to: prepare the site and maintain hygiene; prepare testing equipment; liaise with growers and/or contractors; maintain segregation of grains/seeds and arrange storage.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under broad supervision within enterprise guidelines. The work is usually carried out within established routines, methods and procedures where some discretion and judgement are required in the selection of equipment and materials, organisation of work and the achievement of outcomes within time constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to work safely	<p>1.1. Hazards are identified and risks assessed and controlled in accordance with Occupational Health and Safety (OHS) requirements and industry practice.</p> <p>1.2. Appropriate personal protective equipment is selected and used in accordance with task requirements and industry practice.</p> <p>1.3. Relevant enterprise and/or industry OHS policies and procedures are observed.</p>
2. Maintain hygiene in receival storage facilities	<p>2.1. Receival and storage areas are cleaned and inspected in accordance with industry practice to ensure grain/seed quality.</p> <p>2.2. Receival area is free from potential contaminants.</p> <p>2.3. Facilities are inspected and items are identified and reported that require maintenance or repair.</p>
3. Prepare testing equipment for use	<p>3.1. Testing equipment is assembled in accordance with manufacturer's instructions.</p> <p>3.2. Equipment calibration is checked and recalibration arranged if required.</p> <p>3.3. Testing equipment is inspected and items requiring maintenance or repair identified and reported.</p> <p>3.4. Testing equipment is kept clean and free from residue.</p>
4. Prepare to provide service to	<p>4.1. All documentation and information is made available including conflict and dispute resolution</p>

ELEMENT	PERFORMANCE CRITERIA
growers/suppliers	<p>procedures.</p> <p>4.2.All documents and/or data are accessible and available to record all necessary information on receipt.</p>
5. Prepare for storage of grains/seed	<p>5.1.Arrangements are made for segregation of grain/seed according to enterprise standards and industry practice.</p> <p>5.2.Site transfer arrangements are made as required.</p> <p>5.3.Conveying equipment is inspected and items requiring maintenance or repair identified and reported.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and assess risks in grain/seed receipt area
- operation and maintenance of grain/seed testing equipment
- inspection and cleaning of receipt and storage areas and equipment
- grower/supplier information
- identify grain/seed types
- use of personal protective equipment
- identification of defects such as split grains/seeds, undersize, chaff, weed seeds
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- grain/seed receipt processes and industry practice
- calibration requirements for testing equipment

**REQUIRED SKILLS AND KNOWLEDGE**

- types of testing equipment such as protein, oil content, moisture etc.
- requirements for segregation, traceability and hygiene
- impact of residues including chemical
- industry practice, standards and quality assurance requirements
- legislation and regulations including OHS
- quality requirements in relation to grains receipt
- segregation strategies/methods
- dust control
- dispute resolution.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare the site and maintain hygiene
- prepare testing equipment
- liaise with growers and/or contractors
- maintain segregation of grains/seeds and arrange storage.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Seeds and grains may include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• temperate pastures</li> <li>• tropical pastures.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Broad acre cropping
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCBC304A Test grains/seeds on receipt

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of testing grains/seeds on receipt and defines the standard required to: identify different grains/seeds; conduct sampling and initial testing; record samples for further testing; communicate with customers and maintain records.
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### Application of the Unit

<b>Application of the unit</b>	This unit involves working under broad supervision within enterprise guidelines. The work is usually carried out within established routines, methods and procedures where some discretion and judgement are required in the selection of equipment and materials, organisation of work and the achievement of outcomes within time constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify grains/seeds on receipt	1.1.Grains/seeds are checked against growers/suppliers details and product details. 1.2.A visual check of product is conducted. 1.3.Relevant enterprise and/or industry policies and procedures are observed with regard to rejection of product. 1.4.Grades of grains/seeds are identified in accordance with enterprise and/or industry practice as required.
2. Collect grains/seed samples for testing	2.1.Growers/suppliers requirements are confirmed and feedback sought to improve service delivery. 2.2.Information from growers/suppliers is recorded in accordance with enterprise and/or industry practice. 2.3.The appropriate tests to be performed are determined. 2.4.Sampling requirements/protocols are carried out in accordance with enterprise and/or industry practice.
3. Perform initial tests on samples	3.1.Testing equipment is operated in accordance with manufacturer's instructions, enterprise and/or industry practice. 3.2.Grains/seed defects and contaminants are identified and recorded. 3.3.Results of initial testing are recorded in accordance with enterprise and/or industry practice. 3.4.Test results are compared with specifications and appropriate action taken where necessary. 3.5.Handling procedures are followed to prevent mixing and/or contamination of samples.

ELEMENT	PERFORMANCE CRITERIA
4. Despatch samples to testing facilities	4.1. Samples are packed and labelled in accordance with enterprise and/or industry practice. 4.2. Records of testing requirements are prepared in accordance with enterprise and/or industry practice. 4.3. Samples are dispatched to testing facility.
5. Prepare for storage of grains/seed	5.1. Arrangements are made for segregation of grain/seed according to enterprise standards and industry practice. 5.2. Site transfer arrangements are made as required. 5.3. Inspect conveying equipment and identify and report items requiring maintenance or repair.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify Occupational Health and Safety (OHS) hazards and implement safe operating procedures
- identify grain/seed types
- take samples
- identify defects such as split grains/seeds, undersize, chaff, weed seeds, damage
- store and dispatch grains/seeds samples and maintain hygiene
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- safe operating procedures for handling and storing grain
- grain/seed testing processes
- industry standards and codes of practice

**REQUIRED SKILLS AND KNOWLEDGE**

- testing regimes for grains such as protein, weight, oil content, moisture, defects, sprouts etc.
- testing regimes for seed such as genetic purity, cultivar, dead, abnormal and hard seed, germination potential, foreign matter
- analysis and consequence of test result
- requirements for segregation, traceability and hygiene
- impact of residues including chemical
- industry practice, standards and quality assurance requirements in relation to grains sampling and testing
- segregation strategies/methods
- sampling and testing protocols.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify different grains/seeds
- conduct sampling and initial testing
- record samples for further testing
- communicate with customers and maintain records.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Testing may include:	<ul style="list-style-type: none"> <li>• seeds/grains that may be taken into receipt and tested under this standard include:                             <ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• temperate pastures</li> <li>• tropical pastures.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Broad acre cropping
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCBC305A Undertake preparation of land for agricultural crop production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing land for agricultural crop production and defines the standard required to: interpret production/planting plans; produce standards, quality specifications and work procedure documents; measure materials and site plan specifications; service, operate, adjust and calibrate cultivation equipment safely; and complete pre- and post-operational checks on tools, vehicles and equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm workers operating under limited supervision from others with checking only related to overall progress. Preparing land for crop production is usually done within established routines, methods and procedures. Some discretion and judgement are required in the selection of equipment and materials, organisation of work and services. The outcomes should be achieved within specified timelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for cultivation	1.1. Requirements for the work to be undertaken are interpreted from the planting plan and confirmed with the manager. 1.2. The method and order of cultivation is identified and interpreted from the planting plan. 1.3. Occupational Health and Safety (OHS) hazards are identified; risks assessed and suitable controls implemented. 1.4. Suitable personal protective equipment is selected, used and maintained. 1.5. Environmental implications of cultivating the site are identified, likely outcomes assessed and, if necessary, responsible action taken.
2. Prepare the cultivating equipment	2.1. Vehicles and equipment required for site cultivation are selected according to the planting plan and organisation guidelines. 2.2. Vehicles and equipment are serviced, adjusted for the conditions and worn parts are replaced to ensure

ELEMENT	PERFORMANCE CRITERIA
	<p>reliability during cultivation.</p> <p>2.3.All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately.</p> <p>2.4.All maintenance and servicing is documented according to the requirements of the organisation's record keeping system.</p>
3. Cultivate soil	<p>3.1.Previous crop or land clearance debris is removed, incorporated or burnt according to the organisation's guidelines.</p> <p>3.2.The cultivation plan is followed and completed for each paddock.</p> <p>3.3.OHS hazards are identified, risks assessed and suitable controls implemented.</p> <p>3.4.Suitable personal protective equipment (PPE) is selected, used and maintained.</p> <p>3.5.Vehicles and equipment are operated in a safe, effective and efficient manner and at speeds to suit the conditions.</p> <p>3.6.The quality of cultivation is maximised by continually checking and adjusting the vehicles and equipment as necessary.</p> <p>3.7.All timelines, resource and quality requirements of the planting plan are met.</p>
4. Prepare site for planting	<p>4.1.The planting layout and soil profiles are completed as required by the planting plan.</p> <p>4.2.Weed and pest control measures are taken as required by the planting plan.</p> <p>4.3.Fertilisers, ameliorants, and/or other pre-planting treatments are applied as required by the planting plan.</p> <p>4.4.The environmental implications of site preparation are identified, likely outcomes assessed and, if necessary, responsible action is taken.</p>
5. Complete land preparation operations	<p>5.1.Equipment is cleaned according to manufacturer specifications, organisational procedures and regulations.</p> <p>5.2.Vehicles and equipment are cleaned and stored to minimise damage according to manufacturer specifications, organisational procedures and regulations.</p> <p>5.3.All containers, leftover fluids, waste and debris from</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>the cleaning and maintenance work are disposed of safely and appropriately.</p> <p>5.4. All required records and documentation are completed accurately and promptly according to organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret production/planting plans, produce standards, quality specifications and work procedure documents
- measure materials and site plan specifications
- operate, adjust and calibrate cultivation equipment safely
- complete pre- and post-operational checks on tools, vehicles and equipment
- perform routine safety, service and maintenance procedures on tools, cultivator and equipment
- read and interpret manufacturer specifications, work and maintenance plans, and material safety data sheets (MSDS)
- interpret and apply task instructions
- communicate with work team and supervisor
- record and report faults, workplace hazards and accidents
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- methods of cultivating a range of soil types
- environmental issues of cultivating soil for planting, such as drainage and irrigation systems, soil amelioration and waste disposal procedures
- a range of pre-planting treatments, their purpose and method of application
- operation and maintenance of planting equipment
- OHS guidelines, procedures and principles, including manual handling and exposure to hazardous substances.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret production/planting plans, produce standards, quality specifications and work procedure documents</li> <li>• measure materials and site plan specifications</li> <li>• service, operate, adjust and calibrate cultivation equipment safely</li> <li>• complete pre- and post-operational checks on tools, vehicles and equipment.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Preparation practices may include:</p>	<ul style="list-style-type: none"> <li>• land preparation equipment and soil pre-planting treatments used in commercial cropping for the range of crops, including:                             <ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• sugar</li> <li>• temperate pastures</li> <li>• tropical pastures.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Broadacre cropping
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBC306A Establish agricultural crops

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of establishing agricultural crops and defines the standard required to: prepare and service machinery and equipment; carry out tillage and apply pre-planting treatments; carry out sowing operation and fertiliser application; monitoring the environmental impacts of establishing the crop; clean, secure and store machinery and equipment; and keep records of the sowing operation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on cropping enterprises and involves the application of some judgement and discretion. Work is likely to be carried out under minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare machinery and equipment for use	<p>1.1.Machinery and equipment are selected and confirmed against the work plan and prepared to manufacturer specifications.</p> <p>1.2.Equipment is securely attached and calibrated for operation to manufacturer specifications.</p> <p>1.3.Existing and potential Occupational Health and Safety (OHS) hazards in the workplace are identified, risks assessed and controlled in line with enterprise requirements.</p>
2. Prepare for agricultural crop establishment	<p>2.1.Soil and weather conditions are monitored for optimal seeding conditions.</p> <p>2.2.Soil conservation and sustainable land management practices and procedures are recognised and confirmed according to enterprise requirements.</p> <p>2.3.Seeding, fertiliser, and pest and weed control requirements are confirmed against the work plan and prepared to manufacturer specifications using safe handling procedures.</p> <p>2.4.Contingency plans are prepared for unusual seasonal conditions.</p>
3. Sow the crop	<p>3.1.Suitable personal protective equipment (PPE) is selected, used and maintained according to OHS requirements.</p> <p>3.2.Seeding and fertiliser applications are carried out in line with the work plan.</p> <p>3.3.Pest and weed control treatment is coordinated with seeding and fertiliser applications as required.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4.Environmental implications associated with sowing operations are identified, impacts assessed and procedures adopted in line with enterprise requirements.
4. Complete seeding operations	<p>4.1.Seeding, machinery and equipment operation records are maintained according to enterprise requirements.</p> <p>4.2.Machinery and equipment damage, malfunctions or irregular performance are reported in line with enterprise requirements.</p> <p>4.3.Machinery and equipment is cleaned, secured and stored in line with manufacturer specifications and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- sow seed and apply fertiliser at the required placement and rate
- identify types of weeds and insects harmful to crop establishment
- perform pre-operational and safety checks, servicing and maintenance on machinery and equipment
- calibrate, operate machinery and attach/detach equipment
- demonstrate emergency operating procedures in normal and adverse conditions
- recognise and report machinery damage, faults or malfunctions and perform minor repairs
- demonstrate safe, environmentally responsible and sustainable land management practices
- monitor and minimise impacts to the environment associated with sowing operations
- read and interpret manufacturer specifications, work and maintenance plans, and MSDS
- obtain relevant licences and permits
- clean, secure and store machinery and equipment
- interpret and apply task instructions

## REQUIRED SKILLS AND KNOWLEDGE

- communicate with work team and supervisor
- record and report equipment faults, workplace hazards and accidents
- assess and calculate the application of fertiliser/pesticide requirements and application rates
- calibrate equipment and calculate volumes, consumption and servicing requirements
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## Required knowledge

- crop types, preparation of seeds, seeding methods and application techniques
- fertiliser types, rates of application and crop nutrient requirements
- effects of weather conditions (normal and adverse) on seeding and fertilising applications
- operating principles and operating methods for machinery and equipment
- pre-operational and safety checks, servicing and maintenance procedures for seeding machinery and equipment
- principles of weight distribution with regard to load shifting and vehicle movement
- sustainable land management and soil conservation techniques
- positive environmental practices, negative environmental impacts and minimisation measures associated with seeding operations
- procedures for cleaning, securing and storing machinery, equipment and materials
- enterprise policies with regard to seeding operations, and recording and reporting routines
- relevant state/territory legislation, regulations and codes of practice with regard to workplace OHS and the use and control of hazardous substances
- PPE and when and how it should be used
- relevant state/territory legislation and regulations with regard to licensing requirements and the use and control of machinery and equipment.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare and service machinery and equipment</li> <li>• carry out tillage and apply pre-planting treatments</li> <li>• carry out sowing operation and fertiliser application</li> <li>• monitoring the environmental impacts of establishing the crop</li> <li>• clean, secure and store machinery and equipment</li> <li>• keep records of the sowing operation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Crops may include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• sugar</li> <li>• temperate pastures</li> <li>• tropical pastures.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Broadacre cropping
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCBC307A Maintain agricultural crops

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining agricultural crops and defines the standard required to: monitor crops for levels of pests and diseases and moisture; implement pest and disease control strategies; monitor the health and maturity of the crop.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on cropping enterprises who operate under limited supervision from others with checking only related to overall progress. It is usually done within established routines, methods and procedures where some discretion and judgment is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess agricultural crop condition, growth and requirements	<p>1.1.Crops are monitored to assess their needs, and observations are recorded and reported.</p> <p>1.2.Pests and diseases are identified, monitored and reported at nominated threshold levels.</p> <p>1.3.Sites for regular measurement of soil moisture are established in consultation with directions.</p> <p>1.4.Soil probe is used to measure moisture levels and soil water percentage calculated.</p>
2. Apply fertiliser and amendments	<p>2.1.Occupational Health and Safety (OHS) hazards are identified; risks assessed and suitable controls are implemented.</p> <p>2.2.Suitable personal protective equipment is selected, used and maintained.</p> <p>2.3.Specialist sprays are applied according to label directions and industry standards for growth stages, taking into account specialist advice if required.</p> <p>2.4.Chipping or spot spraying is carried out as required.</p> <p>2.5.Crop growth stages and keys are assessed, recorded and reported.</p> <p>2.6.Water is applied according to the identified need and the directions of management.</p> <p>2.7.All applications are undertaken in the full consideration of adverse environmental impacts.</p>
3. Monitor crop condition, growth	<p>3.1.Crop maturity is monitored and the possible need for further applications is reported to the manager.</p>

ELEMENT	PERFORMANCE CRITERIA
and requirements	<p>3.2. The health of the crop is continually monitored and deviation from expected growth and vigour is reported as required.</p> <p>3.3. Observations of crop ripening are reported for the timing of harvest to be determined by contractors and property manager.</p>
4. Complete cleaning and hygiene operations	<p>4.1. Equipment is cleaned in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>4.2. All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately.</p> <p>4.3. All required records and documentation are completed accurately and promptly in accordance with organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- detect differences and variations in crop growth
- report/communicate such differences to the supervisor/farm owner
- observe and report on health and growth of the crop
- monitor pests and disease in crops
- assess crop maturity
- apply sprays and fertilizers as directed
- measure soil moisture and relate data to crop requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- appropriate legislative requirements, manufacturer's instructions and organisation procedures/instructions
- potential hazards associated with the operation of basic tools and equipment
- general machine maintenance procedures
- machinery operating principles and safe operating methods
- environmental impacts associated with the operation of machinery and equipment in a harvesting context
- organisation recording and reporting procedures
- symptoms of crop lacking health and vigour
- signs of pest and disease infestation, moisture stress and nutrient deficiencies
- hygiene requirements for agricultural crops and equipment that comes into contact with the crop
- types and uses of herbicides, insecticides and other pesticides and alternative pest control methods (non-chemical)
- OHS and pesticides legislative and enterprise requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor crops for levels of pests and diseases and moisture
- implement pest and disease control strategies
- monitor the health and maturity of the crop.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Crops may include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• sugar</li> <li>• temperate pastures</li> <li>• tropical pastures.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Broad acre cropping
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCBA308A Undertake agricultural crop harvesting activities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of harvesting agricultural crops and defines the standard required to: complete pre and post operational checks on tools, harvesting machinery and equipment; perform routine safety; service and maintenance procedures on tools, harvesting machinery and equipment; sample crops to assess moisture content and maturity/ripeness of the crop; handle and manoeuvre harvesting equipment; monitor efficiency of harvesting equipment and make adjustments to height and other settings and transport; clean and store harvesting equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on cropping enterprises or in harvesting contract teams and requires the ability to work as part of a team following set routines, methods and procedures. Some discretion and judgment is required in the maintenance and operation of equipment and machinery. The outcomes must be achieved at a rate that maintains the progress of the harvesting operation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to harvest agricultural crops	<p>1.1. Requirements for the work to be undertaken, method and order of harvesting is interpreted from the harvest strategy and confirmed with the supervisor.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented for the harvesting operation.</p> <p>1.3. Personal protective equipment is selected, used and maintained.</p> <p>1.4. The environmental impacts of harvesting the crop are identified and action taken where required.</p> <p>1.5. Windrowing/swathing is completed to the standard required.</p> <p>1.6. Crop is sampled for moisture content to assess timing of harvest.</p> <p>1.7. The hygiene standards for the crop and the paddock are identified from the harvest strategy and/or the crop storage plan.</p>
2. Prepare the	2.1. Harvesting machinery and other equipment are

ELEMENT	PERFORMANCE CRITERIA
harvesting equipment	<p>cleaned of pests and other contaminants to maintain crop and paddock hygiene standards, as required by the harvest strategy.</p> <p>2.2.All machinery and equipment are serviced, assessed for reliability, adjusted for harvesting conditions and appropriate parts are replaced to ensure reliability during the harvest.</p> <p>2.3.All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and in line with environmental guidelines.</p> <p>2.4.All maintenance and servicing is documented according to the requirements of the organisation.</p>
3. Harvest crops	<p>3.1.The harvest strategy is followed and completed for each paddock.</p> <p>3.2.Personal protective equipment is selected, used and maintained for harvesting.</p> <p>3.3.Harvesting machinery and ancillary equipment is operated in a safe manner and at speeds to suit crop conditions.</p> <p>3.4.Cleanliness and purity of the harvested product is maximised by maintaining the hygiene of all surfaces that come into contact with the crop.</p> <p>3.5.The quality of product is optimised by continually checking and, where necessary, adjusting the harvester and ancillary equipment, including their height and other settings.</p> <p>3.6.Fire prevention measures are taken as outlined and described in the harvest strategy.</p>
4. Complete harvesting operations	<p>4.1.Equipment is cleaned in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>4.2.Attachments and other ancillary equipment are cleaned and stored to minimise damage and to maximise hygiene according to manufacturer's specifications, organisational procedures and regulations.</p> <p>4.3.Insecticides are applied as required by the organisation and the harvest strategy.</p> <p>4.4.All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and according to environmental requirements.</p> <p>4.5.Harvesting equipment is moved between sites and on public roads in compliance with legislation including</p>

ELEMENT	PERFORMANCE CRITERIA
	hygiene requirements. 4.6. All required records and documentation are completed accurately and promptly in accordance with enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- handle and manoeuvre harvesting equipment
- operate crop harvesting machinery and equipment
- implement procedures for seed handling and hygiene
- identify hazards and implement OHS procedures for all harvest tasks
- complete pre- and post-operational checks on tools, harvesting machinery and equipment
- perform routine, service and maintenance procedures on tools, harvesting machinery and equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- appropriate legislative requirements, manufacturer's instructions and organisation procedures/instructions
- pre-operational and safety checks, servicing and maintenance procedures for tools and equipment
- potential hazards and safe operating procedures for basic tools and equipment
- safe operating procedures and standards for harvesting and ancillary equipment
- grain quality and the impact of harvesting practices
- general machine maintenance procedures

**REQUIRED SKILLS AND KNOWLEDGE**

- machinery operating principles and operating methods
- environmental impacts associated with the operation of machinery and equipment in a harvesting context
- organisation recording and reporting procedures
- pests and signs of pest infestation in the crop
- hygiene procedures for harvesting machinery and equipment
- organisation moisture and hygiene requirements for the crop and equipment that comes into contact with the crop
- requirements for harvesting machinery and equipment transport
- fire prevention strategies.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- complete pre and post operational checks on tools, harvesting machinery and equipment
- perform routine safety, service and maintenance procedures on tools, harvesting machinery and equipment
- sample crops to assess moisture content and maturity/ripeness of the crop
- handle and manoeuvre harvesting equipment
- monitor efficiency of harvesting equipment and make adjustments to height and other settings
- transport, clean and store harvesting equipment.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Harvested crops may include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• sugar</li> <li>• temperate pastures</li> <li>• tropical pastures.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Broad acre cropping
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCBC401A Manage pastures for livestock production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the management of pastures for livestock production and defines the standard required to: establish production targets for each pasture type in an enterprise; develop a pasture management program to meet production targets and enterprise objectives; carry out strategic grazing to reduce or eradicate areas of weed infestation; monitor soil health and grazing management to ensure sustainable pasture and optimal livestock production levels; monitor pasture yields and evaluate against forecast production levels; maintain physical and financial records of production.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to livestock managers working independently, with only technical advice sought from others in areas such as pasture selection, pasture management and grazing management.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop a pasture management program	<p>1.1. Production targets for each pasture type are established, consistent with livestock production and enterprise objectives.</p> <p>1.2. Irrigation schedules, where required, are determined for each soil and pasture type based on assessed water requirements, rainfall and evapo-transpiration data.</p> <p>1.3. Nutrient requirements for pastures are assessed to determine appropriate fertiliser and soil ameliorant program.</p> <p>1.4. Grazing and fodder conservation strategies are identified and planned for.</p> <p>1.5. Infrastructure required to support grazing management is identified.</p> <p>1.6. Budgetary constraints are identified and accounted for according to enterprise requirements.</p> <p>1.7. A pasture management program is developed to meet production targets and enterprise objectives.</p>
2. Implement pasture management program	<p>2.1. Pasture program is implemented and pasture capacity is monitored according to enterprise requirements.</p> <p>2.2. Strategic grazing may be carried out to reduce or eradicate areas of weed infestation where planned.</p> <p>2.3. Fertiliser and soil ameliorant applications and rates</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>are determined appropriate to pasture type and soil analysis, and applied accordingly.</p> <p>2.4. Soil moisture is monitored and watering scheduled adjusted for irrigated pasture.</p> <p>2.5. Processes to minimise waste and soil degradation are introduced and implemented according to enterprise environmental requirements.</p>
3. Monitor pasture growth and fodder production	<p>3.1. Longer term trends in weed, pest and disease incidence are determined and any necessary changes to control measures are implemented.</p> <p>3.2. Soil structure and risks of erosion are monitored and necessary changes to cultural practices, grazing management and drainage are determined to improve soil quality.</p> <p>3.3. Irrigation and drainage systems are checked regularly and maintained if appropriate.</p> <p>3.4. Grazing management is monitored to ensure sustainable pasture and optimal livestock production levels.</p> <p>3.5. Feed surpluses and deficiencies are identified and appropriate action taken according to enterprise requirements.</p> <p>3.6. Pasture maturity is monitored and seed harvesting is undertaken to meet marketing and production targets if required.</p>
4. Review production level	<p>4.1. Pasture yields are monitored and evaluated against forecast production levels.</p> <p>4.2. Grazing programs are evaluated for sustainability of the land and pasture resource, and livestock profitability.</p> <p>4.3. Physical and financial records of production are maintained for analysis and evaluation of production performance.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

**REQUIRED SKILLS AND KNOWLEDGE****Required skills**

- determine fertiliser, soil ameliorants and biological inputs required to support production
- apply environmental protection strategies in land use
- set objectives and milestones for pasture production
- calculate costs
- determine soil quality and land use capability
- monitor the productivity and feed intake of grazing livestock
- develop grazing strategies and plan infrastructure required
- assess the impact of grazing on pasture productivity and resilience
- identify pasture species and estimate dry matter production of pasture
- assess options to control weed infestation
- identify strategies for pest and disease control
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- land and soil conditions
- pasture species and growing requirements
- pasture grazing strategies
- nutrient requirements and soil fertility
- environmental protection strategies
- safe handling processes for fertilisers
- infestation patterns for different types of weed
- Occupational Health and Safety (OHS) legislative and enterprise requirements
- relevant environmental codes of practice, legislation and regulations relating to farm production.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish production targets for each pasture type in an enterprise</li> <li>• develop a pasture management program to meet production targets and enterprise objectives</li> <li>• carry out strategic grazing to reduce or eradicate areas of weed infestation</li> <li>• monitor soil health and grazing management to ensure sustainable pasture and optimal livestock production levels</li> <li>• monitor pasture yields and evaluate against forecast production levels.</li> <li>• maintain physical and financial records of production.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock production may include:	<ul style="list-style-type: none"> <li>• all unimproved and improved rangelands used for grazing including:             <ul style="list-style-type: none"> <li>• temperate and tropical pastures</li> <li>• crop stubble</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>shrubs and trees that may be used for stock feed.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Broadacre cropping
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBAC402A Plan a pasture establishment program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the planning of a pasture establishment program and defines the standard required to: assess site factors; select suitable pasture species and cultivars; identify threats to pasture establishment including weeds, pests and diseases; determine resources and equipment for planting and post-planting care; prepare pasture establishment plans to meet livestock production plans and schedules.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm enterprise managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine requirements of the pasture establishment program	<p>1.1.Existing pasture is assessed and either retained or removed.</p> <p>1.2.Pasture species and cultivars that are appropriate to the site and meet production needs are identified and the required quantity calculated, costed and availability confirmed with suppliers.</p> <p>1.3.Pasture establishment procedures are selected consistent with seasonal factors, site and soil characteristics, production plans and the resources and equipment available.</p> <p>1.4.Post-planting care is planned according to production needs, enterprise standards and site capabilities.</p> <p>1.5.Plant germination and nutrient requirements are identified and planned for, taking into account soil characteristics.</p> <p>1.6.Resources, tools, equipment and machinery required for planting and post-planting care are identified, costed and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>1.7.Occupational Health and Safety (OHS) hazards associated with the pasture establishment program are identified; risks assessed and controls developed according to enterprise guidelines.</p>
2. Prepare and document the pasture establishment program	<p>2.1.Detailed plans are prepared based on the requirements of the pasture establishment program and production requirements.</p> <p>2.2.Plan is produced which can be readily interpreted</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and understood by on-site personnel according to enterprise standards.</p> <p>2.3. On-site procedures and schedules required for the planting of the site and post-planting care of pasture are developed and communicated to staff.</p> <p>2.4. Contingencies are planned for and alternative strategies identified if applicable.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- determine requirements of the pasture establishment program
- research suitable pasture species for the site and proposed land use
- prepare and document the pasture establishment program
- develop strategies for weed, pest and disease control
- assess pastures for production potential
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- pasture varieties and their characteristics, requirements and production potential
- establishment techniques of specific pasture species and cultivars
- the advantages and disadvantages of a range of pasture establishment procedures
- maintenance requirements and practices for specific pasture species and cultivars after initial establishment
- livestock production systems and their integration with pasture production

**REQUIRED SKILLS AND KNOWLEDGE**

- planning process, including costing and scheduling of works
- plant identification of pasture and weed species
- role of pasture in sustainable land use
- environmental impacts of pasture establishment.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess site factors
- select suitable pasture species and cultivars
- identify threats to pasture establishment including weeds, pests and diseases
- determine resources and equipment for planting and post-planting care
- prepare pasture establishment plans to meet livestock production plans and schedules.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**



<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The range of crops and establishment methods may include:	<ul style="list-style-type: none"> <li>annual, perennial and subtropical pasture species, established with or without cover crops.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Broadacre cropping
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBA403A Supervise agricultural crop establishment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the supervision of agricultural crop establishment and defines the standard required to: identify the seasonal conditions which affect crop establishment; plan the planting operation including timing and resources required; carry out pest, weed and disease control either pre or post planting if required; supervise staff and monitor the planting operation; recognise poor growth and lack of vigour and investigate causes.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to cropping managers and supervisors.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Source information for input to planting plan	<p>1.1. Documents within the organisation that detail the requirements of the production plan are identified and obtained.</p> <p>1.2. Information regarding activities that will be occurring at a similar time to planting is gathered through discussion with colleagues and management, and by reading the production/management plan.</p> <p>1.3. The specific target area, or paddock, for planting is identified from the production/management plan.</p> <p>1.4. Trash levels and seedbed conditions are assessed and accounted for in planning.</p>
2. Prepare planting plan	<p>2.1. The agricultural crop and method(s) of planting to be used are determined from the organisations production / management plan and availability.</p> <p>2.2. The resources required for the planting operations are assessed and calculated from the area to be sown, the method of planting to be used, and the available timelines.</p> <p>2.3. The target dates are set for planting, including the sequencing for planting across paddocks or crop areas, in line with the overall production/management planning for the organisation.</p> <p>2.4. The chemical applications that are required prior to and post planting are selected and organised to occur at an appropriate time.</p> <p>2.5. The plan is prepared to ensure that any potential detrimental environmental impacts are minimised or</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>eliminated, including the proper disposal of containers, drums and other waste.</p> <p>2.6. Occupational Health and Safety (OHS) hazards are identified, assessed, and safe work practices for planting are implemented and overseen with staff.</p> <p>2.7. Any approvals that are required for the planting operations are identified, sought and obtained.</p> <p>2.8. Measurable indicators, specifications and targets are determined, based on the production/management plan and the method, resources, and seed to be used.</p>
<p>3. Determine scheduling and key responsibilities</p>	<p>3.1. Scheduling for planting is determined taking the range of geographic and resourcing factors into consideration, as well as operations that will be occurring at the same time as the planting.</p> <p>3.2. Key responsibilities for specific preparatory processes that are required before planting are determined.</p> <p>3.3. Key responsibilities for specific implementation processes are determined.</p> <p>3.4. Recordkeeping requirements are determined and procedures are put in place to ensure compliance with the range of applicable regulations.</p> <p>3.5. The plan, including scheduling and key responsibilities, is clearly documented.</p> <p>3.6. The plan includes the type, format, frequency and detail of any reporting required by both managers and operators.</p>
<p>4. Monitor and adjust the planting plan</p>	<p>4.1. Monitoring points outlined in the implementation plan are adhered to.</p> <p>4.2. Checks are made to ensure that OHS procedures are being observed and followed.</p> <p>4.3. Checks are made to ensure that the site environmental requirements are being observed and followed.</p> <p>4.4. Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress.</p> <p>4.5. Checks are made to ensure that the documentation required by the organisation, or other regulating bodies, is completed clearly and accurately during the progress of the planting process.</p> <p>4.6. Where any corrective action or amendment to the</p>

ELEMENT	PERFORMANCE CRITERIA
	planting plan is required, the action is initiated and taken.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and oversee safe operating procedures
- identify the seasonal conditions which affect crop establishment
- plan and schedule planting including amending plans during the operations
- recognise poor growth and lack of vigour caused by nutrient deficiency and incorrect planting depth
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the equipment that is required for a range of tillage methods, and pest and weed control prior to planting
- crop establishment requirements
- equipment servicing requirements
- integrated pest and weed management techniques
- environmental controls and codes of practice applicable to the enterprise
- Legislation, codes of practice and enterprise procedures for OHS and environmental management
- sound management practices and processes to minimise environmental impacts such as noise, soil degradation, and debris from planting operations.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify the seasonal conditions which affect crop establishment</li> <li>• plan the planting operation including timing and resources required</li> <li>• carry out pest, weed and disease control either pre or post planting if required</li> <li>• supervise staff and monitor the planting operation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The range of crops may include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• sugar</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>temperate and tropical pastures.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Broadacre cropping
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBA404A Plan and implement agricultural crop maintenance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the planning and implementation of agricultural crop maintenance and defines the standard required to: accurately assess crop needs; carry out crop cultural practices and treatments; monitor and assess crop maturity; ascertain water requirements from survey advice and weather forecasts; accurately measure soil moisture and interpret data; determine time of harvest with specialist advice.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm supervisors and cropping managers who maintain the health of agricultural crops.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine condition of agricultural crops	<p>1.1.Measurement and assessment of soil moisture is undertaken to calculate soil water percentage.</p> <p>1.2.Water requirements are calculated according to soil analysis data, standing crop, and forecast weather conditions.</p> <p>1.3.Nutrient requirements and availability for crops are assessed and deficiencies identified.</p> <p>1.4.Factors affecting crop capacity are identified.</p> <p>1.5.Sustainable land management is implemented according to enterprise requirements and environmental standards.</p>
2. Determine pest control	<p>2.1.Evidence of pests and disease is assessed and integrated control measures appropriate to type and species of infestation are determined.</p> <p>2.2.Areas of weed infestation, which may be reduced or eradicated, are located and species identified.</p> <p>2.3.Integrated control methods are selected to control pests and weeds.</p> <p>2.4.Control methods are scheduled at the optimum time with minimal damage to the crop.</p> <p>2.5.Severity of infestations and records of treatments are maintained to provide essential data for future management programs.</p>
3. Manage crop health	<p>3.1.Crop is planned and monitored to maintain water and nutritional requirements for optimal production.</p> <p>3.2.Weed and pest levels are monitored and the control program modified as required.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Benefits from soil and plant inputs and treatments are assessed and documented for analysis in future management programs.</p> <p>3.4. Cropping programs are monitored for efficiency and effectiveness, and documented for future best practice.</p> <p>3.5. Relevant data is documented for continual analysis and effective crop management.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- refer to records of, and assess, soil health and nutrient status
- dispatch soil samples to laboratories
- carry out a soil health appraisal
- identify likely threats to crop from pests, weeds and diseases
- recognise damage to crop caused by weeds, pests or diseases
- recognise poor growth and lack of vigour in crop caused by nutrient deficiency
- record monitoring results
- plan and implement integrated control strategies to address nutrient deficiencies, disease outbreaks, pest and weed infestations
- accurately measure soil moisture and estimate irrigation needs if required
- apply pesticides or fertility treatments as required
- communicate with industry, suppliers and other personnel
- read and interpret Material Safety Data Sheets (MSDSs), production plans and analysis results
- estimate and measure pest control treatments
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- crop growth stages and keys
- crop growth requirements compared to soil nutrient status
- fertiliser and soil ameliorant types and application times, methods and rates

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• chemical use if applicable</li> <li>• factors leading to development of chemical resistance</li> <li>• integrated pest management strategies</li> <li>• life-cycles of pest, diseases and weeds</li> <li>• Occupational Health and Safety (OHS) legislative requirements</li> <li>• relevant codes of practice with regard to the use and control of hazardous substances</li> <li>• legislation and codes of practice with regard to environmental protection.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• accurately assess crop needs</li> <li>• carry out crop cultural practices and treatments</li> <li>• monitor and assess crop maturity</li> <li>• ascertain water requirements from survey advice and weather forecasts</li> <li>• accurately measure soil moisture and interpret data</li> <li>• determine time of harvest with specialist advice.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The range of crops may include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• sugar</li> <li>• temperate and tropical pastures.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Broadacre cropping
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCBA405A Supervise agricultural crop harvesting

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the supervision of agricultural crop harvesting and defines the standard required to: establish strategies, procedures and controls for crop harvesting, including fire prevention and control plans; negotiate and arrange contracts and agreements; estimate crop yields; maintain budgetary controls; assess crop maturity and quality in readiness for harvesting; arrange storage and delivery requirements; and segregate grain for quality and monitor for moisture content.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm managers and harvest supervisors whose work is likely to be carried out under broad supervision.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for harvesting	<p>1.1. Crop maturity and quality is assessed in readiness for harvesting.</p> <p>1.2. Pre-harvest treatments for the control and eradication of pests are determined and carried out according to Occupational Health and Safety (OHS) requirements.</p> <p>1.3. Requirements for licences or permits are identified and complied with.</p> <p>1.4. Insurance requirements are assessed and risk management strategies planned and implemented as required.</p>
2. Determine harvest strategy	<p>2.1. Optimum timing to carry out harvest is estimated and calculated according to crop maturity assessment.</p> <p>2.2. Resource requirements are assessed giving consideration to the size of the crop and estimated timing of harvest.</p> <p>2.3. Labour and equipment required to carry out harvesting operations is confirmed and arranged within budgetary constraints.</p> <p>2.4. Requirements for fire prevention and control are identified and arranged according to OHS requirements.</p>
3. Coordinate the harvest strategy	<p>3.1. Effective communication strategies are implemented to ensure smooth workflow operations and personnel safety.</p> <p>3.2. Harvesting operations are implemented and adjusted as required according to weather, equipment and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>staff requirements.</p> <p>3.3. Equipment operation is coordinated for maximum efficiency and monitored for performance effectiveness.</p> <p>3.4. Existing and potential hazards are identified and controlled according to OHS and enterprise requirements.</p>
4. Complete harvest operation	<p>4.1. Storage resources are located for efficient operations and strategies for drying grain are identified, if necessary, according to marketing initiatives.</p> <p>4.2. Quality of grain is segregated to marketing grades and monitored for moisture content according to classification standards.</p> <p>4.3. Harvesting operations and outcomes are evaluated against harvest strategy.</p> <p>4.4. Relevant information is documented for continual analysis and effective planning management.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- organise and schedule the maintenance of plant and equipment
- establish strategies, procedures and controls for crop harvesting
- negotiate and arrange contracts and agreements
- implement safe workplace and positive environmental practices
- deal with weather and other contingencies
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
cultural, social and religious backgrounds and with a range of physical and mental abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• crop maturity and yield potential</li> <li>• grain or seed quality</li> <li>• functions and limitations of harvesting equipment</li> <li>• crop measurement techniques and parameters</li> <li>• market information and sources</li> <li>• location and relative skills and abilities of available contractors</li> <li>• weather conditions which may affect the harvest</li> <li>• relevant legislation, codes of practice and enterprise requirements for OHS, contractor engagement, environment and pesticides</li> <li>• environmental controls and codes of practice applicable to harvesting operations</li> <li>• supervisor responsibilities in managing the safety of a workplace.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish strategies, procedures and controls for crop harvesting, including fire prevention and control plans</li> <li>• negotiate and arrange contracts and agreements</li> <li>• estimate crop yields</li> <li>• maintain budgetary controls</li> <li>• assess crop maturity and quality in readiness for harvesting</li> <li>• arrange storage and delivery requirements</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>segregate grain for quality and monitor for moisture content.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The range of agricultural crops includes:	<ul style="list-style-type: none"> <li>wheat and coarse grains</li> <li>cotton</li> <li>grain legumes</li> <li>oilseeds</li> <li>sugar</li> <li>temperate and tropical pastures.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Broadacre cropping
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCBAC406A Maintain grain quality in storage

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers maintaining grain quality in storage and defines the standard required to: implement pre-determined integrated pest management strategies; monitor and maintain hygiene; monitor and control pests and contaminants; investigate and recommend options for technology, systems or practices that will improve grain quality.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes assessing and maintaining hygiene in grain storage areas, as well as monitoring the grain for deterioration or pests and contaminants.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Maintain hygiene in storage areas	<p>1.1.Storage conditions and facilities are regularly tested to maintain the standard of hygiene in stored grain.</p> <p>1.2.The need for repairs and maintenance is identified, and either carried out or a report of the need is made.</p> <p>1.3.Treatments are applied to storage facilities to maintain hygiene standards and in line with the grain storage program.</p> <p>1.4.The application of all treatments used is accurately recorded in line with the grain storage program.</p>
2. Monitor grain from arrival to dispatch	<p>2.1.Before the grain is stored, samples are taken for testing to ensure a complete record of the quality of the grain.</p> <p>2.2.Samples of the grain are taken regularly for testing to ensure purity standards in the grain.</p> <p>2.3.At dispatch, the grain is checked for quality and against the records taken at the point of storage.</p> <p>2.4.Test samples are taken, prepared and forwarded for analysis according to prescribed guidelines.</p> <p>2.5.Clear and accurate records of grain movements in and out of storage are created, maintained and kept as prescribed in the grain storage program.</p> <p>2.6.Recommendations are made to adopt new technology, systems or practices that will improve or maintain grain quality in storage.</p> <p>2.7.All activities around the grain storage facilities are undertaken according to the Occupational Health and Safety (OHS) guidelines detailed in the grain storage</p>

ELEMENT	PERFORMANCE CRITERIA
	program.
3. Monitor and maintain grain condition in storage	<p>3.1.Regular checks of grain in storage are conducted to maintain continued freedom from contaminants and deterioration.</p> <p>3.2.Periodical checks of grain in long-term storage are conducted for quality factors and viability according to enterprise requirements.</p> <p>3.3.Where necessary, samples of the grain are taken for testing in a laboratory setting.</p> <p>3.4.Where test samples are required, they are taken, prepared, and forwarded for analysis according to industry quality assurance and laboratory requirements.</p> <p>3.5.Clear and accurate records of grain tests and inspections are created, maintained and kept as described in the grain storage program.</p> <p>3.6.The condition of storage facilities is monitored using the schedule and methods outlined in the grain storage program.</p> <p>3.7.Where it is required, appropriate corrective action is taken to maintain grain quality.</p> <p>3.8.All activities around the grain storage facilities are undertaken according to the OHS guidelines detailed in the grain storage program.</p>
4. Control weeds and pests in storage are	<p>4.1.Grain is monitored according to the monitoring points, targets and methods outlined in the grain storage program.</p> <p>4.2.Samples of the grain are appropriately taken to test for pest infestation.</p> <p>4.3.Where it is required, the sample is prepared and forwarded for analysis according to the prescribed guidelines.</p> <p>4.4.Pests in storage are controlled according to the guidelines in the grain storage program.</p> <p>4.5.Enclosed grain storage area is fumigated, and the surrounding environment is kept clean according to the integrated pest management strategy in the grain storage program.</p> <p>4.6.The sources of any infestations are identified and steps are taken to control them in line with the integrated pest management strategy in the grain storage program.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.7. All pest control activities are undertaken in line with the OHS guidelines detailed in the grain storage program.</p> <p>4.8. Clear and accurate records of treatments to the grain and storage facilities are created, maintained and kept as described in the grain storage program.</p> <p>4.9. Clear and accurate records of all chemical use in the storage facility, and the applicable withholding periods are created, maintained and kept as described in the grain storage program.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- setup and operate fumigation and pesticide application equipment
- sample loads and grain in storage, and conduct a simple analysis
- create, maintain, use and keep clear and trackable records
- use a range of communication equipment, including in emergency situations
- inspect and test silos
- identify insects, pests and other factors that affect grain quality
- set up and operate inert atmosphere equipment
- handle and mix chemicals for baiting, fumigation, spraying, and other forms of application
- interpret monitored information on pests
- plan and schedule weed, pest and/or disease control including amending plans during the operations
- calculate mass and volumes of grain and grain storages
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of

**REQUIRED SKILLS AND KNOWLEDGE**

cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- the types, levels and control methods for a range of pests and contaminants
- silo and temporary storage configuration and operation
- chemical handling and dangerous goods requirements
- the range of applicable pesticides, their uses, application methods and handling requirements
- commodity types, varieties and grades
- handling requirements for gas cylinders
- insect life cycles and optimum conditions for development
- Integrated Pest Management (IPM) principles and the procedures used within the organisation
- legislative requirements, codes of practice and enterprise procedures relating to the purchase, transport, storage, use and disposal of pesticides and fumigants, OHS and environment
- client's sampling and classification requirements
- common grain pests and their general control methods
- appropriate action to be taken in contingency situations
- marketing requirements and options for grain growers
- equipment available and its uses, limitations and OHS requirements
- site hazards and sound management practices and processes to minimise noise, odours, and debris from grain storage operations
- chemical handling and dangerous goods requirements
- developments and options available for maintaining or improving the quality of grain during storage.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• implement pre-determined integrated pest management strategies</li> <li>• monitor and maintain hygiene</li> <li>• monitor and control pests and contaminants</li> <li>• investigate and recommend options for technology, systems or practices that will improve grain quality.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Factors affecting grain quality in storage may include:	<ul style="list-style-type: none"> <li>• the presence of water or water damage</li> <li>• presence and activity of pests (including insects, moulds, birds and rodents)</li> <li>• dead vertebrate pests in storage</li> <li>• breakdown of storage security and integrity (e.g. holes, cracks, poor sealing, etc.)</li> <li>• grain moisture migration</li> <li>• excessive dust levels</li> <li>• high pesticide and fumigant residues</li> <li>• legal withholding periods.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Broadacre cropping
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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# AHCBAC407A Save, prepare and store agricultural seed

## Modification History

Not Applicable

## Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers saving, preparing and storage of agricultural seed and defines the standard required to: calculate the quantity of seed required for the following season; grade and test seed and interpret the results; store the seed for use in the following season; maintain grain in storage to ensure maximum quality and yield when used.</p>
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## Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to cropping managers and is likely to be carried out independently as part of managing a cropping enterprise.</p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select seed from agricultural crops	<p>1.1.The quantity of seed required to sow the following season's crop is calculated.</p> <p>1.2.The area of crop needed to produce the required quantity of seed for the following season's crop is calculated.</p> <p>1.3.A portion of the crop to be used as seed is selected, based on the calculated requirements and its health, vigour, and grain size.</p> <p>1.4.The soil type in the selected portion of the crop is noted for potential input to management decision-making.</p> <p>1.5.Measures are taken to improve seed and plant health, vigour and uniformity within the selected area.</p> <p>1.6.The application of any chemicals to the crop is undertaken in full consideration of detrimental environmental impacts.</p> <p>1.7.All work carried out is done using the appropriate personal protective equipment and is within Occupational Health and Safety (OHS) guidelines.</p>
2. Evaluate and grade seed	<p>2.1.After harvest, the grain variety saved is assessed for its suitability for the location, the soil, and the organisation's current marketing requirements.</p> <p>2.2.Information regarding new varieties or trial results and progress is sourced for input to management decision-making.</p> <p>2.3.The seed is graded to the required size either on or off-site.</p> <p>2.4.Fungicidal and insecticidal dressings are applied to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>the seed where appropriate and according to the organisation's production and marketing requirements.</p> <p>2.5. Test samples are taken, prepared and forwarded to the analysing body, according to the guidelines of that body.</p> <p>2.6. Records of observations, information gathered, and results of tests and grading are kept, updated, and maintained according to the requirements of the organisation and the industry.</p> <p>2.7. The records kept are forwarded to the appropriate person for analysis and decision-making.</p>
3. Store seed	<p>3.1. The storage facilities to be used are selected and hygienically prepared.</p> <p>3.2. Seed is transferred to the storage facility according to the organisation's OHS and hygiene procedures.</p> <p>3.3. Seed is stored under conditions that maintain its quality and germination capacity.</p> <p>3.4. Periodical checks of seed in long-term storage are conducted for quality factors and viability according to enterprise requirements.</p> <p>3.5. Seed samples for laboratory testing are taken, prepared and forwarded for analysis according to prescribed guidelines.</p> <p>3.6. Clear and accurate records of seed storage, tests and inspections are created, maintained and kept as described in the seed storage program.</p> <p>3.7. The condition of storage facilities is monitored using the schedule and methods outlined in the seed storage program and appropriate corrective action is taken to maintain seed quality where required.</p> <p>3.8. Activities around the seed storage facilities are undertaken according to the OHS guidelines detailed in the grain storage program.</p>
4. Collect and deliver seed	<p>4.1. Delivery or supply terms are established and applied when collecting or delivering seed.</p> <p>4.2. Seed sold or purchased conforms to local State and Federal legislation and regulations.</p> <p>4.3. Regulations relating to the interstate movement of seeds are observed.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- select appropriate seed tests
- apply pre and post-harvest treatments for seed
- identify varieties from growth patterns
- identify weed seeds and contaminants
- identify pests in stored grain and initiate control measures
- calculate volumes, capacities, areas, ratios for seed, storages, and chemicals
- keep, update and maintain records relating to test results, provenance, varieties, pest control measures, and other relevant information about the seed
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- identification of varieties
- seed treatment and cleaning measures
- sources of purchased seed
- inoculation treatments and seed dressings used within the organisation
- records and documentation required for tracking and handling of seed
- storage techniques and requirements for seed and grain
- environmental controls and codes of practice applicable to the enterprise
- relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, vehicle and plant use, and to the use, handling and sale of seed
- sound management practices and processes to minimise noise, odours, and debris from sowing operations.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• calculate the quantity of seed required for the following season</li> <li>• grade and test seed and interpret the results</li> <li>• store the seed for use in the following season</li> <li>• maintain grain in storage to ensure maximum quality and yield when used.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Agricultural seed may include:</p>	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• sugar</li> <li>• temperate</li> <li>• tropical pastures.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Broadacre cropping
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCBA501A Manage agricultural crop production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing agricultural crop production and defines the standard required to: develop a cropping program for an enterprise; plan for crop establishment; monitor growing crops; provide inputs and carry out cultural practices as required; develop a plan for the crop harvest; monitor crop yields and evaluate production performance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes managing the production of agricultural crop.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop agricultural crop establishment program	<p>1.1. Production targets for each crop type are established, consistent with marketing and enterprise objectives.</p> <p>1.2. Plant varieties are selected that are best suited to soil, climate, seasonal conditions and marketing goals.</p> <p>1.3. Irrigation schedules, where required, are determined for each soil and crop type based on assessed water requirements, rainfall and evapo-transpiration data.</p> <p>1.4. Nutrient requirements for crops are assessed to determine appropriate fertiliser program.</p> <p>1.5. Budgetary constraints are identified and maintained according to enterprise requirements.</p> <p>1.6. A crop establishment program is developed to meet the production targets and enterprise objectives specified in the crop production plan.</p>
2. Manage crop maintenance	<p>2.1. Strategic grazing may be planned to reduce or eradicate areas of weed infestation.</p> <p>2.2. Fertiliser applications and rates are determined appropriate to crop type and applied accordingly.</p> <p>2.3. Crop nutrient requirements are determined to ensure sustainability and achievement of yield.</p> <p>2.4. Soil moisture is monitored and watering schedule adjusted if appropriate.</p> <p>2.5. Processes to minimise waste and soil degradation are introduced and implemented according to environmental procedures.</p>
3. Monitor an	3.1. Longer term trends in weed, pest and disease

ELEMENT	PERFORMANCE CRITERIA
agricultural crop through to harvest	<p>incidence are determined, and any necessary changes to control measures are implemented.</p> <p>3.2. Soil structure and erosion are monitored and necessary changes to cultural practices, grazing management and drainage are determined.</p> <p>3.3. Irrigation and drainage systems are checked regularly and maintained if appropriate.</p> <p>3.4. Grazing management is monitored to ensure crop production levels.</p> <p>3.5. Crop maturity is monitored and harvesting is undertaken to meet marketing and production targets.</p>
4. Record production level and review cropping strategies	<p>4.1. Crop yields are monitored and evaluated against forecast production levels.</p> <p>4.2. Grazing and cropping programs are evaluated for efficiency and effectiveness, and documented for future best practice.</p> <p>4.3. Evaluation of production performance is undertaken and documented for use in reviewing and revising management program.</p> <p>4.4. Physical and financial records of production are maintained for analysis and evaluation of production performance.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- apply environmental protection strategies in land use
- set objectives and milestones for a cropping program
- determine soil quality and land use capability
- determine crop nutrient requirements and fertiliser requirements
- measure and assess quantities of fertiliser to meet plant requirements
- predict patterns of weed infestation
- design irrigation processes to avoid soil degradation if applicable
- assess financial strategies and prepare budgets
- use literacy skills to fulfil job roles as required by the organisation. The level of

**REQUIRED SKILLS AND KNOWLEDGE**

skill may range from reading and understanding documentation to completion of written reports

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- land and soil conditions
- effects of soil characteristics on nutrient availability
- financial analysis techniques
- environmental protection strategies
- cultivation requirements for different types of crop
- safe handling processes for fertilisers
- infestation patterns for different types of weed
- integrated strategies for the management of pests, weeds and diseases
- Occupational Health and Safety (OHS) legislative requirements
- environmental legislation and codes of practice, relating to farm production.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- develop a cropping program for an enterprise
- plan for crop establishment
- monitor growing crops, provide inputs and carry out

<b>EVIDENCE GUIDE</b>	
	cultural practices as required <ul style="list-style-type: none"> <li>• develop a plan for the crop harvest</li> <li>• monitor crop yields and evaluate production performance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Agricultural crops include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• sugar</li> <li>• temperate and tropical pastures.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Broadacre cropping
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### Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCBC502A Manage forage conservation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing forage conservation and defines the standard required to: assess cost benefit and forage conservation options; select appropriate forage conservation method; select suitable forage conservation machinery; oversee harvest, forage preparation and storage; record work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job function includes managing the production of hay and silage and the storage of forage to ensure quality is maintained.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan for forage conservation	<p>1.1. Determine the resource needs and end use requirements of forage conservation in the farm production system.</p> <p>1.2. Define forage conservation options and cost benefit.</p> <p>1.3. Select appropriate paddocks for forage conservation with regard to species selection and target growth stage.</p> <p>1.4. Select appropriate forage conservation machinery, equipment and personal protective equipment in accordance with manufacturer's specifications, Occupational Health and Safety (OHS) requirements and industry practice.</p> <p>1.5. Ensure safe access to paddocks for harvesting and transport machinery.</p> <p>1.6. Plan and prepare storage facility/system for selected forage conservation method.</p> <p>1.7. Identify and minimise potential environmental impacts of forage conservation activities.</p> <p>1.8. Negotiate contracts and costs including crop inputs, machinery, harvest area and storage sites where applicable.</p> <p>1.9. Communicate details of work activities with workers and/or contractors where applicable.</p>
2. Prepare paddocks for forage conservation	<p>2.1. Identify need for fertiliser, irrigation, weed control and grazing or slashing before closing paddock to stock at appropriate time.</p> <p>2.2. Identify optimum time for harvest of key species.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Oversee forage harvesting operations	<p>2.3. Monitor and control weeds, pests and diseases.</p> <p>3.1. Establish dry matter targets for the selected method of forage conservation.</p> <p>3.2. Monitor seasonal and current weather conditions to determine optimum time for harvest and to ensure quality.</p> <p>3.3. Assess condition and dry matter content of the crop throughout the harvesting operation.</p> <p>3.4. Select harvesting and conditioning machinery based on weather conditions and forage drying targets.</p> <p>3.5. Ensure that harvesting activities are conducted in a safe, controlled and efficient manner.</p> <p>3.6. Ensure that baling, wrapping, compacting, sealing and/or storage of forage is in accordance with storage plan.</p> <p>3.7. Ensure that forage is safely loaded, transported and stored in accordance with OHS and quality requirements and to minimise spoilage and the risk of combustion.</p>
4. Complete operation	<p>4.1. Complete records in accordance with quality assurance requirements and industry practice.</p> <p>4.2. Ensure waste and debris is disposed of to minimise environmental impact.</p> <p>4.3. Ensure that machinery and ancillary equipment is cleaned and serviced in accordance with manufacturer's specifications, OHS requirements and industry practice.</p> <p>4.4. Conduct quality checks on stored forage.</p> <p>4.5. Monitor and minimise environmental impacts of forage conservation activities including concentration of nutrients at field out areas and effluent run-off.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills



<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• assess the need for and implications of forage conservation in the farming system</li> <li>• select and implement a forage conservation system</li> <li>• perform harvesting operations</li> <li>• use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• economic analysis of forage conservation</li> <li>• silage and hay conservation systems</li> <li>• factors affecting the quality of silage and hay</li> <li>• dry matter content, quality and hygiene requirements</li> <li>• range and functions of silage and haymaking machinery and equipment</li> <li>• common weeds, pests and diseases associated with crops and pastures</li> <li>• types and application of personal protective equipment</li> <li>• legislation and regulations including licensing requirements in relation to forage operations</li> <li>• risk factors including human and animal health, weather, harvesting and environmental.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance</p>

<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess cost benefit and forage conservation options</li> <li>• select appropriate forage conservation method</li> <li>• select suitable forage conservation machinery</li> <li>• oversee harvest, forage preparation and storage</li> <li>• record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Forage conservation methods may include:	<ul style="list-style-type: none"> <li>• hay</li> <li>• silage</li> <li>• haylage</li> <li>• green chop.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Broadacre cropping
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCBAC503A Manage integrated crop and pasture production

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers managing integrated crop and pasture production and defines the standard required to: develop a pasture and crop program to meet production targets and enterprise objectives; maintain the productivity of crops and pastures in a farming system; monitor soil structure and erosion and make required changes to cultural practices and grazing management; implement grazing strategies to optimise pasture and livestock production levels and support the cropping program; evaluate grazing and cropping programs for efficiency and effectiveness; and use physical and financial records of production to evaluate production performance.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to farm managers whose job function includes managing integrated crop and pasture production.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop a pasture and crop program	<p>1.1. Production targets for each crop and pasture type are established consistent with marketing and enterprise objectives.</p> <p>1.2. Plant varieties are selected that are best suited to soil, climate, seasonal conditions and marketing goals.</p> <p>1.3. Irrigation schedules, where required, are determined for each soil and crop/pasture type based on assessed water requirements, rainfall and evapo-transpiration data.</p> <p>1.4. Nutrient requirements for crops and pastures are assessed to determine appropriate fertiliser program.</p> <p>1.5. Budgetary constraints are identified and maintained according to enterprise requirements.</p> <p>1.6. A pasture and crop program is developed to meet production targets and enterprise objectives.</p>
2. Implement pasture and crop management program	<p>2.1. Pasture and crop program is implemented and pasture capacity is monitored according to enterprise requirements.</p> <p>2.2. Strategic grazing is carried out, where necessary, to reduce or eradicate areas of weed infestation, where planned.</p> <p>2.3. Fertiliser applications and rates are determined appropriate to crop/pasture type and applied</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>accordingly.</p> <p>2.4.Crop and pasture nutrient requirements are applied to ensure achievement of yield and sustainability of pasture.</p> <p>2.5.Soil moisture is monitored and watering scheduled adjusted as required.</p> <p>2.6.Processes to minimise waste and soil degradation are introduced and implemented according to environmental standards.</p>
3. Monitor crop/pasture growth and fodder production	<p>3.1.Longer term trends in weed, pest and disease incidence are determined and any necessary changes to control measures are implemented.</p> <p>3.2.Soil structure and erosion are monitored and necessary changes to cultural practices, grazing management and drainage are determined.</p> <p>3.3.Irrigation and drainage systems are checked regularly and maintained, if appropriate.</p> <p>3.4.Grazing management is monitored to ensure high pasture and livestock production levels.</p> <p>3.5.Livestock are integrated into the cropping cycle through grazing of pastures returning to crop, stubbles and crop residues, and dual purpose crops.</p> <p>3.6.Feed surpluses and deficiencies are identified and appropriate action taken according to enterprise requirements.</p> <p>3.7.Crop/pasture maturity is monitored and harvesting is undertaken to meet marketing and production targets.</p>
4. Review production level	<p>4.1.Pasture and crop yields are monitored and evaluated against forecast production levels.</p> <p>4.2.Grazing and cropping programs are evaluated for efficiency and effectiveness, and documented for future best practice.</p> <p>4.3.Evaluation of production performance of each enterprise is undertaken and documented for use in reviewing and revising management program.</p> <p>4.4.Physical and financial records of production are maintained for analysis and evaluation of production performance.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- measure and assess quantities of fertiliser
- apply environmental protection strategies in land use
- set objectives and milestones
- determine soil quality and land use capability
- predict patterns of weed infestation
- design irrigation processes to avoid soil degradation
- assess financial strategies and prepare budgets
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- land and soil conditions
- effects of nutrients of soil types
- financial analysis techniques
- environmental protection strategies
- cultivation requirements for different types of crop
- safe handling processes for fertilisers
- infestation patterns for different types of weed
- OHS and environmental legislation codes of practice and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop a pasture and crop program to meet production targets and enterprise objectives</li> <li>• maintain the productivity of crops and pastures in a farming system</li> <li>• monitor soil structure and erosion and make required changes to cultural practices and grazing management</li> <li>• implement grazing strategies to optimise pasture and livestock production levels and support the cropping program</li> <li>• evaluate grazing and cropping programs for efficiency and effectiveness</li> <li>• use physical and financial records of production to evaluate production performance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pastures may include:	<ul style="list-style-type: none"> <li>• all unimproved and improved rangelands used for grazing</li> <li>• temperate and tropical pastures</li> <li>• crop stubble</li> <li>• shrubs and trees</li> <li>• residues that may be used for stock feed.</li> </ul>



<b>RANGE STATEMENT</b>	
Crops may include:	<ul style="list-style-type: none"> <li>• agricultural broadacre crops, including wheat and coarse grains</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• sugar</li> <li>• temperate and tropical pastures</li> <li>• intensive fruit and vegetable crops</li> <li>• field and tree crops</li> <li>• vines</li> <li>• hay crops.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Broadacre cropping
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCBA504A Plan and manage a stored grain program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning and managing a stored grain program and defines the standard required to: plan for storage needs based on grain production estimates; implement an Integrated Pest Management (IPM) program for grain storage; supervise procedures to manage Occupational Health and Safety (OHS) risk for the storage site; schedule the storage and transport of grain; supervise staff to monitor transport, storage, sampling and pest control procedures; maintain records of grain storage to meet Quality Assurance (QA) requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who plan and manage grain storage at grain storage facilities for the long, medium and short term to maximise returns for the organisation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan grain storage program	<p>1.1.Relevant organisational documentation and information is obtained and analysed for input to the storage program.</p> <p>1.2.The available storage facilities are identified, recorded and assessed for suitability and capacity.</p> <p>1.3.The projected grain production and delivery quantities, types and timeframes are calculated and analysed against storage capacity.</p> <p>1.4.Temporary storage if required, is arranged.</p> <p>1.5.Timeframes and scheduling for delivery of grain to storage facilities on- and off-site are estimated.</p> <p>1.6.The program includes plans for annual, seasonal and short-term periods, and is prepared to achieve the goals and objectives of the organisation.</p> <p>1.7.The program, including scheduling and key responsibilities, is clearly documented.</p> <p>1.8.The program includes the type, format, frequency and detail of any reporting required by both managers and operators.</p>
2. Plan integrated pest control for the storage area	<p>2.1.Grain is sampled for pest infestation and testing is organised.</p> <p>2.2.The results of samples and tests for pest infestation are recorded and analysed.</p> <p>2.3.An integrated pest management program is developed and implemented to control grain insects</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and other pests in storage.</p> <p>2.4. Monitoring points, targets and methods are determined to identify possible development of resistance in insects.</p> <p>2.5. The pest control strategies selected relate to the requirements of the end use, and to the customers expectations.</p> <p>2.6. Record keeping requirements are determined and procedures are put in place to ensure compliance with the range of applicable regulations.</p> <p>2.7. The program, including scheduling and key responsibilities, is clearly documented.</p> <p>2.8. The program includes the type, format, frequency and detail of any reporting required by both managers and operators.</p>
3. Implement OHS program for grain storage area	<p>3.1. OHS hazards are identified within and surrounding the grain storage area(s).</p> <p>3.2. Procedures to minimise OHS risks are developed and documented for use by all people operating around the storage facilities.</p> <p>3.3. Procedures to minimise OHS risks are communicated clearly to all people operating around the storage facilities, and confirmation of the clear communication is sought.</p> <p>3.4. The OHS program clearly describes the personal protective equipment and safety gear required to be used around the storage facilities.</p> <p>3.5. Record keeping requirements are determined and procedures are put in place to ensure compliance with the range of applicable regulations.</p> <p>3.6. The program includes the type, format, frequency and detail of any reporting required by both managers and operators.</p>
4. Manage the grain storage program	<p>4.1. All aspects of the grain storage program are implemented to achieve the goals and objectives of the organisation.</p> <p>4.2. Activities are scheduled and organised to allow for efficient transport and storage of the grain.</p> <p>4.3. Pest control strategies are undertaken according to the requirements of the integrated pest management program.</p> <p>4.4. Personal protective equipment and safety gear is</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>provided to all people operating around the storage facilities.</p> <p>4.5. All OHS procedures that were prepared are implemented by operational personnel.</p> <p>4.6. Checks are made to ensure that the performance indicators, targets and specifications are being met and amendments to the program are made where necessary.</p> <p>4.7. Operational personnel are communicated with regularly throughout the storage, transport, sampling and chemical application operations to ensure efficient and safe operation and progress.</p> <p>4.8. The impact and risk of existing and potential problems are assessed.</p> <p>4.9. Where a potential problem is identified, investigation is made into its likely causes.</p> <p>4.10. Alternative solutions are analysed and reviewed, and the most appropriate is recommended to the appropriate personnel for a decision.</p>
5. Maintain records of stored grain movement	<p>5.1. Records and documentation are created, maintained and kept as described in the grain storage program, the integrated pest management program, and the OHS requirements.</p> <p>5.2. Records and documentation are completed clearly and accurately throughout the storage program.</p> <p>5.3. The record keeping system that is used ensures that required information is available, accessible, reliable, meaningful, and useful.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- estimate costs of problems and cost savings in improvements
- establish procedures and controls for implementation by others
- plan, schedule, monitor and amend plans for operations

## REQUIRED SKILLS AND KNOWLEDGE

- administer and co-ordinate operations on a site
- explain, and deliver instructions about the plans and scheduling of the grain storage operations to both staff and contractors
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- silo layout and operations, configuration, and maintenance procedures
- safe working practices, especially in confined spaces and at heights
- organisational priorities and policies in relation to production planning, OHS and chemical use
- organisational priorities and policies in relation to quality, personnel and operations
- pest control principles
- reporting and recording requirements within the organisation and as required by external authorities
- general grains market and commodity prices
- specific electronic systems used within the organisation
- integrated pest and weed management techniques
- relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, site management, and vehicle and plant use
- sound management practices and processes to minimise noise, odours, and debris from grain storage operations.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• plan for storage needs based on grain production estimates</li> <li>• implement an IPM program for grain storage</li> <li>• supervise procedures to manage OHS risk for the storage site</li> <li>• schedule the storage and transport of grain</li> <li>• supervise staff to monitor transport, storage, sampling and pest control procedures</li> <li>• maintain records of grain storage to meet QA requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
This standard includes:	<ul style="list-style-type: none"> <li>• a range of grain storage areas that can be assessed in relation to capacity, suitability for fumigation, state of repair and their current use.</li> </ul>

### Unit Sector(s)

Unit sector	Broadacre cropping
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCBAC505A Plan and manage long-term weed, pest and/or disease control in crops

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning and managing long-term weed, pest and/or disease control in crops and defines the standard required to: interpret information on pest and weed numbers, density and control; establish processes/strategies, procedures and controls for long-term weed, pest and/or disease control; implement and monitor long-term weed, pest and/or disease control strategies; use records and observations to evaluate weed, pest and/or disease control strategies; plan land use incorporating long term weed, pest and/or disease control strategies.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to cropping managers or advisors whose job function includes planning for and managing weed, pest and/or disease control in crops and then managing the implementation of such a plan.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Source information for input to weed, pest and/or disease control planning	<p>1.1. Historical data, including recent data from organisational records is identified and accessed for input to weed, pest and/or disease control planning.</p> <p>1.2. Information from other enterprises within the district is sought and gathered.</p> <p>1.3. Information regarding the characteristics of the crop(s) planned for, or under production, is accessed.</p> <p>1.4. Information regarding the local geography, soil and climatic conditions is accessed and gathered.</p> <p>1.5. The environmental implications of pesticide/herbicide use, alternative methods and non-chemical preventative methods are considered and documented.</p> <p>1.6. Information is assessed to determine potential key information for input to planning decisions.</p>
2. Determine long-term weed, pest and/or disease control strategies	<p>2.1. Information gathered is analysed for suitable methods of weed, pest and/or disease control.</p> <p>2.2. Methods of control are considered in light of their impacts.</p> <p>2.3. Strategies for weed, pest and/or disease control are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>determined to integrate the most suitable control methods with the proposed crops and the existing geography.</p> <p>2.4.Environmental controls are established and specifically included in the plan.</p> <p>2.5.Occupational Health and Safety (OHS) hazards are identified; risks assessed and suitable controls are incorporated into the plan.</p>
<p>3. Provide input to other planning processes</p>	<p>3.1.Details regarding selected weed, pest and/or disease control strategies are used as input to other organisational planning processes.</p> <p>3.2.Information regarding other planning processes is collected and used to inform the weed, pest and/or disease control planning process.</p> <p>3.3.Information about the range of planning processes is communicated verbally and/or in writing according to the requirements of the circumstances and the people involved.</p>
<p>4. Determine scheduling and key responsibilities</p>	<p>4.1.Scheduling for weed, pest and/or disease control is determined taking the range of seasonal, geographic and resourcing factors into consideration.</p> <p>4.2.Key responsibilities for specific implementation processes are determined.</p> <p>4.3.Record keeping requirements are determined and procedures are put in place to ensure compliance with the range of applicable regulations.</p> <p>4.4.The plan, including scheduling and key responsibilities, is clearly documented.</p> <p>4.5.The plan includes the type, format, frequency and detail of any reporting required by both manager(s) and operators.</p>
<p>5. Monitor and adjust weed, pest and/or disease control strategies</p>	<p>5.1.The effectiveness of the weed, pest and/or disease control strategies is evaluated at key points, and adjustments made as necessary.</p> <p>5.2.Environmental impacts and OHS hazards relating to weed, pest and/or disease control are identified, monitored and assessed throughout the implementation process.</p> <p>5.3.Modifications are made to the strategy as and when necessary for environmental, OHS, resourcing, or effectiveness reasons.</p>
<p>6. Evaluate weed, pest</p>	<p>6.1.Data, observations, and documentation from the</p>

ELEMENT	PERFORMANCE CRITERIA
and/or disease control strategies and record result	<p>implementation of weed, pest and/or disease control is analysed against the plan according to organisation guidelines.</p> <p>6.2. Recommendations for future strategies are prepared based on the analysis of the data.</p> <p>6.3. A report is prepared that documents the implementation of the strategies and includes any difficulties or issues faced, the methods used for treatment, impacts on environmental and OHS, any recommendations for future work, results, costs and any available data analysis.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret monitored information on pest and weed numbers, density and control
- interpret, analyse and extract information from a range of sources and discussions
- plan and manage long-term weed, pest and/or disease control including amending plans during the operations
- plan land use incorporating appropriate weed, pest and/or disease control measures
- establish processes/strategies, procedures and controls for long-term weed, pest and/or disease control
- negotiate and arrange contracts and agreements
- explain, and deliver instructions about the plans and scheduling of the weed, pest and/or disease control operations to both staff and contractors, as well as suppliers, customers, and neighbours
- recognise poor growth and lack of vigour caused by nutrient deficiency
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• pest and weed species, including their life cycles and reproduction/multiplication capability</li> <li>• integrated pest and weed management</li> <li>• the effects on crops of weeds, pests and/or diseases including competitive effects on crop yield; threshold levels; and the effects of alternative methods of control</li> <li>• environmental controls and codes of practice applicable to the enterprise</li> <li>• relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, and vehicle and plant use</li> <li>• environmental controls and codes of practice applicable to the business, and to the weed, pest and/or disease control operations</li> <li>• sound management practices and processes to minimise noise, odours, and debris from weed, pest and/or disease control operations.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret information on pest and weed numbers, density and control</li> <li>• establish processes/strategies, procedures and controls for long-term weed, pest and/or disease control</li> <li>• implement and monitor long-term weed, pest and/or disease control strategies</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• use records and observations to evaluate weed, pest and/or disease control strategies</li> <li>• plan land use incorporating long term weed, pest and/or disease control strategies.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Crop pests may include:	<ul style="list-style-type: none"> <li>• insects</li> <li>• weeds</li> <li>• pathogens</li> <li>• vertebrates</li> <li>• nematodes</li> <li>• molluscs.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Broadacre crops
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### Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCBAC506A Manage the harvest of crops

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of planning for and implementing the harvest of agricultural and horticultural crops and defines the standard required to: estimate crop yield and value and monitor for harvest readiness; plan for the resources that will be required for harvest; negotiate insurance and equipment supply contracts; develop risk management procedures for Occupational Health and Safety (OHS), climate and fire risk; organise for the logistics of the harvesting operation including harvesting, storage and delivery; keep grain batches separate and monitor for pests or spoilage.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managing the harvest and is likely to be undertaken without supervision, with only general guidance on progress sought from others.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine crop quality	<p>1.1.The potential crop yield is assessed by measurements made in the field.</p> <p>1.2.The potential quality of the crop is assessed by testing the quality parameters before harvest.</p> <p>1.3.The value of each crop is estimated using the measurements taken and assessments made before harvest.</p>
2. Determine crop readiness	<p>2.1.Pre-harvest samples are sent to the laboratory/marketing agent to determine the potential quality of the crop.</p> <p>2.2.Weather patterns are monitored to assist in estimating the rate of ripening.</p> <p>2.3.The crop maturity is monitored to anticipate when the crop will be at its optimum, and thus when the harvest will begin.</p> <p>2.4.The incidence of pests is assessed to determine the requirement for, and the type of, pre-harvest treatment.</p> <p>2.5.Pre-harvest treatments are selected to ensure that the crop meets market requirements.</p> <p>2.6.All OHS and environmental requirements are adhered to throughout the application of pre-harvest treatments.</p>
3. Assess the need for	3.1.If the crop is estimated to be of sufficient value, and

ELEMENT	PERFORMANCE CRITERIA
insurance	<p>where commitments were made to insure the crop, these commitments are honoured.</p> <p>3.2.Strategies to manage financial risk are analysed and assessed, and implemented where they are found to be appropriate</p>
4. Plan harvest strategy	<p>4.1.The commencement date and the time span for harvest are estimated, so that the crop will be maintained in optimum condition.</p> <p>4.2.The equipment and labour resources required for harvest are calculated from the size of the crop and the time limitations on the harvest.</p> <p>4.3.The equipment and labour resources required are analysed against those available within the enterprise, and the amount of labour and equipment to be contracted is determined.</p> <p>4.4.Any equipment preparation that is required prior to harvest is planned for, in order that it is ready at the appropriate time.</p> <p>4.5.Where pre-harvest pest control treatments are to be applied, these are planned for according to the recommendations of the manufacturer and the legislative requirements.</p> <p>4.6.Any requirements for licenses, permits and notifications are determined, and arrangements are made for these requirements to be met.</p> <p>4.7.The order in which the harvest is to occur is determined, planned, and described in the plan.</p>
5. Plan for OHS hazard management	<p>5.1.All people involved in harvesting are made aware of the OHS hazards that may be present, their responsibilities for action, and the systems that are in place to deal with such hazards.</p> <p>5.2.Suitable controls are put in place to minimise or eliminate the OHS hazards, and so reduce risks.</p> <p>5.3.At each stage of the harvesting process, OHS hazards are monitored, identified and the associated risks are assessed.</p>
6. Plan for fire prevention and control	<p>6.1.The property is evaluated and the fire risks and hazards are identified where appropriate.</p> <p>6.2.A fire prevention and control strategy that addresses the identified risks and hazards, and includes the measures to be taken, is prepared where appropriate.</p> <p>6.3.The fire prevention and control strategy, and the</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>specific measures to be taken are assessed to ensure that they meet legislative requirements where appropriate.</p> <p>6.4. Fire breaks are prepared in the manner, and locations identified in the strategy, where appropriate.</p> <p>6.5. Arrangements are made to ensure that firefighting equipment that is serviceable and meets appropriate fire authority standards and/or guidelines is available in the quantities prescribed by the strategy, where appropriate.</p> <p>6.6. Community fire control practices are understood and put in place where appropriate.</p>
7. Decide on storage and delivery requirements	<p>7.1. Storage facilities for the crop are allocated and arrangements are made for the immediate delivery of the crop to packing sheds, the bulk handling system, or other purchasers.</p> <p>7.2. Silos, storage bins and other containers are located to enable harvesting and transport operations to be as efficient as possible.</p> <p>7.3. Any OHS hazards presented by silo operation are identified and practices put in place to reduce risk to the health of operators.</p> <p>7.4. Storage is planned in such a way that it enables flexible marketing and distribution initiatives</p> <p>7.5. Resources required for crop transport are evaluated, and where contractors are required, they are engaged.</p> <p>7.6. Where crops are to be dried, the strategies and resources for doing so are identified, ensuring safe working practices are enabled at all times.</p>
8. Implement the harvest strategy	<p>8.1. Where the weather patterns permit, pre-harvest pest control treatments are applied in the manner, and at the time, scheduled in the harvesting plan.</p> <p>8.2. All OHS and environmental requirements are adhered to throughout the application of pre-harvest treatments.</p> <p>8.3. All labour and equipment that is required for the harvest is organised to be ready and available at the scheduled place and time.</p> <p>8.4. The harvest is begun at the scheduled time when the crop will be at its optimum.</p> <p>8.5. All OHS practices are monitored throughout the harvest to ensure that staff and contractors work</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>safely at all times.</p> <p>8.6. The order of the harvest described in the harvesting plan is followed.</p> <p>8.7. Harvesting operations are monitored regularly and adjusted to allow for weather, contracting and equipment maintenance needs.</p> <p>8.8. Truck, tractor and harvester operators are instructed on procedures to deliver each crop load at maximum quality.</p>
9. Segregate crop for quality	<p>9.1. As the crop is harvested, it is monitored for quality and assessed against the quality expectations in the harvesting plan.</p> <p>9.2. The quality of the crop is assessed throughout the harvest and segregated into the various marketing grades.</p> <p>9.3. Each grade is located and stored in the appropriate place as determined by the harvesting plan.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan and implement harvesting operations, including amendment of these during the operation itself
- organise and schedule the maintenance of plant and equipment
- establish processes/strategies, procedures and controls for crop harvesting
- interpret, analyse and extract information from a range of sources and discussions
- assess potential yields
- negotiate and arrange contracts and agreements
- explain, and deliver instructions about the plans and scheduling of the harvest operations to both staff and contractors, as well as suppliers, customers, and neighbours
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>written reports</p> <ul style="list-style-type: none"> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• capability and use of harvesting equipment</li> <li>• crop measurement techniques and parameters</li> <li>• market information and sources</li> <li>• location and relative skills and abilities of available contractors</li> <li>• contracting requirements for crop insurance</li> <li>• management of the moisture content of crops, including drying and aeration</li> <li>• storage options and local storage availability</li> <li>• bushfire prevention and control legislation</li> <li>• bushfire prevention and control strategies and equipment</li> <li>• contact details for local fire services</li> <li>• weather conditions which may affect the harvest</li> <li>• relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, and vehicle and plant use</li> <li>• environmental controls and codes of practice applicable to the business and to the harvesting operations</li> <li>• sound management practices and processes to minimise noise, odours, and debris from the harvesting operations.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy</p>

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• estimate crop yield and value and monitor for harvest readiness</li> <li>• plan for the resources that will be required for harvest</li> <li>• negotiate insurance and equipment supply contracts</li> <li>• develop risk management procedures for OHS, climate and fire risk</li> <li>• organise for the logistics of the harvesting operation including harvesting, storage and delivery</li> <li>• keep grain batches separate and monitor for pests or spoilage.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
Crops may include:	<ul style="list-style-type: none"> <li>• all horticultural crops</li> <li>• all agricultural crops.</li> </ul>
Horticultural crops may include:	<ul style="list-style-type: none"> <li>• all fruit</li> <li>• vegetables</li> <li>• herbs</li> <li>• flowers</li> <li>• foliage</li> <li>• bulbs</li> <li>• tubers</li> <li>• nuts</li> <li>• fungi</li> <li>• wild harvest plants</li> <li>• oils</li> <li>• olives</li> <li>• grains</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• seeds</li> <li>• hops</li> <li>• other specialised crops not specifically named as broadacre crops.</li> </ul>
Agricultural crops may include:	<ul style="list-style-type: none"> <li>• canola</li> <li>• wheat</li> <li>• hay</li> <li>• barley</li> <li>• oats</li> <li>• rice</li> <li>• triticale</li> <li>• maize</li> <li>• millet</li> <li>• chickpeas</li> <li>• cotton</li> <li>• faba beans</li> <li>• lucerne</li> <li>• lupins</li> <li>• pigeon peas</li> <li>• sorghum</li> <li>• soybean</li> <li>• sunflower</li> <li>• other crops grown as part of a broadacre mixed farming enterprise not specifically named as horticultural crops.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Broadacre cropping
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**Co-requisite units**

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCBAC507A Develop production plans for crops

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing production plans for agricultural and horticultural crops and defines the standard required to: prepare budgets and gross margins; source and interpret relevant benchmark information from consultants or peers; sample soils and plant tissue for testing; select crop species and variety and determine yield potential for crop; prepare individual paddock plans and a whole farm cropping plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to production managers is likely to be undertaken without supervision, with only technical advice sought from others. It requires knowledge of determinants of crop types and yields, market prices, gross margins, cash flow budgets and disease and pest management for relevant crops.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select crop species and variety	<p>1.1. Crop types and varieties are assessed and selected for their market potential and gross margin returns for the farm environment.</p> <p>1.2. Most profitable cultural practices and rotations are selected consistent with disease and pest management strategies, available machinery resources, and management for sustainability of resources.</p> <p>1.3. Production risks are identified for each crop and strategies to address these are determined.</p> <p>1.4. Environmental risks are identified and strategies developed as appropriate.</p>
2. Establish yield potential and quality specification for crop	<p>2.1. Relevant benchmark yields are sourced, where available, to assist setting target yields.</p> <p>2.2. Past production records are analysed to determine the key determinants of yield.</p> <p>2.3. Available models for calculating water use efficiency or other key determinants of yield are used, as appropriate, to assist in setting target yields.</p> <p>2.4. Quality specifications and target yields are established for all crops.</p>
3. Prepare crop program	<p>3.1. Proposed crop land areas are assessed for their nutrient, pest and disease status, water reserves, tillage requirements, and other factors before selecting crop variety.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Records of chemical use are used, as appropriate, to assist planning to reduce chemical resistance.</p> <p>3.3. Crop variety is selected and paddock preparation, planting, fertilising and other treatments are planned.</p> <p>3.4. Optimum timing of planting, applications and treatments is determined and a calendar of operations is prepared.</p> <p>3.5. Cash flow budget for the cropping program is determined.</p>
4. Review production plan	<p>4.1. Logistical arrangements related to harvesting/transportation/marketing and other key operations are planned for the production cycle.</p> <p>4.2. Machinery and equipment requirements are planned and checked for the crop production cycle.</p> <p>4.3. Labour requirements are identified and planned for the crop production cycle.</p> <p>4.4. Seed, fertiliser, pest and disease treatments and other input requirements are identified.</p> <p>4.5. Physical and financial record keeping system is established to provide data for the analysis of crop performance, and to meet other statutory requirements including records of chemical use.</p> <p>4.6. Production plan is reviewed, amended where required and documented as a final plan.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare budgets and gross margins
- source and interpret relevant benchmark information from consultants or peers
- sample soils and plant tissue for testing
- manage and monitor crop diaries and associated records
- select crop species and variety
- source and interpret relevant benchmark information
- determine yield potential for crop

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• prepare crop programs</li> <li>• review, amend and document the production plan</li> <li>• use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• determinants of crop yield</li> <li>• cultural practices related to cropping</li> <li>• market prices, gross margins, cash flow budgets</li> <li>• benchmark performance indicators</li> <li>• disease and pest management for relevant crops</li> <li>• machinery and equipment requirements for cropping</li> <li>• record keeping systems (computer or non-computer).</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare budgets and gross margins</li> <li>• source and interpret relevant benchmark information from consultants or peers</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• sample soils and plant tissue for testing</li> <li>• select crop species and variety and determine yield potential for crop</li> <li>• prepare individual paddock plans and a whole farm cropping plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Crops may include	<ul style="list-style-type: none"> <li>• all horticultural crops</li> <li>• all agricultural crops.</li> </ul>
Horticultural crops may include	<ul style="list-style-type: none"> <li>• all fruit</li> <li>• vegetables</li> <li>• herbs</li> <li>• flowers</li> <li>• foliage</li> <li>• bulbs</li> <li>• tubers</li> <li>• nuts</li> <li>• fungi</li> <li>• wild harvest plants</li> <li>• oils</li> <li>• olives</li> <li>• grains</li> <li>• seeds</li> <li>• hops</li> <li>• other specialised crops not specifically named as broadacre crops.</li> </ul>
Agricultural crops	<ul style="list-style-type: none"> <li>• canola</li> <li>• wheat</li> <li>• hay</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• barley</li> <li>• oats</li> <li>• rice</li> <li>• triticale</li> <li>• maize</li> <li>• millet</li> <li>• chickpeas</li> <li>• cotton</li> <li>• faba beans</li> <li>• lucerne lupins</li> <li>• pigeon peas</li> <li>• sorghum</li> <li>• soybean</li> <li>• sunflower</li> <li>• other crops grown as part of a broadacre mixed farming enterprise not specifically named as horticultural crops.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Broadacre cropping
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCBEK201A support beekeeping work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of supporting beekeeping and defines the standard required to: assist with routine beekeeping activities; work safely around and with bees; apply knowledge of food safety regulations when handling frames and honey or other hive products for human consumption.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to beekeeping assistants who may be working by themselves or as part of a small team. Work may be performed in a workshop or similar facility or in the field. Where work requires the use of load-shifting equipment, appropriate training/certification must be provided according to state and territory safety and licensing requirements.
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for beekeeping work	<p>1.1. Required materials, tools and equipment are identified according to lists provided and/or supervisor instructions.</p> <p>1.2. Checks are conducted on all materials, tools and equipment, and insufficient or faulty items are reported to supervisor.</p> <p>1.3. Correct manual handling techniques are used when loading and unloading materials to minimise damage to self, others, load and vehicle.</p> <p>1.4. Suitable personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5. Work support is provided according to Occupational Health and Safety (OHS) requirements and supervisor instructions.</p>
2. Undertake beekeeping work as directed	<p>2.1. Instructions and directions provided by supervisor are followed and clarification is sought when necessary.</p> <p>2.2. Work is undertaken in a safe and environmentally appropriate manner and according to enterprise guidelines.</p> <p>2.3. Interactions with other staff, apiary site owners and customers are carried out in a positive and professional manner.</p> <p>2.4. Enterprise policies and procedures in relation to workplace practices in the handling and disposal of materials are observed.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.5. Problems or difficulties in completing work to required standards or timelines are reported to supervisor.
3. Handle materials and equipment	3.1. Materials, tools and equipment are handled and transported according to supervisor instructions and enterprise guidelines. 3.2. Waste material produced during work is handled according to supervisor instructions. 3.3. Clean and safe work site is maintained while working.
4. Clean up on completion of work	4.1. Materials are returned to store or disposed of according to supervisor instructions. 4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer specifications and supervisor instructions. 4.3. Work outcomes are reported to supervisor, feedback on performance is sought and any required improvements are noted for future action.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and applying safe work practices
- cleaning up on completion of work
- handling bees
- handling materials, tools and equipment
- preparing materials, tools and equipment for work
- undertaking work as directed
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and

**REQUIRED SKILLS AND KNOWLEDGE**

ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- appropriate tools and equipment
- bee-handling techniques
- repair and maintenance of buildings, fixtures or fittings
- OHS, environment and animal welfare legislative and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assist with routine beekeeping activities
- work safely around and with bees
- apply knowledge of food safety regulations when handling frames and honey or other hive products for human consumption.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Bees may include:

- all species of bees used in production.

**Unit Sector(s)**

<b>Unit sector</b>	Beekeeping
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBEK202A Use a bee smoker

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of using a bee smoker when undertaking bee husbandry tasks and defines the standard required to: interpret impact of weather, nectar flow and strain of bee on defensive behaviour of colony; select suitable fuel; place a bee smoker in a cleared spot when not in use and have fire extinguishment materials available when working in dry conditions; keep a bee smoker alight and functioning while carrying out bee husbandry tasks; monitor the effects of smoke on bees, including the wearing off of the effects.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working in the field. It is an important competency for almost all beekeeping job roles. Work is performed under supervision, following established routines and according to Standard Operating Procedures (SOPs).
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare bee smoker for use	1.1. Confirmation is sought that climatic and other conditions permit the use of a bee smoker and planned activities are adjusted if required. 1.2. Bee smoker and components are checked to ensure that they are in good repair and serviceable, and any faults are addressed according to SOPs. 1.3. Personal Protective Equipment (PPE) is checked for serviceability and worn and used correctly. 1.4. Occupational health and safety (OHS) hazards associated with the use of a bee smoker are identified and appropriate action is taken to minimise risks to self and others. 1.5. Adequate water supply and tools are available for fire control. 1.6. Suitable fuel is added to bee smoker and lit. 1.7. Bee smoker bellows are operated to produce and maintain a steady and dense stream of cool smoke.
2. Use bee smoker to manage bee	2.1. Smoke is blown into entrance of hive and sufficient time is allowed before hive is opened. 2.2. After opening hive, additional smoke is puffed over frames and/or supers and directed at bees. 2.3. Bee smoker is placed within easy reach while working on hives to ensure bees remain under control.

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4. Bee smoker is kept alight and producing cool smoke until operations are complete.</p> <p>2.5. After completion of operations, bee smoker is made safe according to fire, biosecurity and other enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and using safe work practices
- interpreting impact of weather, nectar flow and strain of bee on defensive behaviour of colony
- keeping a bee smoker alight and functioning while carrying out bee husbandry tasks
- monitoring effects of smoke on bees, including the wearing off of the effects
- selecting suitable fuel
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- effects of smoke on bees and hive products
- legislation and regulations relating to use of bee smokers, especially in relation to fire protection and bushfires
- suitable fuel for bee smokers
- when and why to use a bee smoker.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret impact of weather, nectar flow and strain of bee on defensive behaviour of colony</li> <li>• select suitable fuel</li> <li>• place a bee smoker in a cleared spot when not in use and have fire extinguishment materials available, when working in dry conditions</li> <li>• keep a bee smoker alight and functioning while carrying out bee husbandry tasks</li> <li>• monitor the effects of smoke on bees, including the wearing off of the effects.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Bee smokers may include:	<ul style="list-style-type: none"> <li>• all types and makes of bee smokers.</li> </ul>



**Unit Sector(s)**

<b>Unit sector</b>	Beekeeping
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBEK203A Open and reassemble a beehive

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of opening and reassembling a beehive in order to carry out routine bee husbandry and related tasks and defines the standard required to: assess weather conditions and nectar availability; minimise risk of robbing and hive stress; raise a beehive lid using a hive tool and bee smoker; reassemble the beehive.
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### Application of the Unit

<b>Application of the unit</b>	Open and reassemble a beehive applies to working individually or as part of a small team. Work may be performed in a workshop or similar facility or in the field. Where work requires the use of load-shifting equipment, appropriate training/certification must be provided according to state and territory safety and licensing requirements.
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to open a beehive	<p>1.1. Required tools and equipment are identified according to supervisor instructions or Standard Operating Procedures (SOPs).</p> <p>1.2. Checks are conducted on all tools and equipment and insufficient or faulty items are reported to supervisor or addressed according to SOPs.</p> <p>1.3. Weather conditions and nectar availability are assessed, and planned activities are adjusted if needed to minimise risk of robbing and hive stress.</p> <p>1.4. Correct manual handling techniques are used and damage to beehive is minimised.</p> <p>1.5. Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.6. Occupational health and safety (OHS) hazards are identified and reported, and appropriate action is taken to minimise risks to self and others.</p> <p>1.7. Where in effect, site quarantine/biosecurity protocols are followed.</p>
2. Open the beehive	<p>2.1. Bees are controlled throughout the opening process by using smoke according to OHS requirements and SOPs.</p> <p>2.2. Work is carried out from a safe and appropriate position in relation to beehive.</p> <p>2.3. Beehive lid is raised using hive tool, and queen excluder, frames and/or supers are removed as</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>required, according to specific task to be undertaken.</p> <p>2.4.All removed frames and supers are placed on upside down lid to ensure they remain dirt free.</p>
3. Reassemble the beehive	<p>3.1.Bees are controlled throughout reassembling process by using smoke according to OHS requirements and SOPs.</p> <p>3.2.Brood frames are placed back into hive in the same position from which they were removed unless manipulation is being undertaken.</p> <p>3.3.All frames are replaced in appropriate boxes and, where used, queen excluders and/or supers are replaced.</p> <p>3.4.Beehive lid is replaced and, where used, hive fasteners are done up securely.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- complying with OHS requirements, including manual handling
- following work instructions and SOPs
- selecting and using appropriate PPE and beekeeping tools, including a bee smoker
- working safely around bees
- opening and reassembling a beehive
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- bee behaviour, particularly when beehive is disturbed
- components of a beehive.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess weather conditions and nectar availability</li> <li>• minimise risk of robbing and hive stress</li> <li>• raise a beehive lid using a hive tool and bee smoker</li> <li>• reassemble the beehive.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Beehives may include:	<ul style="list-style-type: none"> <li>• all types of beehives and enterprises based on bees.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Beekeeping
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBEK204A Construct and repair beehives

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of constructing and repairing beehives and defines the standard required to: assemble construction materials and check that they present no risk of contamination to environment or apiculture products; mark beehives as they are constructed or repaired; select and use tools appropriate to task being performed; use only timber treatments approved for beehives.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to beekeeping assistants who may be working by themselves or as part of a small team. Work may be performed in a workshop or similar facility or in the field.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to construct or repair beehives	<p>1.1. Required materials and equipment are identified according to lists provided and/or supervisor instructions.</p> <p>1.2. Beehive components for assembly or use in repairs are checked to ensure that they are suitable for use.</p> <p>1.3. Faulty or incorrect components are returned to storeroom and replaced, repaired or disposed of according to enterprise policy.</p> <p>1.4. Checks are conducted on all other materials and equipment and insufficient or faulty items are reported to supervisor.</p> <p>1.5. Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.6. Occupational Health and Safety (OHS) hazards are identified and reported to supervisor.</p>
2. Construct or repair beehives	<p>2.1. Beehives requiring repair are inspected visually to identify scope of job and materials and tools required.</p> <p>2.2. Where visual inspection indicates presence of American foulbrood disease, beehives are burned or sent for irradiation.</p> <p>2.3. Beehive components are assembled or repaired using appropriate replacement parts, nails, joins, glues and construction techniques.</p> <p>2.4. Appropriate timber treatments are applied to beehive.</p> <p>2.5. Constructed or repaired beehive and all components are correctly and legibly marked in accordance with</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>state and territory requirements.</p> <p>2.6. Work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.7. A clean and safe work site is maintained while working.</p> <p>2.8. Problems or difficulties in completing work to required standards or timelines are reported to supervisor.</p>
3. Clean up on completion of work	<p>3.1. Materials are returned to store or disposed of according to enterprise procedures and/or supervisor instructions.</p> <p>3.2. Equipment is cleaned, maintained and stored according to manufacturer specifications and supervisor instructions.</p> <p>3.3. Work outcomes are reported to supervisor or noted in enterprise records, feedback on performance is sought and any required improvements are noted for future action.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and using safe work practices
- cleaning up on completion of work
- handling materials and equipment
- preparing materials and equipment for work
- selecting and using tools appropriate to task being performed
- undertaking work as directed
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures

**REQUIRED SKILLS AND KNOWLEDGE**

- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- construction and health standards to be maintained for beehives
- hive components and materials required to construct or repair them
- safe work practices.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assemble construction materials and check that they present no risk of contamination to environment or apiculture products
- mark beehives as they are constructed or repaired
- select and use tools appropriate to task being performed
- use only timber treatments approved for beehives.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Beehives may include:	<ul style="list-style-type: none"> <li>all types of beehives used in commercial production.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCBEK301A Manage honey bee swarms

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of collecting bee swarms and managing the swarming behaviour of bees, and defines the standard required to: catch a swarm of honey bees and relocate it safely; implement a range of control options to manage swarming behaviour in honey bees.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to beekeepers or workers who may be working by themselves or in a small team. Work is likely to be undertaken with limited supervision.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to catch a swarm of honey bees	<p>1.1.All equipment required to collect a swarm of honey bees is obtained and confirmed as being in good repair and serviceable for use.</p> <p>1.2.Personal Protective Equipment (PPE) is checked for serviceability and worn and used correctly.</p> <p>1.3.Occupational Health and Safety (OHS) hazards associated with collecting bee swarms are identified and action is taken to deal with them effectively.</p> <p>1.4.Any site quarantine in effect or other biosecurity protocols are observed.</p> <p>1.5.Risks associated with collecting a swarm of honey bees are identified and actions are taken to minimise likelihood and consequences of risks.</p>
2. Collect a swarm of honey bees	<p>2.1.Dry drawn frames are placed in hive box to be used for collected swarm to ensure collected bees remain in new hive box.</p> <p>2.2.Swarm is caught by shaking it into an empty box.</p> <p>2.3.Boxed swarm is moved to new location after confirming that whole swarm has been collected.</p> <p>2.4.Swarm is requeened.</p>
3. Manage swarming behaviour in a honey bee colony	<p>3.1.Honey bee colony is monitored for signs that swarming may occur.</p> <p>3.2.Risks associated with handling bees that are likely to swarm are identified and actions are taken to minimise likelihood and consequences of risks.</p> <p>3.3.Where swarming appears likely to occur, range of control options is considered and best option is</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>selected and implemented.</p> <p>3.4.Colony is monitored to ensure that swarming behaviour has been controlled and if necessary further control options are implemented.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe work procedures
- communication skills for dealing with members of the public and owners/managers of the property from which a swarm is being collected
- interpreting bee behaviour and handling bees
- identifying disease
- use of specialist equipment and PPE
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- signs of brood disease and wax moth infestation in swarm once it has been placed in a hive
- signs that indicate that a colony is about to swarm
- control options for honey bee swarms
- range of methods that can be used to manage a colony that is showing signs that it is about to swarm
- when to requeen a swarm that has been collected
- why and when honey bees swarm
- why swarms are collected.
- biosecurity protocols.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>catch a swarm of honey bees and relocate it safely</li> <li>implement a range of control options to manage swarming behaviour in honey bees.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of bees may include:	<ul style="list-style-type: none"> <li>all types and strains of bees used in commercial honey production.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCBEK302A Manipulate honey bee brood

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of manipulating a honey bee brood and preparing materials, tools and equipment for work, and defines the standard required to: determine when and how honey bee brood should be manipulated to achieve desired result; open hives and remove and reposition frames safely and with minimal damage or unintended disturbance to brood; apply knowledge of food safety regulations when handling frames, honey or other hive products for human consumption.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to beekeepers and their employees who may be working by themselves or in a small team. Work is likely to be performed under limited supervision and according to established routines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to manipulate brood combs	<p>1.1. Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.2. Tools and equipment required to manipulate brood are selected and checked prior to use.</p> <p>1.3. Occupational Health and Safety (OHS) hazards associated with manipulating brood are identified and actions are taken to minimise risk to self and others.</p> <p>1.4. Any site quarantine or other biosecurity protocols in force are observed.</p> <p>1.5. Reason for manipulating brood is clarified and appropriate sequence of actions is planned.</p> <p>1.6. Risks to colony, including to brood and queen bee, are identified and actions are taken to minimise likelihood and consequences of risks.</p>
2. Manipulate brood	<p>2.1. Hive is opened according to enterprise procedures and safe work practices.</p> <p>2.2. Combs are removed in planned sequence and placed in suitable position.</p> <p>2.3. Frames are replaced in same or new sequence and/or position, or removed to another hive according to purposes for which brood is being manipulated.</p> <p>2.4. Work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Enterprise policies and procedures in relation to workplace practices, handling and disposal of waste materials, and site quarantine are observed.</p> <p>2.6. Hive and colony are monitored after manipulation process and appropriate action is taken if needed.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe work procedures handling bees
- handling materials and equipment
- using a bee smoker.
- cleaning up on completion of work
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- biosecurity for moving bees
- bee behaviour
- bee-handling techniques
- different types of manipulation that may be used to achieve desired result
- fire risk level
- purposes for which brood may be manipulated
- safe work practices.
- animal welfare requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine when and how honey bee brood should be manipulated to achieve desired result</li> <li>• open hives and remove and reposition frames safely and with minimal damage or unintended disturbance to brood</li> <li>• apply knowledge of food safety regulations when handling frames, honey or other hive products for human consumption.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Manipulating the honey bee brood may include:	<ul style="list-style-type: none"> <li>• all types and strains of bees used in commercial production.</li> </ul>

## Unit Sector(s)

Unit sector	Beekeeping
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCBEK303A Re-queen a honey bee colony

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of requeening a honey bee colony with a replacement queen, and defines the standard required to: identify need to requeen, breed and select for replacement queen bee and place in hive; monitor activity of new queen bee and threat of competition.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to beekeepers that are likely to be working supervised. Well-reared and mated, young healthy queen bees of good genetic stock are a major factor in improving honey yields. Requeening is typically practised annually to obtain benefits from the increased egg-laying ability and high pheromone production associated with young queen bees. Requeening by commercial honey producers is normally carried out in spring/summer through to autumn to fit in with seasonal conditions and management practices.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify requirement to requeen a colony	<p>1.1. Vigour of the current queen is assessed.</p> <p>1.2. Colony is monitored for signs that indicate queen replacement is necessary.</p>
2. Prepare to requeen a colony	<p>2.1. Replacement queens that meet enterprise criteria are obtained from a commercial supplier or from own breeding stock.</p> <p>2.2. Replacement queens and any escort worker bees are stored in appropriate conditions and monitored until requeening is undertaken.</p> <p>2.3. Hive is monitored to ensure requeening occurs under optimum conditions.</p> <p>2.4. Replacement queen is confirmed as being healthy and free from parasites.</p>
3. Introduce replacement queen bee	<p>3.1. Old queen bee is located in the hive and removed.</p> <p>3.2. Where queen bee has been raised in a nucleus colony, either nucleus colony is placed on top of colony to be requeened, and the two colonies separated by a single layer of paper, or queen bee is caught and introduced into another colony.</p> <p>3.3. Hive is left undisturbed for a period of ten days.</p>
4. Monitor progress of a replacement queen bee	<p>4.1. After ten days, the hive is monitored for acceptance of replacement queen bee by colony.</p> <p>4.2. Replacement queen bee is monitored for evidence of</p>

ELEMENT	PERFORMANCE CRITERIA
	egg laying and adequate levels of hatching.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe work practices
- assessing suitability of conditions for requeening
- breeding and selecting replacement queen bees
- identifying disease status of parent colonies
- installing replacement queen bee
- monitoring queen bee activity
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- conditions for requeening
- factors other than queen vigour that may affect brood production
- factors to consider when identifying and removing old queen and introducing new queen
- queen bee behaviour and brood pattern
- selection criteria for new queen bee
- storage requirements of queen bees before being introduced into the colony.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify need to requeen</li> <li>• breed and select for replacement queen bee and place in hive</li> <li>• monitor activity of new queen bee and threat of competition.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Honey bee colony may include:	<ul style="list-style-type: none"> <li>• all commercial types and strains of bees.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCBEK304A Remove a honey crop from a hive

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of removing a honey crop from a hive by removing bees from the hive and combs, and by removing filled combs from the hive into other boxes for transport to the extracting facility and defines the standard required to: determine ripeness of nectar honey and filling of comb cells; select and use the most suitable method(s) for removing bees and frames/combs from hive; handle frames/combs filled with honey so that they are not contaminated with dust, dirt or water.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to beekeepers and others working under minimal supervision as part of a team and according to established enterprise procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to remove honey	<p>1.1.All tools and equipment required to remove a honey crop from a hive are obtained and confirmed as being in good repair and serviceable for use.</p> <p>1.2.Personal Protective Equipment (PPE) is checked for serviceability and worn and used correctly.</p> <p>1.3.Occupational Health and Safety (OHS) hazards associated with removing a honey crop from a hive are identified and action is taken to deal with them.</p> <p>1.4.All food safety requirements are identified and met.</p> <p>1.5.Any site quarantine or other biosecurity protocols in force are observed.</p> <p>1.6.Risks associated with removing a honey crop from a hive are identified and actions are taken to minimise likelihood and consequences of risks.</p> <p>1.7.Ripeness of nectar honey is determined to ensure that the honey is mature enough to be harvested.</p> <p>1.8.Any withholding periods for honey bee medications and treatments are observed.</p> <p>1.9.Time and location of planned honey removal takes into account potential contaminants, impact on the colony and quality and type of honey to be obtained.</p> <p>1.10. Factors affecting quantity of honey to be removed from hive are identified and taken into consideration.</p>
2. Remove honey from the hive	<p>2.1.Range of suitable methods for removing bees from honey-filled combs is considered and best option (or combination) is selected and implemented.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2. Range of suitable methods for removing honey crop in the frames from the hive or honey-filled combs is considered and best option (or combination) is selected and implemented.</p> <p>2.3. Quality of honey is monitored during removal process and, if required, removal methods are modified to ensure that desired quality standards are achieved and maintained.</p> <p>2.4. Honey-filled frames are transported to extracting facility.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- judging ripeness of honey nectar
- manual handling
- using PPE
- working with and around bees
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- food safety requirements
- indicators of ripe honey nectar and adequately filled cells
- methods to remove bees from hives.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine ripeness of nectar honey and filling of comb cells</li> <li>• select and use the most suitable method(s) for removing bees and frames/combs from hive</li> <li>• handle frames/combs filled with honey so that they are not contaminated with dust, dirt or water.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Removal may include:	<ul style="list-style-type: none"> <li>• removal from commercial or native bees from the hive and combs</li> <li>• removing filled combs from the hive into other boxes for transport to the extracting facility.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCBEK305A Extract honey

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of extracting honey and defines the standard required to: operate honey extraction equipment safely to extract honey fit for human consumption; store the extracted honey to reduce the risk of spoilage; take a reference sample of honey to meet quality assurance and food safety requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to work that may be performed by a beekeeper or by staff under supervision, and may be carried out in a mobile processing facility or a purpose-built fixed facility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to extract honey	<p>1.1.All equipment is cleaned, dried, sanitised and checked for serviceability and use.</p> <p>1.2.Ripe honey combs are selected for extraction of honey.</p> <p>1.3.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified and action is taken to minimise risks to self and others.</p>
2. Extract honey	<p>2.1.Quality Assurance (QA) and food safety requirements are complied with throughout process of extracting honey.</p> <p>2.2.Frames are visually inspected for areas of brood and, if found, frames are uncapped by hand to avoid brood.</p> <p>2.3.Where required, combs are warmed to assist extraction process.</p> <p>2.4.Cells are uncapped using a hand knife or machine, avoiding damage to cells and frames.</p> <p>2.5.Frames are placed in extraction unit and unit is operated according to manufacturer instructions.</p>
3. Purify honey	<p>3.1.Extracted honey is heated to 30°C and strained or settled to remove wax, air bubbles, pollen and bees.</p> <p>3.2.Moisture content of honey is checked and appropriate action is taken as required.</p> <p>3.3.Action is taken to reduce risk of fermentation of honey by storing in an airtight container or tank.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Store honey	4.1.Cleaned honey is stored in suitable containers to meet customer requirements. 4.2.Reference sample of honey is taken, correctly labelled and stored according to enterprise, food safety and quality assurance requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- distinguishing between honey cells and brood cells
- judging when combs are ripe
- safely using equipment required for honey extraction
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- biosecurity protocols for honey extraction and movement
- effect of heat and extraction process on honey
- effect of heat and extraction process on honey
- equipment and its maintenance requirements
- food safety systems and requirements
- requirements of honey Bee Industry Quality Assurance Program (BQUAL).

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• operate honey extraction equipment safely to extract honey fit for human consumption</li> <li>• store the extracted honey to reduce the risk of spoilage</li> <li>• take a reference sample of honey to meet quality assurance and food safety requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Extracting honey includes:	<ul style="list-style-type: none"> <li>• all of the processes, procedures and equipment required to extract honey from a hive.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCBEK306A Manage pests and disease within a honey bee colony

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of inspecting a honey bee colony for indicators of disease or evidence of pests, and taking appropriate follow-up action and defines the standard required to: inspect hive and colony for signs of disease and ill thrift; identify key signs and symptoms of disease and pests that may affect brood or adult honey bees; undertake remedial action to ensure colony is maintained in healthy and productive condition for intended use.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to managing pests and disease within a honey bee colony. Beekeepers may be working by themselves or as part of a small team. Work may be performed in a workshop or similar facility or in the field. Work is likely to be undertaken with limited supervision. The standard requires a broad range of knowledge about honey bee health and nutrition, as well as skills in handling and working with bees.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to check brood	<p>1.1.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.2.Tools and equipment required to open a hive are selected and checked prior to use.</p> <p>1.3.Occupational Health and Safety (OHS) hazards associated with opening a hive are identified and actions are taken to minimise risk to self and others.</p>
2. Assess health and condition of brood	<p>2.1.Brood is inspected for signs of disease and, where notifiable disease is observed, appropriate authorities are notified as required by legislation and appropriate action is taken.</p> <p>2.2.Brood is inspected for evidence of pests and parasites and, where found, appropriate action is taken and appropriate authorities are notified as required by legislation.</p> <p>2.3.Signs of disease or pest are identified, appropriate samples for testing are collected, and evidence is gathered to support a diagnosis according to relevant standards and protocols.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4.Hive is inspected for signs of diseased brood being ejected from hive at entrance or bottom board.
3. 3 Assess health and condition of adult bees	<p>3.1.Flight paths around hive entrance are observed for signs of poor or irregular flight patterns, and for dead or dying bees at hive entrance.</p> <p>3.2.Adult bees and brood combs are observed for signs of disease and, where notifiable disease is present, appropriate authorities are informed as required by legislation and appropriate action is taken.</p> <p>3.3.Signs of disease or pest are identified, appropriate samples for testing are collected and evidence is gathered to support a diagnosis according to relevant standards and protocols.</p> <p>3.4.Biosecurity measures are implemented according to enterprise biosecurity plans and instructions from appropriate authority.</p> <p>3.5.Results of inspections and any remedial action taken are recorded and used as the basis for future beekeeping operations.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying pests and diseases
- inspecting broods
- preparing supplementary feeds
- reporting signs of notifiable diseases
- requeening a colony
- taking samples
- transporting colonies
- using PPE
- working safely around bees
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks

**REQUIRED SKILLS AND KNOWLEDGE**

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- mode of spread of pests/diseases and level of risk to beekeeping
- signs of endemic and exotic disease and pests of honey bees and treatments
- where relevant, non-allowable inputs for organic honey production.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- inspect hive and colony for signs of disease and ill thrift
- identify key signs and symptoms of disease and pests that may affect brood or adult honey bees
- undertake remedial action to ensure colony is maintained in healthy and productive condition for intended use.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Diseases, pests and parasites may include:	<ul style="list-style-type: none"> <li>the range of diseases, pests and parasites affecting brood and adult bees.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCBEK401A Collect and store propolis

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the collection and storage of propolis and defines the standard required to: recognise suitable flora for propolis production; recognise propolis and distinguish it from other substances collected by bees; maintain a healthy hive and colony; judge suitability of a colony for propolis collection; correctly handle bees and work safely around them; collect propolis; apply quality assurance and food safety procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to beekeepers involved in the specialist production of propolis in line with food safety and quality assurance requirements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to collect propolis	<p>1.1. Suitable colony is selected or acquired.</p> <p>1.2. All equipment to be used in collection of propolis is cleaned and sanitised according to quality assurance and food safety requirements.</p> <p>1.3. Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified and action is taken to minimise risks to self and others.</p> <p>1.5. Suitable propolis trap is constructed and installed, or cracks are created for bees to place propolis.</p> <p>1.6. Propolis production is stimulated by manipulation of environmental conditions.</p>
2. Collect and store propolis	<p>2.1. Quality assurance and food safety requirements are complied with throughout collection and storage of propolis.</p> <p>2.2. Propolis is collected from traps by shaking into a container.</p> <p>2.3. Appropriate extraction method is selected and propolis is extracted according to quality assurance and food safety requirements.</p> <p>2.4. Extracted propolis is stored in appropriate clean and dry conditions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe work practices
- basic woodworking skills
- bee handling
- extracting propolis
- identifying propolis-producing flora
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- bees and their behaviour
- food safety requirements
- quality assurance, including requirements of honey Bee Industry Quality Assurance Program (BQUAL)
- suitable conditions and constraints on collecting propolis.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise suitable flora for propolis production</li> <li>• recognise propolis and distinguish it from other substances collected by bees</li> <li>• maintain a healthy hive and colony</li> <li>• judge suitability of a colony for propolis collection</li> <li>• correctly handle bees and work safely around them</li> <li>• collect propolis</li> <li>• apply quality assurance and food safety procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Performance relates to and may include:	<ul style="list-style-type: none"> <li>• all equipment and processes used in propolis production.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCBEK402A Perform queen bee artificial insemination

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers performing queen bee artificial insemination and defines the standard required to: collect semen from drone honey bees; inseminate queen bees; manage queen bees after insemination; maintain required hygiene standards; keep records in relation to Artificial Insemination (AI) program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to specialists who provide instrumental insemination services for the beekeeping industry.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine breeding method	<p>1.1.Options for artificial breeding are reviewed to determine most suitable and affordable method in line with breeding objectives.</p> <p>1.2.Artificial breeding option is selected and matched to resources so as to meet enterprise's queen and drone management program.</p> <p>1.3.Resource requirements of breeding programs are identified, sourced and arranged.</p> <p>1.4.Program schedules are prepared according to available resources.</p> <p>1.5.Suitable clothing and work environment for self and breeding support staff are made available and comply with Occupational Health and Safety (OHS) and enterprise requirements.</p>
2. Implement breeding method	<p>2.1.Genetic material is obtained from reliable and legitimate sources.</p> <p>2.2.Genetic material is received, checked and stored to ensure maximum viability and program outcomes, according to industry codes of practice.</p> <p>2.3.Rearing times are managed so that queen bees and drones are of appropriate age and condition when AI is scheduled to occur.</p> <p>2.4.Semen is collected from drones and queens are prepared and inseminated using hygienic techniques to minimise risk of contamination.</p> <p>2.5.After insemination, queen is placed in a colony of suitable strength and monitored to determine whether further insemination or treatments with carbon</p>



ELEMENT	PERFORMANCE CRITERIA
	dioxide are required.
3. Monitor and maintain program	3.1. Adjustments in genetic material transfer practices are reviewed to enhance success of future programs. 3.2. Data on genetic material transfer programs is documented and maintained according to enterprise requirements. 3.3. Success rates are determined from breeding objectives and are calculated and used to determine success of AI program. 3.4. Information is supplied to relevant authorities to promote research and improvements in industry practice. 3.5. Necessary modifications to queen and drone management program are identified and recorded to assist continuous improvement processes.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify appropriate AI techniques
- determining AI timing
- schedule and obtain resources for insemination activities and
- identifying queen bee laying fertilised eggs
- performing AI
- preparing queen and drone honey bees for AI
- match queen and drone cycles to resource availability
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of

**REQUIRED SKILLS AND KNOWLEDGE**

cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- artificial breeding methods and benefits, and limitations of each method
- anatomy and physiology of reproductive organs and reproductive process in queen and drone honey bees
- enterprise and industry identification system for queen and drone honey bees and semen
- enterprise and industry policies with regard to AI, and the recording and reporting requirements
- honey bee health and abnormalities
- knowledge of enterprise breeding programs
- preparation requirements for AI
- principles of genetics
- physical resource requirements and how to safely handle and transport them
- relevant commonwealth, state or territory legislation, regulations and codes of practice with regard to workplace OHS
- semen collection and homogenising processes
- semen thawing techniques.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- collect semen from drone honey bees
- inseminate queen bees
- manage queen bees after insemination
- maintain required hygiene standards

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>keep records in relation to AI program.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Performance relates to and may include:	<ul style="list-style-type: none"> <li>all equipment and processes used in artificial insemination of queen bees.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCBEK403A Produce and harvest royal jelly

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the production and harvesting of royal jelly and defines the standard required to: graft larvae and stimulate royal jelly production; hygienically collect and store royal jelly; keep records of royal jelly production for food safety and QA requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to beekeepers that induce the production of royal jelly by honey bees and collect and store the finished product in line with food safety and quality assurance requirements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to produce and harvest royal jelly	<p>1.1.Hive is assessed for suitability for production of royal jelly.</p> <p>1.2.Production of royal jelly is stimulated.</p> <p>1.3.Personal Protective Equipment (PPE) is selected and used.</p> <p>1.4.Occupational Health and Safety (OHS) hazards associated with working with bees are identified and appropriate action is taken to minimise risks to self and others.</p> <p>1.5.All equipment used in process of collecting royal jelly is cleaned and sanitised either by heat, alcohol or irradiation according to food safety requirements and enterprise procedures.</p>
2. Collect and store royal jelly	<p>2.1.Personal hygiene requirements are met, including washed hands and clean clothing.</p> <p>2.2.Wax is cut from selected grafted queen larvae cells just above the royal jelly to aid and speed up collection.</p> <p>2.3.Larvae are carefully removed from cell with a grafting tool so as not to harm or contaminate jelly, and larvae are discarded.</p> <p>2.4.Royal jelly is removed from each cell.</p> <p>2.5.Royal jelly is filtered through fine nylon net to remove traces of wax or larvae.</p> <p>2.6.Harvested royal jelly is placed into appropriate hygienic containers, avoiding excessive exposure to air, and is refrigerated immediately.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Finalise tasks	3.1. Equipment is checked, cleaned and returned to store area. 3.2. Records are made and maintained according to enterprise procedures, and food safety and quality assurance requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- bee handling
- carefully collecting and filtering royal jelly
- record keeping
- removing larvae
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- bee handling
- correct cleaning and sanitation methods
- field floral conditions
- food safety requirements
- role of nurse bees in royal jelly production
- quality assurance, including requirements of honey Bee Industry Quality Assurance Program (BQUAL).

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• graft larvae and stimulate royal jelly production</li> <li>• hygienically collect and store royal jelly</li> <li>• keep records of royal jelly production for food safety and Quality Assurance (QA) requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Performance relates to and may include:	<ul style="list-style-type: none"> <li>• all equipment and processes used in commercial production of royal jelly.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCBEK404A Provide bee pollination services

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers providing bee pollination services and defines the standard required to: assess need for pollination; negotiate price and pollination agreement; comply with all industry and legislative requirements; identify suitable locations within crop or site for hive placement; objectively assess hive condition and suitability for pollination; monitor performance of contract and of bee colonies.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to a specialist grower under a commercial arrangement.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess pollination service requirement	<p>1.1.Pollination services to be provided are confirmed with customer.</p> <p>1.2.Number and types of colonies required for crop are determined.</p> <p>1.3.Strength and condition of bee colonies are assessed for their suitability for use as crop pollinators.</p> <p>1.4.Risk of pollination problems is assessed with customer and process to monitor risk is agreed and established.</p> <p>1.5.Technical information is provided to customer.</p>
2. Price and formalise agreement for pollination services	<p>2.1.Costs in providing pollination services are identified and calculated.</p> <p>2.2.Price for pollination services is agreed with customer.</p> <p>2.3.Formal agreement is made with customer and documented.</p>
3. Monitor pollination performance of bee colonies	<p>3.1.Crop is monitored within appropriate timeframe for evidence of bee foraging and pollination efficiency.</p> <p>3.2.Remedial action is taken where required.</p> <p>3.3.Hive strength and condition are demonstrated to customer where required.</p> <p>3.4.Swarm control is maintained.</p> <p>3.5.Bee husbandry practices are carried out as required.</p>
4. Comply with industry and legislative	<p>4.1.Appropriate health certificates and permits are obtained where bees are to be moved across state borders.</p>

ELEMENT	PERFORMANCE CRITERIA
requirement	4.2. Appropriate pollination code of practice is followed. 4.3. All state or territory Apiary Acts and other relevant Acts and regulations, and local government regulations affecting beekeeping are addressed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and following safe work practices
- calculating strength and numbers of bee colonies required to pollinate crop
- managing pollination of honey bee colonies
- monitoring chemical use near hives
- monitoring climate and weather
- monitoring hive activity on target crop
- pricing and negotiating provision of services
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- chemicals used on each crop to be pollinated and available alternatives
- environmental and climatic factors affecting bee foraging behaviour and pollination
- essential elements of a valid contract
- location of colonies to maximise pollination
- management of health and performance of bee colonies
- nutrition and water requirements of bees
- pollination requirements of major crops in locality of operation, including nearby crops/plants that may be more attractive to foraging bees

**REQUIRED SKILLS AND KNOWLEDGE**

- public liability insurance requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess need for pollination
- negotiate price and pollination agreement
- comply with all industry and legislative requirements
- identify suitable locations within crop or site for hive placement
- objectively assess hive condition and suitability for pollination
- monitor performance of contract and of bee colonies.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Performance relates to and may

- all processes and equipment used in

<b>RANGE STATEMENT</b>	
include:	commercial bee pollination services.

### Unit Sector(s)

Unit sector	Beekeeping
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### Co-requisite units

Co-requisite units	

### Competency field

Competency field	
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## AHCBEK405A Select and establish an apiary site

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the selection and establishment of an apiary site and defines the standard required to: identify flora and assess its productivity including its potential for pollen and nectar flow; communicate with land owners/managers; determine site selection criteria including the potential productivity of flora; select apiary location to meet the nutritional requirements of colony.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to beekeepers.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan to select and establish an apiary site	<p>1.1.Criteria for selecting a site are established.</p> <p>1.2.Suitable locality in which to search for site is identified.</p> <p>1.3.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.4.Tools and equipment required to select and establish an apiary site are selected and checked prior to use.</p> <p>1.5.Occupational Health and Safety (OHS) hazards associated with selecting and establishing an apiary site are identified and actions are taken to minimise risk to self and others.</p>
2. Select the apiary site	<p>2.1.Detailed information about potential sites in selected locality is gathered and analysed using site selection criteria.</p> <p>2.2.Capacity of available flora to support desired number of hives at site is determined.</p> <p>2.3.Most suitable site(s) is selected.</p> <p>2.4.Precise area(s) within site to place hives is selected taking into account proximity to flora, water, gates, stockyards and movement of the sun.</p> <p>2.5.Permission to locate beehives at site is obtained from land owner or manager.</p>
3. Establish the apiary at the selected sit	<p>3.1.Access of bees to floral sources and water is monitored and hives are repositioned as required or a new site is sought.</p> <p>3.2.Where required, supplementary feeds of nectar and/or protein substitutes are provided at</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>concentration and frequency required by bees to obtain desired results.</p> <p>3.3. Results of inspections and any remedial action taken are recorded and used as basis for future beekeeping operations.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- hazard identification and risk assessment
- bush sense
- correct manual handling
- loading and unloading beehives
- map reading
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- potential productivity of flora, including its potential for pollen and nectar flow
- nutritional requirements of colony
- sources of information about potential sites
- residue risks in honey
- OHS and environmental legislation, codes of practice and enterprise procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify flora and assess its productivity including its potential for pollen and nectar flow</li> <li>• communicate with land owners/managers</li> <li>• determine site selection criteria including the potential productivity of flora</li> <li>• select apiary location to meet the nutritional requirements of colony.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Apiaries may include:	<ul style="list-style-type: none"> <li>• the range of apiaries and production systems in commercial honey production.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCBEK406A Trap and store pollen

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers trapping and storing of pollen and defines the standard required to: build a suitable pollen trap and install trap onto hive; correctly collect and process pollen; manage a hive: maintain records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to beekeepers involved in the specialist production of pollen. Where pollen is intended for human consumption, work must be carried out in accordance with food safety requirements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to trap and store pollen	<p>1.1.Colony is assessed for suitability for pollen collection.</p> <p>1.2.Personal Protective Equipment (PPE) is selected and used.</p> <p>1.3.Occupational Health and Safety (OHS) hazards associated with working with bees are identified and appropriate action is taken to minimise risks to self and others.</p> <p>1.4.All equipment used in process of collecting pollen is cleaned and sanitised according to food safety requirements and enterprise procedures.</p>
2. Collect pollen	<p>2.1.Suitable pollen trapping mechanism is constructed and installed in hive.</p> <p>2.2.Personal hygiene requirements are met, including washed hands and clean clothing.</p> <p>2.3.Pollen is collected at appropriate frequency, depending on its intended use as bee feed or for human consumption.</p> <p>2.4.Risk of theft by ants is assessed and steps are taken to reduce likelihood of this occurring.</p> <p>2.5.Risk of colony decline is assessed and pollen collection is stopped if necessary.</p> <p>2.6.Pollen is temporarily stored in a suitable container to be transported to processing facilities.</p>
3. Process pollen	<p>3.1.Pollen is cleaned to remove all foreign material.</p> <p>3.2.Pollen is air dried until moisture content is appropriate to prevent fermentation and deterioration.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3.Pollen is stored appropriately and according to its intended use.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- basic woodworking skills to construct a pollen trap
- bee handling
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- bee colony's pollen requirements
- bee handling
- correct cleaning and sanitation methods
- knowledge of appropriate floral sources
- quality assurance and food safety, including requirements of honey Bee Industry Quality Assurance Program (BQUAL)
- requirements for commercial processing.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• build a suitable pollen trap and install trap onto hive</li> <li>• correctly collect and process pollen</li> <li>• manage a hive and maintain records.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pollen production may relate to and may include:	<ul style="list-style-type: none"> <li>• all equipment and processes used in commercial production of pollen.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Beekeeping
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCBEK407A Rear queen bees

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers rearing queen bees and defines the standard required to: select breeding stock according to established breeding program criteria; graft larvae of suitable age; assess and maintain nutrition and health of larvae and drones; maintain records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who rear queen bees to produce high quality queen bees and queen cells through the application of good management practices.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish conditions and obtain requirements for queen bee rearing	<p>1.1. Breeding stock is selected from productive healthy stock according to established breeding program criteria.</p> <p>1.2. All tools, equipment and other requirements needed to rear queen bees are obtained and confirmed as being in good repair and serviceable for use.</p> <p>1.3. Personal Protective Equipment (PPE) is checked for serviceability and worn and used correctly.</p> <p>1.4. Occupational Health and Safety (OHS) hazards associated with rearing queen bees are identified and action is taken to minimise them.</p> <p>1.5. Any site quarantine or other biosecurity protocols in force are observed.</p> <p>1.6. All hives and colonies used for queen bee and drone production are confirmed as being in clean and healthy condition.</p> <p>1.7. Day-old larvae from the breeder queen bee are selected for grafting and transferred from worker cells into queen cell cups.</p> <p>1.8. Adequate numbers of nurse bees are confirmed as being present in cell raising colonies.</p> <p>1.9. Grafted cells are placed into cell starting colonies and then into cell finishing colonies.</p>
2. Establish and monitor the queen mating process	<p>2.1. Ripe queen cells are transferred into the nucleus 10-11 days after grafting.</p> <p>2.2. Adequate numbers of mature, well nourished and genetically suitable drones are provided during</p>

ELEMENT	PERFORMANCE CRITERIA
	mating period. 2.3. Details of grafting and subsequent placement of cells into nucleus colonies are recorded according to enterprise standards. 2.4. Age of the queen removed from mating colony is recorded.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe work practices
- grafting
- handling the hive
- recognising diseases, pests and disorders and taking appropriate action
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills / language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic knowledge of the principles of inheritance of bee characteristics
- signs of brood and adult bee ill health sufficient to recognise diseases, pests and disorders and take appropriate
- techniques and timing for queen cell production
- storage requirements of queen bees
- optimum conditions for requeening
- OHS and animal welfare requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select breeding stock according to established breeding program criteria</li> <li>• graft larvae of suitable age</li> <li>• assess and maintain nutrition and health of larvae and drones.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Stock may include:	<ul style="list-style-type: none"> <li>• breeding stock from instrumentally inseminated stock</li> <li>• stock mated in an isolated area</li> <li>• select tested</li> <li>• stock selected according to established breeding program criteria.</li> </ul>

## Unit Sector(s)

Unit sector	Beekeeping
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHC BIO201A Inspect and clean machinery for plant, animal and soil material

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of inspecting and cleaning machinery of material that may contribute to the spread of weeds, pests or diseases and defines the standard required to: examine areas on machinery and equipment according to legislation or operating procedures; report any issues that pose an infection risk; dispose of waste and infected material or weeds.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm workers who are responsible for inspecting and cleaning machinery that is being moved from one location to another to ensure that soil borne pathogens and weeds are not relocated to new sites. It is carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Check machinery and support vehicles	<p>1.1. Machinery and equipment are checked for contamination according to written guidelines and legislative requirements.</p> <p>1.2. Machinery and support vehicles are made safe for checking, supported safely, with free moving parts pinned or supported as required.</p> <p>1.3. Covers and guards removed safely.</p> <p>1.4. All points identified in legislation or operating procedures are identified and inspected for contamination.</p>
2. Clean machinery and equipment	<p>2.1. Machinery is made safe for cleaning, supported safely, with free moving parts pinned or supported as required.</p> <p>2.2. Correct equipment for cleaning selected.</p> <p>2.3. Points listed in appropriate regulations, checklists or enterprise procedures are cleaned and checked.</p> <p>2.4. Guards replaced safely and checked.</p> <p>2.5. Areas on other equipment likely to accumulate contaminants identified, inspected and cleaned.</p>
3. Complete cleaning work	<p>3.1. Waste materials are disposed of according to enterprise operating procedures and relevant legislative requirements.</p> <p>3.2. Records of cleaning are recorded on appropriate</p>

ELEMENT	PERFORMANCE CRITERIA
	forms according to enterprise policy and procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- inspect machinery and support vehicles
- dispose of waste materials
- report inspection results
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- machinery and equipment operating features
- major components of machinery and equipment
- inspection points and procedures required by legislation
- vectors for spread of weeds, pests or diseases
- Occupational Health and Safety (OHS), environment and pest management legislative and enterprise requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment



<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• list weeds and diseases that can be borne in plant, animal and soil material</li> <li>• examine areas on machinery and equipment according to legislation or operating procedures</li> <li>• report any issues that pose an infection risk</li> <li>• dispose of waste and infected material or weeds.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Machinery may include:	<ul style="list-style-type: none"> <li>• any other machinery used for agricultural, horticultural or earthmoving purposes</li> <li>• ancillary equipment such as vehicles and trailers, bins and augers.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Biosecurity
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHC BIO202A Follow site quarantine procedures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of following enterprise site quarantine procedures that are designed to reduce the likelihood of pathogenic organisms entering the site, and defines the standard required to: read and/or interpret site quarantine procedures; follow enterprise quarantine procedures (including industry quality assurance procedures if applicable); report and respond to quarantine issues or breaches of procedures; communicate with visitors to the enterprise about site quarantine procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the routine part of ones own work and is applied to visitors to the site. Work is performed under supervision and according to strict procedures and policies.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to work in quarantine site	<p>1.1.Ensure personal and/or work vehicles are decontaminated before entering the quarantine site.</p> <p>1.2.Contact with potential contaminants is reported according to enterprise requirements.</p> <p>1.3.Hands are washed before livestock, feed, plant stock or other products are handled.</p> <p>1.4.Showering and changing into work clothes is carried out if required.</p> <p>1.5.Appropriate clothing and footwear is put on before commencing work and street clothing is securely stored away from livestock, feed or other products.</p> <p>1.6.Footbaths are used thoroughly and checked for disinfectant level before entering site and sheds if required.</p>
2. Work in quarantine site	<p>2.1.Chemicals and/or medications are handled and stored appropriately.</p> <p>2.2.Different feed mixes, soils and/or growing media and/or other products are kept separate and appropriately marked according to enterprise procedures.</p> <p>2.3.Any cases of disease or pest infestation are identified and reported to supervisor.</p> <p>2.4.Any breaches of quarantine procedures are identified and reported to supervisor.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Any Occupational Health and Safety (OHS) hazards are identified and appropriate action is taken according to enterprise policy and OHS legislation and codes.</p> <p>2.6. All waste products is disposed of according to enterprise procedures.</p> <p>2.7. All deceased livestock, unwanted biological material or damaged/infected plant stock are disposed of according to enterprise procedures.</p> <p>2.8. Information relating to work in quarantine site is recorded as required by the enterprise procedures.</p>
<p>3. Assist in maintaining site quarantine procedures</p>	<p>3.1. All visitors are informed of the quarantine procedures and are provided with appropriate clothing and footwear, if required by enterprise procedures.</p> <p>3.2. Visitors are required to sign in, state their recent activities and exposures, and wash or shower if required by enterprise procedures.</p> <p>3.3. Any observed breaches of quarantine procedures by visitors are noted and reported to supervisor.</p> <p>3.4. Gates and doors are kept locked where required by enterprise procedures and supervisor instructions.</p> <p>3.5. Where installed, security fencing is maintained according to supervisor's instructions.</p> <p>3.6. Deliveries to site are checked to ensure that established procedures for vehicle decontamination, unloading and receipt and holding or storage of stock and/or supplies are followed.</p>
<p>4. Respond to site quarantine breach or problem</p>	<p>4.1. The specific problem and its location is identified and reported to supervisor.</p> <p>4.2. Problems are secured according to enterprise procedures.</p> <p>4.3. Quarantine site and location of breach is cleaned and disinfected as required according to the specific nature of the problem and enterprise procedures.</p> <p>4.4. Livestock, plant stock suspected of being exposed to contaminants are isolated and monitored for evidence of contamination according to enterprise procedures.</p> <p>4.5. All contaminated stock/materials are treated and/or disposed of according to enterprise procedures.</p> <p>4.6. Information about the breach or problem is recorded according to enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- read and/or interpret site quarantine procedures
- follow biosecurity and hygiene procedures
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- enterprise site quarantine policy and procedures
- industry quality assurance requirements (where applicable) and documentation required to be kept
- reporting procedures for alleged breaches of site quarantine procedures
- consequences of breaching site quarantine procedures
- OHS, environmental and disease legislative and enterprise requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• read and/or interpret site quarantine procedures</li> <li>• follow enterprise quarantine procedures (including industry quality assurance procedures if applicable)</li> <li>• report and respond to quarantine issues or breaches of procedures</li> <li>• communicate with visitors to the enterprise about site quarantine procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to carry out movement and security procedures.</p> <p>The candidate must also have access to resources that establish movement and security controls.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Sites may include:	<ul style="list-style-type: none"> <li>• quarantine site of the whole farm</li> <li>• an apiary</li> <li>• enterprise premises, or part of the premises or enterprise, such as <ul style="list-style-type: none"> <li>• an isolation area or sick bay.</li> </ul> </li> <li>• in some cases, the quarantine area may extend beyond the enterprise boundaries.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Biosecurity
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHC BIO301A Work effectively in an emergency disease or plant pest response

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit specifies the outcomes required to work effectively within own area of responsibility in a response to an emergency disease or plant pest incursion.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Obtain and use information about the emergency disease or plant pest and an appropriate response	1.1. Information about emergency disease or plant pest and appropriate response is accessed and applied during an emergency disease or plant pest response. 1.2. Information is used to address specific work needs and further information requirements are identified. 1.3. Information and/or resources required from stakeholders are identified and accessed.
2. Work according to organisational requirements	2.1. All communication with stakeholders is carried out according to organisational policies and procedures. 2.2. All work undertaken reflects a current working knowledge and understanding of organisational requirements. 2.3. All work undertaken reflects understanding and compliance with relevant duty of care and legal responsibilities. 2.4. Work activities conform to relevant legislation, regulations, procedures and codes of practice appropriate to work area and level of responsibility. 2.5. Hazards and risks relevant to specific work being undertaken are identified and responded to as required. 2.6. Work is carried out according to organisational policies and procedures.
3. Manage own work	3.1. Work instructions are interpreted correctly and clarification is sought if inconsistencies are noted. 3.2. Workload is assessed and competing demands are prioritised to achieve personal, team and organisational goals and objectives. 3.3. Need for physical and human resources is communicated clearly to appropriate person(s). 3.4. Own role, responsibilities and duties are performed

ELEMENT	PERFORMANCE CRITERIA
	<p>in a positive manner that promotes cooperation within the workplace.</p> <p>3.5.Importance of own and others' roles in achieving organisational goals is respected.</p> <p>3.6.Personal symptoms of stress and their potential to impact on performance are recognised, action is taken to minimise their negative effects and undue personal stress is reported to appropriate persons.</p>
4. Comply with biosecurity requirements	<p>4.1.Biosecurity procedures relevant to own work area are identified.</p> <p>4.2.Work activities are carried out according to established biosecurity procedures.</p> <p>4.3.Personal protective equipment and fomites are maintained according to biosecurity procedures.</p> <p>4.4.Biosecurity breaches are reported immediately to appropriate person.</p> <p>4.5.Biosecurity records are completed according to work area requirements.</p>
5. Adapt to change as required	<p>5.1.Need for change in own work practices to reflect critical emergency issues or emerging trends is identified and assessed.</p> <p>5.2.Changes required are discussed and agreed with senior staff.</p> <p>5.3.Own work practices are changed where required and according to agreed arrangements.</p> <p>5.4.Flexible approach that takes account of changing priorities and circumstances is applied when implementing instructions for changes to work practices.</p> <p>5.5.Change is monitored to determine the effectiveness of revised work practices and senior staff members are advised of findings.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- operating in stressful situations
- prioritising conflicting demands
- working in a strict line management environment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- district, regional and local plans
- functional plans of other government agencies
- legal and regulatory framework under which responses are taken
- national plans such as Australian Veterinary Emergency Plan (AUSVETPLAN) or Australian Emergency Plant Pest Response Plan (PLANTPLAN)
- Occupational Health and Safety (OHS) and biosecurity procedures
- national, state and territory plans.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

This unit of competency could be assessed on its own or in combination with other units of competency relevant to the job function.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The critical requirements for this unit of competency as a whole are listed below. Assessment must confirm one's ability to:

- access and use national plans such as

<b>EVIDENCE GUIDE</b>	
	<p>AUSVETPLAN or PLANTPLAN</p> <ul style="list-style-type: none"> <li>operate within a response team and follow instructions</li> <li>operate effectively under stress in tasks involving problem solving in relation to own role</li> <li>make effective judgements</li> <li>follow instructions</li> <li>provide advice in area of expertise and authority</li> <li>understand legal and regulatory implications of one's own role in an emergency disease or plant pest response.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to work effectively in an emergency disease or plant pest response.</p> <p>The candidate must also have access to the following resources:</p> <ul style="list-style-type: none"> <li>simulated workplace for an emergency disease or plant pest response for assessment using scenarios, case studies, role plays and group work</li> <li>access to local, regional, district, state and territory, and national plans relating to an emergency disease or plant pest response.</li> </ul>
<b>Method of assessment</b>	<p>Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in a simulated workplace or in a situation that reproduces normal work conditions.</p>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to work effectively in an emergency disease or plant pest response must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. This could include:</p> <ul style="list-style-type: none"> <li>working in the field or in a local, state or national control centre</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>participating in a response to a plant pest or to an emergency disease of animals, fish or other marine animals</li> <li>participating in a response to a natural disaster.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Information about emergency diseases or plant pests may be found in:	<ul style="list-style-type: none"> <li>AUSVETPLAN or PLANTPLAN strategies</li> <li>published texts</li> <li>scientific literature.</li> </ul>
Information about emergency response may be found in:	<ul style="list-style-type: none"> <li>district, regional or local plans</li> <li>functional plans of other government agencies</li> <li>industry biosecurity plans</li> <li>national, state or territory plans.</li> </ul>
Emergency diseases and pests may include:	<ul style="list-style-type: none"> <li>diseases that may effect animals, fish and other marine animals include:                             <ul style="list-style-type: none"> <li>disease that is exotic to Australia</li> <li>serious infectious diseases or pests of or uncertain cause</li> <li>severe infectious disease of unknown or uncertain cause</li> <li>severe outbreaks of known endemic diseases or pests that are considered to be of national significance with serious social or trade implications</li> <li>variants of endemic diseases</li> <li>biotypes or strains of invertebrate pests or pathogens injurious to plants or plant health; invasive pest plants.</li> </ul> </li> </ul>
Stakeholders may include:	<ul style="list-style-type: none"> <li>agronomists and consultants</li> <li>chemical resellers</li> <li>consumers</li> <li>crop monitors or scouts</li> <li>general community</li> <li>government departments</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• industry</li> <li>• producers and other local enterprise owners</li> <li>• other personnel involved in an emergency response</li> <li>• plant pathologists</li> <li>• property owners, managers and staff</li> <li>• stock agents and transport personnel</li> <li>• veterinarians.</li> </ul>
Organisational requirements may include:	<ul style="list-style-type: none"> <li>• biosecurity and OHS policies and procedures</li> <li>• district or regional plans</li> <li>• functional plans of other government agencies</li> <li>• goals, objectives, policies and standard operating procedures of response lead agency</li> <li>• national plans such as AUSVETPLAN or PLANTPLAN</li> <li>• local, state and territory plans.</li> </ul>
Duty of care and legal responsibilities may include:	<ul style="list-style-type: none"> <li>• duties and responsibilities for self and others</li> <li>• responsibilities defined through legislation</li> <li>• responsibility of an employer to provide a safe workplace.</li> </ul>
Procedures may include:	<ul style="list-style-type: none"> <li>• AUSVETPLAN or PLANTPLAN</li> <li>• biosecurity procedures of industry and response lead agency</li> <li>• handling and storage of hazardous materials</li> <li>• industry codes of practice</li> <li>• legal or regulatory requirements</li> <li>• personal hygiene</li> <li>• standard operating procedures of response lead agency.</li> </ul>
Hazards and risks may include:	<ul style="list-style-type: none"> <li>• allergic reaction</li> <li>• chemical exposure</li> <li>• occupational trauma</li> <li>• physical injury</li> <li>• spreading disease or plant pests</li> <li>• zoonotic infection.</li> </ul>
Ways in which work may be carried out include:	<ul style="list-style-type: none"> <li>• individually</li> <li>• in cooperation with other sections in response team, using their skills and knowledge as appropriate.</li> </ul>
Appropriate person may include:	<ul style="list-style-type: none"> <li>• controller</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• section manager</li> <li>• team leader.</li> </ul>
Fomites may be defined in terms of:	<ul style="list-style-type: none"> <li>• inanimate objects capable of transmitting an infectious agent such as:                             <ul style="list-style-type: none"> <li>• boots</li> <li>• clothing</li> <li>• vehicles.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Biosecurity
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHC BIO302A Identify and report unusual disease or plant pest signs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency specifies the outcomes required to recognise unusual disease or plant pest signs during day-to-day work and take appropriate reporting action.
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### Application of the Unit

<b>Application of the unit</b>	The work in this unit is typically performed by those who have daily contact with plants, birds, animals or fish. It would usually be carried out in conjunction with routine animal or plant husbandry tasks.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify signs of unusual disease or a plant pest	1.1. Signs of disease or a plant pest are identified. 1.2. Signs of disease or a plant pest are compared with own experience of common endemic disease or a plant pest in the species. 1.3. Where signs indicate an unusual disease or a plant pest, severity and extent of problem in the species are assessed. 1.4. Where signs indicate an unusual disease or a plant pest, immediate advice is sought from supervisors, professionals or appropriate authorities.
2. Report signs of unusual disease or a plant pest	2.1. Signs of unusual disease or a plant pest are reported immediately to appropriate authorities. 2.2. Biosecurity measures are implemented according to enterprise biosecurity plans and instructions from appropriate authority.

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• observing</li> <li>• recognising unusual disease or plant pest signs</li> </ul>

**REQUIRED SKILLS AND KNOWLEDGE**

- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- required procedures to follow in notifying appropriate authorities
- where to access additional reliable information or personnel.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

This unit of competency could be assessed on its own or in combination with other units of competency relevant to the job function.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The critical requirements for this unit of competency as a whole are listed below. Assessment must confirm one's ability to:

- identify unusual disease or pest signs within ones own experience
- notify appropriate authorities where appropriate
- implement appropriate biosecurity measures.

**Context of and specific resources for assessment**

For valid assessment, one must have opportunities to participate in a range of exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to identify and report unusual disease or plant pest signs.

The candidate must also have access to resources such as photographs of signs of emergency and endemic diseases

<b>EVIDENCE GUIDE</b>	
	and of plant pests.
<b>Method of assessment</b>	Assessment for this unit of competency may be undertaken on or off the job. The unit could be assessed on its own or in combination with other units of competency relevant to the job function,
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to identify and report unusual disease or plant pest signs must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. For example, this could include a range of diseases for a particular species or a variety of pests.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Signs of disease or a plant pest may include:	<ul style="list-style-type: none"> <li>• abnormality</li> <li>• clinical signs</li> <li>• decline and dieback</li> <li>• insect damage or presence of insects</li> <li>• mortalities and mode of death</li> <li>• presence of highly specific vectors</li> <li>• results of post-mortem examinations</li> <li>• unexplained levels of morbidity or mortality in populations.</li> </ul>
Unusual diseases or plant pests may include:	<ul style="list-style-type: none"> <li>• disease that is classified as an emergency disease</li> <li>• disease that presents in an unusual, uncommon or atypical form</li> <li>• plant pest species, biotype or strain of invertebrate pest or pathogen injurious to plants or plant health.</li> </ul>

<b>RANGE STATEMENT</b>	
Appropriate authorities may include:	<ul style="list-style-type: none"> <li>• national disease watch hotlines</li> <li>• property owner or manager</li> <li>• regulatory officers from state and territory departments of Primary Industries, Agriculture, Fisheries and Forestry.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Biosecurity
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHC BIO303A Carry out emergency disease or plant pest control procedures at infected premises

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency specifies the outcomes required to carry out emergency disease or plant pest control activities at a site affected by an emergency disease outbreak or plant pest incursion. This may require some supervision and coordination of a team, under the direction and supervision of the Infected Premises (IP) site supervisor.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for emergency disease or plant pest control activities	<p>1.1. Work instructions received from IP site supervisor are clarified in preparation for carrying out control procedures.</p> <p>1.2. Appropriate equipment and materials are selected and prepared to undertake control activities in line with IP site supervisor work instructions and associated safety requirements.</p> <p>1.3. Personal Protective Equipment (PPE) is selected and prepared according to Occupational Health and Safety (OHS) requirements.</p>
2. Implement emergency disease or plant pest control activities	<p>2.1. Control activities are implemented in line with work instructions, OHS requirements and standards and protocols.</p> <p>2.2. Log of activities carried out on the IP is maintained according to instructions from IP site supervisor.</p> <p>2.3. PPE is used as instructed by IP site supervisor and according to OHS requirements and manufacturer instructions.</p> <p>2.4. Within own area of responsibility, work instructions are given and received.</p>
3. Check and adjust emergency disease or plant pest control activities	<p>3.1. Control activities within own area of responsibility are regularly checked to ensure compliance with work instructions, OHS requirements, and standards and protocols.</p> <p>3.2. Reports are provided to IP site supervisor as required.</p> <p>3.3. Any variations from work instructions, and standards and protocols, or failure to achieve</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>objectives are reported to IP site supervisor and remedial action is undertaken within one's scope of authority.</p> <p>3.4. Any recommendations for adjusting work instructions are communicated to IP site supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- adhering to security procedures in line with specific emergency disease or plant pest control strategies
- coordinating a team, if team leader
- correctly preparing and using equipment and materials for control procedures
- correctly preparing and using PPE
- ensuring animal welfare when working with animals
- following guidelines and protocols for control procedures in an emergency disease or plant pest response
- keeping records
- making written and oral reports
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- OHS requirements for working in an emergency disease or plant pest control situation, including safe use of equipment and material
- PPE requirements
- record-keeping requirements
- relevant provisions of the control strategy for particular emergency disease or plant pest being controlled



<b>REQUIRED SKILLS AND KNOWLEDGE</b>
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- |   |
|---|
| <ul style="list-style-type: none"> <li>reporting requirements.</li> </ul> |
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## Evidence Guide

<b>EVIDENCE GUIDE</b>
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The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	This unit of competency could be assessed on its own or in combination with other units of competency relevant to the job function.
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<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The critical requirements for this unit of competency as a whole are listed below. Assessment must confirm one's ability to:</p> <ul style="list-style-type: none"> <li>follow instructions</li> <li>comply with OHS requirements</li> <li>monitor own performance</li> <li>observe and report variations from work instructions or standards and protocols.</li> </ul>
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<b>Context of and specific resources for assessment</b>	<p>Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in an emergency disease or plant pest response simulation or in responses to emergency disease outbreak or plant pest incursion.</p> <p>The candidate must also have access to the following resources:</p> <ul style="list-style-type: none"> <li>actual or simulated IP</li> <li>PPE.</li> </ul>
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<b>Method of assessment</b>	For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to carry out emergency disease or plant pest control procedures at an IP.
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<b>Guidance information for</b>	To ensure consistency in one's performance, competency
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**EVIDENCE GUIDE**

**assessment**

should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

The skills and knowledge required to carry out emergency disease or plant pest control procedures at an IP must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events.

**Range Statement**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Emergency diseases or plant pests may include:

- diseases that may affect animals, fish and other marine animals including:
  - diseases that are exotic to Australia
  - serious infectious diseases of or uncertain cause
  - severe outbreaks of known endemic diseases that are considered to be of national significance with serious social or trade implications
  - variants of endemic diseases
- species, biotypes or strains of invertebrate pests or pathogens which are injurious to plants or plant health.

Information covered in work instructions may involve:

- stipulations relating to standards, protocols and specific IP site requirements, and may cover:
  - administration
  - collection of biological samples
  - decontamination
  - destruction of livestock or crop
  - disposal of carcasses and infectious material
  - gate control
  - inventory and valuation
  - mapping of location of affected plants or

<b>RANGE STATEMENT</b>	
	<p>crops</p> <ul style="list-style-type: none"> <li>• pest control</li> <li>• team leader duties</li> <li>• wild animal control.</li> </ul>
Control procedures may include:	<ul style="list-style-type: none"> <li>• containment of livestock or crop and other materials</li> <li>• decontamination and disinfection of premises, equipment and staff leaving premises</li> <li>• destruction and slaughter</li> <li>• disposal of livestock or crop and other materials</li> <li>• gate control</li> <li>• pest control</li> <li>• sample collection</li> <li>• use of chemicals</li> <li>• vaccination and treatment</li> <li>• wild animal control.</li> </ul>
OHS requirements may include:	<ul style="list-style-type: none"> <li>• administration of treatments and vaccinations</li> <li>• animal handling and use of approved restraints where required</li> <li>• correct techniques for manual handling</li> <li>• policies relating to livestock or crop destruction and disposal</li> <li>• procedures for dealing with risks associated with working in areas where there may be an accumulation of airborne dusts or gases, such as ammonia, methane and carbon dioxide</li> <li>• procedures for dealing with risks that may arise when working in buildings or yards that have been damaged in the course of implementation of control procedures</li> <li>• processes for avoiding needle stick injuries and safe use of biohazard containers for disposal of sharps</li> <li>• safe operation of machinery and equipment, including consideration of layout, buildings, terrain, location and prevailing weather conditions</li> <li>• safe use and handling of chemicals</li> <li>• use of firearms for livestock destruction</li> <li>• use of PPE and clothing.</li> </ul>
Relevant standards and protocols	<ul style="list-style-type: none"> <li>• approved standard operating procedures</li> </ul>

**RANGE STATEMENT**

may include:

- Australian Veterinary Emergency Plan (AUSVETPLAN) or Australian Emergency Plant Pest Response Plan (PLANTPLAN) or similar protocols
- damage minimisation policies
- environmental policies
- OHS legislation
- relevant commonwealth, state and territory legislation.

**Unit Sector(s)**

<b>Unit sector</b>	Biosecurity
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHC BIO304A Carry out movement and security procedures

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit of competency specifies the outcomes required to implement appropriate procedures to restrict the movement of vehicles, personnel, products, livestock and/or plant material in relation to managing an emergency disease or a plant pest incursion. The work in this unit is undertaken in the field and as part of a team.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit of competency applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to carry out movement and security procedures	<p>1.1. Specific movement and security procedures to be carried out, and times and locations of operations are identified from work instructions.</p> <p>1.2. Where required for the particular procedures to be carried out, Personal Protective Equipment (PPE) is obtained and checked for serviceability and use.</p> <p>1.3. Documentation required to carry out specific procedures is obtained.</p> <p>1.4. Resources required to carry out specific procedures are obtained and checked for serviceability and use.</p>
2. Apply movement and security procedures	<p>2.1. Traffic check point is established according to work instructions.</p> <p>2.2. Movement of vehicles, personnel, products, livestock and/or plant material through declared areas is monitored in line with requirements.</p> <p>2.3. Permits are issued and/or checked appropriately according to standards and protocols.</p> <p>2.4. Where vehicles are determined to be carrying personnel, products, livestock and/or plant material without a valid permit, action is taken according to standards and protocols.</p> <p>2.5. Close liaison with external security providers is maintained as required.</p> <p>2.6. PPE is used where required, according to occupational health and safety requirements and manufacturer instructions.</p> <p>2.7. Resources are appropriately decontaminated where required, according to standards, protocols and</p>

ELEMENT	PERFORMANCE CRITERIA
	policies.
3. Check and adjust movement and security procedures	3.1. Application of movement and security procedures within own area of responsibility is regularly checked to ensure consistency, currency and ongoing effectiveness. 3.2. Reports are provided to appropriate authorities as required. 3.3. Any variations in consistency, currency and ongoing effectiveness or failure to achieve objectives are reported to appropriate authorities and remedial action is undertaken within one's scope of authority. 3.4. Any recommendations for adjusting movement and security procedures are communicated to supervisor and appropriate authorities.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- applying movement and security controls under emergency conditions
- carrying out instructions
- identifying the checks and permits required to maintain effective security
- taking appropriate measures to enforce movement and security procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- application of the law in relation to movement and security controls during an emergency disease or plant pest incursion response program
- decontamination procedures where required

**REQUIRED SKILLS AND KNOWLEDGE**

- movement permit system
- safety issues
- understanding the role of movement and security controls in controlling the spread of an emergency disease or a plant pest incursion.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	This unit of competency could be assessed on its own or in combination with other units of competency relevant to the job function.
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	The critical requirements for this unit of competency as a whole are listed below. Assessment must confirm one's ability to: <ul style="list-style-type: none"> <li>• establish appropriate movement and security controls</li> <li>• check movement permits for validity</li> <li>• check for unauthorised movement of personnel, livestock, plant materials and/or products that have been in contact with infectious or infested material</li> <li>• deal with unauthorised movements in line with required standards and protocols.</li> </ul>
<b>Context of and specific resources for assessment</b>	Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in a practical training activity or emergency disease outbreak or a plant pest incursion.
<b>Method of assessment</b>	For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to carry out movement and security procedures.
<b>Guidance information for assessment</b>	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of



**EVIDENCE GUIDE**

	<p>circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to carry out movement and security procedures must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events.</p>
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<p>Movement and security procedures may include:</p>	<ul style="list-style-type: none"> <li>• implementing interstate and international movement requirements</li> <li>• issuing permits for product, livestock, crop and people movement</li> <li>• locating boundaries of declared areas to be secured</li> <li>• maintaining a registers of vehicles and equipment entering and exiting infected premises</li> <li>• maintaining communication links</li> <li>• maintaining security patrols; movements into and out of declared areas.</li> </ul>
<p>Documentation may include:</p>	<ul style="list-style-type: none"> <li>• lists of people who have been issued with permits</li> <li>• logbook</li> <li>• permits</li> <li>• public relations materials</li> <li>• quarantine forms</li> <li>• rosters</li> <li>• schedules.</li> </ul>
<p>Resources may include:</p>	<ul style="list-style-type: none"> <li>• equipment</li> <li>• personnel</li> <li>• stores.</li> </ul>
<p>Relevant standards and protocols may include:</p>	<ul style="list-style-type: none"> <li>• approved standard operating procedures</li> <li>• commonwealth, state and territory legislation</li> <li>• emergency disease response agreements</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• emergency disease-specific guidelines and manuals included in the relevant national response plan, such as Australian Veterinary Emergency Plan (AUSVETPLAN) or Australian Emergency Plant Pest Response Plan (PLANTPLAN)</li> <li>• other relevant guidelines or regulations.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Biosecurity
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHC BIO305A Monitor and review biosecurity measures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers monitoring and reviewing biosecurity measures defines the standard required to: interpret quarantine procedures and monitor compliance; supervise the range of activities required to maintain biosecurity; communicate with staff and visitors on biosecurity issues and procedures; respond to breaches of biosecurity and participate in the review of biosecurity measures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers and team leaders in animal production facilities who are responsible for implementing biosecurity procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Apply biosecurity procedures to people, animals and equipment entering the site	<p>1.1. Possible sources of pathogen contamination entering the site are identified.</p> <p>1.2. Personal sanitation and hygiene is maintained including required change of clothing and showering if required on entry to quarantined area.</p> <p>1.3. Sign in procedures are completed with information supplied fully and accurately.</p> <p>1.4. Visitors are signed in, checked for risk profile and instructed in quarantine requirements.</p> <p>1.5. All equipment is cleaned and disinfected before being brought onto the site.</p> <p>1.6. Animals introduced to the site are checked for health status, isolated from all others and placed in disinfected sheds.</p>
2. Implement biosecurity procedures to prevent the incidence or spread of pathogens	<p>2.1. Potential biosecurity threats on the enterprise are identified.</p> <p>2.2. The potential costs and impacts of an outbreak of disease in a production facility are quantified and described.</p> <p>2.3. Possible sources of pathogen contamination being carried between sheds are identified.</p> <p>2.4. Procedures for entering sheds or moving from one shed to another are implemented.</p> <p>2.5. Order of priority and prescribed routes are established for movements, with younger or more susceptible animals visited before more resistant animals.</p> <p>2.6. Personal sanitation and equipment cleaning procedures are implemented for movement between</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>sheds.</p> <p>2.7. Farm compound footpaths and areas around sheds are kept clear of debris.</p>
<p>3. Apply on-farm sanitation practices to reduce the risk of disease</p>	<p>3.1. Litter is cleaned from sheds and dust removed from surfaces.</p> <p>3.2. Shed areas are sprayed down with water and then allowed to dry before disinfection.</p> <p>3.3. Shed feeding and watering equipment is pressure cleaned and water lines flushed.</p> <p>3.4. Disinfectant is mixed and applied according to label requirements and enterprise procedures.</p>
<p>4. Implement pest control to reduce the risk of disease</p>	<p>4.1. High risk pathogens that can be introduced by pests are identified.</p> <p>4.2. Pests are excluded from the facility, and from individual sheds, by effective physical barriers.</p> <p>4.3. Pest numbers are monitored through the use of counts or other indicators.</p> <p>4.4. Pest control procedures are carried out including destruction of habitat and poisoning.</p> <p>4.5. Feeds imported are screened for introduction of pests.</p>
<p>5. Review biosecurity procedures</p>	<p>5.1. Records of biosecurity procedures are kept as required by standards and protocols.</p> <p>5.2. Effectiveness and progress of control activities are monitored and compared with planned objectives.</p> <p>5.3. Monitoring of sheds and facilities is carried out as part of work duties to ensure that work practices and procedures are applied in line with required standards and protocols.</p> <p>5.4. Issues and concerns with biosecurity are reported to management.</p> <p>5.5. Control activities are revised as required to address relevant protocols, maintain cost-effectiveness (including appropriate resource allocation) and contain wider impacts.</p> <p>5.6. Revisions to activities are communicated promptly to other staff.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- carrying out cleaning and pest control activities
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- diseases that pose a threat and their likely causes of spread
- principles of risk management applied to biosecurity
- personal hygiene and quarantine procedures for site entry
- safe use of chemicals and cleaning agents
- Occupational Health and Safety (OHS), environmental and biosecurity legislation, codes of practice and enterprise procedures
- record keeping requirements
- reporting incidents or issues
- safety practices related to use of equipment and materials used in cleaning and pest control.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret quarantine procedures and monitor compliance</li> <li>• supervise the range of activities required to maintain biosecurity</li> <li>• communicate with staff and visitors on biosecurity issues and procedures</li> <li>• respond to breaches of biosecurity</li> <li>• participate in the review of biosecurity measures.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
<b>Method of assessment</b>	This unit may be assessed in a holistic way with other units. The assessment strategy for this unit must verify required knowledge, skill and application using more than one of the following assessment methods: oral/written questions, professional conversations, direct observation, third-party evidence, performance audit and portfolio.
<b>Guidance information for assessment</b>	Evidence should be gathered over a period of time in a range of actual or simulated environments.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• pigs</li> <li>• poultry.</li> </ul>
Biosecurity may include:	<ul style="list-style-type: none"> <li>• isolation or quarantine through physical barriers as well as hygiene practices to prevent importing pathogens onto the site, or from spreading if they are able to enter the site.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Biosecurity
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHC BIO401A Supervise activities on infected premises

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising activities on infected premises and defines the standard required to: develop a schedule for implementation of emergency disease or plant pest control activities; effectively supervise the range of activities required to achieve emergency disease or plant pest control in an outbreak or incursion; effectively communicate and give directions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response. Where work requires the use of load-shifting or other equipment, appropriate training/certification must be provided according to state and territory safety and licensing requirements.
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan emergency disease or plant pest control activities on an IP	<p>1.1. Emergency disease or plant pest control activities are planned under direction from Infected Premises (IP) operations manager and in consultation with property owner/manager.</p> <p>1.2. All IP procedures are confirmed with IP operations manager and communicated to property owner/manager.</p> <p>1.3. Schedule for implementation of emergency disease or plant pest control activities is developed and resources required for planned activities are requested according to instructions from IP operations manager.</p> <p>1.4. Reporting processes are established according to instructions from IP operations manager.</p> <p>1.5. Staff rosters are established to support activities in a cost-effective manner and with minimal stress on personnel.</p>
2. Oversee emergency disease or plant pest control activities	<p>2.1. Personnel are assigned to team leader and worker positions according to IP operations functions to be performed and are given directions about tasks to be performed.</p> <p>2.2. Emergency disease or plant pest control activities are conducted in ongoing consultation with IP operations manager and property owner/manager.</p> <p>2.3. Emergency disease or plant pest control activities are overseen to ensure that they are cost-effective, make</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>effective use of resources, and avoid unnecessary property damage and livestock or crop destruction.</p> <p>2.4. Valuations of materials requiring destruction, use of plant, equipment and materials, and all IP service provision are monitored to ensure they adhere to relevant standards, protocols and contract requirements.</p> <p>2.5. Supplies of materials and resources are monitored to ensure that they are adequate to meet needs of control activities.</p> <p>2.6. Incident log is maintained that includes details of all activities undertaken and contractors' hours and performance.</p> <p>2.7. Effective communications with IP operations manager and property owner/manager are established and maintained throughout operation.</p> <p>2.8. Personnel are supervised and motivated to carry out specific emergency disease or plant pest control activities to the standard required and according to Occupational Health and Safety (OHS) and legislative requirements.</p>
<p>3. Check effectiveness of emergency disease or plant pest control activities</p>	<p>3.1. Effectiveness and progress of control activities are monitored and compared with planned objectives.</p> <p>3.2. Inspections of teams on site are carried out with sufficient regularity to ensure that standards are applied in line with required standards and protocols.</p> <p>3.3. Progress reports are provided to IP operations manager according to agreed reporting schedule and format.</p> <p>3.4. Records are kept as required by standards and protocols.</p>
<p>4. Revise site-specific emergency disease or plant pest control activities</p>	<p>4.1. Control activities are revised as required to address relevant protocols, maintain cost-effectiveness (including appropriate resource allocation) and contain wider impacts.</p> <p>4.2. Revisions to activities are communicated promptly to Local Control Centre (LCC).</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- operating effectively under stress
- managing people
- supervising application of emergency disease or plant pest control measures on an IP, in line with relevant response plan
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- appropriate standards and protocols for the emergency disease or plant pest e.g. Australian Veterinary Emergency Plan (AUSVETPLAN) or Australian Emergency Plant Pest Response Plan (PLANTPLAN)
- OHS and other legislative requirements in an emergency disease or plant pest incursion response
- principles underpinning control procedures
- procedures necessary to ensure that environmental values are protected during and after emergency disease or plant pest control program
- OHS, environmental and biosecurity legislation, codes of practice and enterprise procedures
- record keeping requirements
- reporting requirements
- safety practices related to use of equipment and materials used in emergency disease or plant pest control.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The critical requirements for this unit of competency as a whole are listed below. Assessment must confirm one's ability to:</p> <ul style="list-style-type: none"> <li>• effectively supervise range of activities required to achieve emergency disease or plant pest control in an outbreak or incursion</li> <li>• effectively communicate and give directions.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in an emergency disease or plant pest simulation exercise or in responses to outbreaks or incursions.</p> <p>The skills and knowledge required to supervise activities on IP must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events.</p>
<b>Method of assessment</b>	<p>For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to supervise activities on IP.</p> <p>The candidate must also have access to either real or simulated IP.</p>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to supervise activities on IP must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Emergency diseases or plant pests may include:	<ul style="list-style-type: none"> <li>• diseases that may affect animals, fish and other marine animals including:               <ul style="list-style-type: none"> <li>• disease that is exotic to Australia</li> <li>• serious infectious disease of unknown or uncertain cause</li> <li>• severe outbreak of a known endemic disease that is considered to be of national significance with serious social or trade implications</li> <li>• variant of an endemic disease</li> </ul> </li> <li>• species, biotype or strain of invertebrate pest or pathogen injurious to plants or plant health.</li> </ul>
IP procedures may include	<ul style="list-style-type: none"> <li>• collection of emergency disease or plant pest information</li> <li>• decontamination</li> <li>• destruction</li> <li>• disposal</li> <li>• eradication</li> <li>• mustering</li> <li>• property security and quarantine</li> <li>• sentinel restocking</li> <li>• valuation and inventory</li> <li>• vector control.</li> </ul>
Resources required may include:	<ul style="list-style-type: none"> <li>• personnel</li> <li>• plant, facilities, equipment and materials for livestock or crop destruction, disposal, cleaning and disinfection</li> <li>• staff amenities.</li> </ul>
Factors to take into account when overseeing IP control activities may include:	<ul style="list-style-type: none"> <li>• cost</li> <li>• direction by LCC</li> <li>• effectiveness of emergency disease or plant pest control operations</li> <li>• OHS requirements</li> <li>• relevant standards and protocols</li> <li>• staff welfare</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• wider impact on things such as:               <ul style="list-style-type: none"> <li>• animal welfare</li> <li>• environment</li> <li>• industry</li> <li>• local businesses</li> <li>• local community</li> <li>• neighbouring properties</li> <li>• other non-susceptible livestock or crops</li> <li>• property owners and managers.</li> </ul> </li> </ul>
Relevant standards and protocols may include:	<ul style="list-style-type: none"> <li>• animal welfare codes of practice</li> <li>• approved standard operating procedures</li> <li>• AUSVETPLAN or PLANTPLAN protocols</li> <li>• commonwealth, state and territory legislation</li> <li>• environmental legislation</li> <li>• impact on and potential for damage to property</li> <li>• OHS requirements and legislation.</li> </ul>
Progress reports may include information about:	<ul style="list-style-type: none"> <li>• estimated completion dates</li> <li>• problems encountered</li> <li>• recommendations for change to priorities or procedures</li> <li>• resource requirements</li> <li>• successful solutions</li> <li>• work completion and work in progress.</li> </ul>
Records may be kept of:	<ul style="list-style-type: none"> <li>• any other records relevant to outbreak or incursion</li> <li>• authorisations for personnel and equipment to enter and leave IP</li> <li>• damage to equipment and property</li> <li>• inventories of livestock or crops alive/destroyed</li> <li>• materials and stockfeed destroyed</li> <li>• personnel employed</li> <li>• stores ordered and supplied</li> <li>• work done by private contractors.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Biosecurity
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHC BIO402A Carry out field surveillance for a specific emergency disease or plant pest

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the outcomes required to carry out field surveillance for a specific emergency disease or plant pest. Field surveillance teams work under instructions from the control centre.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Look for signs of a specific emergency disease or plant pest	1.1. Work instructions from surveillance coordinator or other appropriate authority are received and confirmed. 1.2. Signs of an emergency disease or plant pest are identified, appropriate samples for testing collected, and evidence gathered to support a diagnosis according to relevant standards and protocols. 1.3. Available expertise is accessed to assist in diagnosis, as appropriate. 1.4. Diagnostic samples are collected, handled, packaged and dispatched according to relevant standards and protocols.
2. Respond to an emergency disease or plant pest	2.1. Where signs of an emergency disease or plant pest are found, surveillance coordinator is alerted. 2.2. Appropriate measures are taken to immediately contain emergency disease or plant pest according to instructions from control centre and relevant guidelines. 2.3. Information relevant to management of emergency disease or plant pest outbreak is collected and reported to surveillance coordinator. 2.4. Property owners/persons in charge are given directions and warnings about suspected emergency disease or plant pest. 2.5. Personal decontamination and, where appropriate, decontamination of equipment and vehicles, are conducted according to relevant standards and protocols for emergency disease or plant pest.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- apply relevant standards, protocols and procedures
- solve problems to deal with unexpected issues
- work as part of a team where required
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- appropriate standards and protocols for the emergency disease or plant pest, such as Australian Veterinary Emergency Plan (AUSVETPLAN) or Australian Emergency Plant Pest Response Plan (PLANTPLAN)
- emergency disease or plant pest control procedures
- personal and general decontamination procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The critical requirements for this unit of competency as a whole are listed below.</p> <p>Assessment must confirm one's ability to:</p> <ul style="list-style-type: none"> <li>• follow work instructions</li> <li>• follow biosecurity and decontamination procedures</li> <li>• communicate findings to supervisor in a timely and accurate manner</li> <li>• communicate with property owner while observing confidentiality requirements.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to carry out field surveillance for a specific emergency disease or plant pest.</p> <p>The candidate must also have access to the following resources:</p> <ul style="list-style-type: none"> <li>• standards, protocols and procedures, such as:                             <ul style="list-style-type: none"> <li>• AUSVETPLAN or PLANTPLAN</li> </ul> </li> <li>• operational plan and survey plan</li> <li>• personal protective and decontamination equipment.</li> </ul>
<p><b>Method of assessment</b></p>	<p>Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in an emergency disease or plant pest response simulation exercise or in responses to an emergency disease or plant pest incursion.</p>
<p><b>Guidance information for assessment</b></p>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to carry out field surveillance for a specific emergency disease or plant pest must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. For example, this could include work with outbreaks of different emergency diseases or plant pest incursions and with possibly unfamiliar</p>

<b>EVIDENCE GUIDE</b>	
	species.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Signs of emergency disease or plant pest may include:	<ul style="list-style-type: none"> <li>• abnormality</li> <li>• clinical signs</li> <li>• high levels of morbidity in populations</li> <li>• mode of death</li> <li>• mortalities</li> <li>• presence of highly specific vectors</li> <li>• results of post-mortem examinations</li> <li>• symptoms and decline.</li> </ul>
Emergency diseases or plant pests include:	<ul style="list-style-type: none"> <li>• diseases that may affect animals, fish and other marine animals, including: <ul style="list-style-type: none"> <li>• disease that is exotic to Australia</li> <li>• serious infectious disease of unknown or uncertain cause</li> <li>• severe outbreak of a known endemic disease that is considered to be of national significance with serious social or trade implications</li> <li>• variant of an endemic disease</li> </ul> </li> <li>• species, biotype or strain of invertebrate pest or pathogen injurious to plants or plant health.</li> </ul>
Relevant standards and protocols may include:	<ul style="list-style-type: none"> <li>• approved standard operating procedures</li> <li>• commonwealth, state and territory legislation</li> <li>• emergency disease or plant pest specific guidelines, such as AUSVETPLAN or PLANTPLAN</li> <li>• other relevant guidelines for handling an emergency disease or plant pest</li> <li>• transportation of dangerous goods.</li> </ul>
Appropriate measures to contain emergency diseases or plant pests	<ul style="list-style-type: none"> <li>• decontaminating people, products, materials and premises</li> <li>• disposing of carcasses or plants and plant</li> </ul>

<b>RANGE STATEMENT</b>	
may include:	products <ul style="list-style-type: none"> <li>• implementing movement controls</li> <li>• notifying appropriate authorities</li> <li>• quarantining one or more premises.</li> </ul>
Relevant information may include:	<ul style="list-style-type: none"> <li>• clinical signs</li> <li>• disease history</li> <li>• epidemiology</li> <li>• livestock or crop data</li> <li>• owner/manager contact details</li> <li>• premises data</li> <li>• surveillance</li> <li>• tracing.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Biosecurity
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHC BIO403A Plan and implement a biosecurity program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the planning and implementation of a biosecurity program and defines the standard required to: establish a biosecure area for an animal enterprise; manage visitor access and the storage and movement of inputs and outputs for biosecurity; develop sanitation procedures to reduce the risk of disease; apply integrated pest management practices to control pests in a biosecure area; train staff in biosecurity procedures; review biosecurity status based on records system.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to site managers in animal production facilities and covers the work involved in taking responsibility for maintaining protection for animals from transmissible diseases.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Maintain a biosecure area to prevent disease transmission through the use of physical barriers and hygiene practices	<p>1.1. A controlled access perimeter is maintained to funnel authorised traffic through control points.</p> <p>1.2. Procedures are established and implemented for all staff and equipment to cross the controlled access perimeter into the controlled access zone.</p> <p>1.3. Entry of workers and equipment into the controlled access zone is restricted by transferring inputs, waste and products through access points on the controlled access perimeter.</p> <p>1.4. Restricted access perimeters and restricted access zones for each shed are maintained.</p> <p>1.5. Access to sheds is prioritised, based on the risks and potential impacts of infection being carried to the animals being housed in them.</p>
2. Implement biosecurity procedures to manage visitors	<p>2.1. The risk level of visitors is defined by gathering information before the visit and during sign in.</p> <p>2.2. Procedures for higher risk visitors such as veterinarians, catchers and vaccinating crews are established.</p> <p>2.3. Clear signage is maintained to direct traffic and discourage unauthorised visitors.</p> <p>2.4. The requirements for entry are communicated to visitors before they arrive on site.</p> <p>2.5. Visitor parking is kept separate so that staff vehicle or traffic ways don't become contaminated.</p> <p>2.6. A questionnaire is developed to be completed and signed by visitors to establish their risk levels.</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>2.7. Criteria for banning visitors are set down including those who fail to make pre-arrangements.</p> <p>2.8. Visitor log books are maintained to allow traceability of any subsequent disease issues.</p>
<p>3. Apply on-farm sanitation practices and personnel movements to reduce the risk of disease</p>	<p>3.1. Drainage is monitored and adjusted to ensure water doesn't collect and stand.</p> <p>3.2. Hygiene and clothing procedures for entry to the site are put in place and monitored.</p> <p>3.3. Well-defined transition zones are established and maintained for entering barns or rooms.</p> <p>3.4. Disinfectants that are appropriate for surfaces and water quality are selected for use.</p> <p>3.5. Standard operating procedures for cleaning and sanitising facilities, tools and equipment are developed and implemented.</p> <p>3.6. Staff movements and animal exposures are from most susceptible animals to least susceptible.</p> <p>3.7. Boot dips are used correctly and recharged frequently.</p>
<p>4. Implement an integrated strategy for pests to reduce the risk of disease</p>	<p>4.1. Facilities are maintained to eliminate potential points of entry for pests.</p> <p>4.2. All inputs such as feed, animals and bedding are screened to reduce the likelihood of pests being introduced.</p> <p>4.3. Pest numbers are monitored through the use of counts or other indicators.</p> <p>4.4. Good sanitation and hygiene is used to break pest cycles and eliminate pest habitat.</p> <p>4.5. Pests are controlled or excluded from output storage areas.</p> <p>4.6. Pest numbers are reduced by use of an integrated approach using a combination of biological, chemical, behavioural and mechanical controls.</p> <p>4.7. Pesticides are rotated periodically to overcome resistance in pest populations.</p> <p>4.8. Sufficient time is allowed between groups of animals in a shed to break the pest cycle.</p> <p>4.9. Pest control measures are documented and evaluated in response to effectiveness over time.</p>
<p>5. Manage farm outputs to reduce the risk of</p>	<p>5.1. Farm outputs such as garbage, manure and bedding are removed and stored for removal or disposal.</p>

ELEMENT	PERFORMANCE CRITERIA
disease	<p>5.2.Storage areas for farm outputs are located in low-traffic areas and managed to prevent cross-contamination and comply with environmental legislation.</p> <p>5.3.A manure management strategy is put in place with emphasis on sale or recycling.</p> <p>5.4.A mortality management strategy is implemented using alternatives such as burial, composting, rendering or incineration.</p>
6. Review the implementation of biosecurity measures	<p>6.1.Record keeping of biosecurity procedures is used to reduce risk of disease.</p> <p>6.2.Effectiveness and progress of control activities are monitored and compared with planned objectives.</p> <p>6.3.Standards and protocols for the monitoring of sheds and facilities are carried out as part of work duties.</p> <p>6.4.Issues and concerns with biosecurity are addressed and procedures amended where required.</p> <p>6.5.Control activities are revised as required to address relevant protocols, maintain cost-effectiveness (including appropriate resource allocation) and contain wider impacts.</p> <p>6.6.Staff training and induction records are reviewed to ensure they are able to implement all biosecurity requirements appropriate to their position.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop safe operating procedures
- manage and maintain quarantine
- implement and monitor on-farm sanitation
- disinfect production facilities
- planning and implementing pest control strategies
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
information collected and select and apply procedures to a range of tasks <ul style="list-style-type: none"> <li>• use oral communication skills / language competence to fulfill the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• diseases that pose a threat and their likely causes of spread</li> <li>• principles of risk management applied to biosecurity</li> <li>• requirements for personal hygiene and quarantine procedures for site entry</li> <li>• principles of disinfecting a site</li> <li>• safe use of chemicals and cleaning agents</li> <li>• integrated pest management and rotation of chemical pest controls</li> <li>• cleaning and disinfecting procedures</li> <li>• Occupational Health and Safety (OHS), environmental and biosecurity legislation, codes of practice and enterprise procedures</li> <li>• record keeping requirements</li> <li>• reporting incidents or issues</li> <li>• safety practices related to use of equipment and materials used in cleaning and pest control.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• establish a biosecure area for an animal enterprise</li> <li>• manage visitor access and the storage and movement of inputs and outputs for biosecurity</li> <li>• develop sanitation procedures to reduce the risk of disease</li> <li>• apply integrated pest management practices to control pests in a biosecure area</li> <li>• train staff in biosecurity procedures</li> <li>• review biosecurity status based on records system.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
<b>Method of assessment</b>	This unit may be assessed in a holistic way with other units. The assessment strategy for this unit must verify required knowledge, skill and application using more than one of the following assessment methods: oral/written questions, professional conversations, direct observation, third-party evidence, performance audit and portfolio.
<b>Guidance information for assessment</b>	Evidence should be gathered over a period of time in a range of actual or simulated environments.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• pigs</li> <li>• poultry.</li> </ul>
Biosecurity may include:	<ul style="list-style-type: none"> <li>• isolation or quarantine through physical barriers as well as hygiene practices to prevent importing pathogens onto the site, or from spreading if they are able to enter the site.</li> </ul>

## Unit Sector(s)

Unit sector	Biosecurity
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHC BIO501A Manage active operational emergency disease or plant pest sites

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing active operational emergency disease or plant pest sites and specifies the outcomes required to manage activities required to eradicate emergency disease or plant pests from infected premises and dangerous contact premises.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response. Work is performed at the control centre and will involve the management of personnel and contractors operating in the field.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan control procedures across the declared area	<p>1.1.Planning is carried out in effective and ongoing consultation with stakeholders and field personnel.</p> <p>1.2.Planning is conducted in line with relevant standards and protocols, and according to instructions from operations director.</p> <p>1.3.All required resources are identified, obtained, scheduled, prioritised and deployed according to relevant standards and protocols.</p> <p>1.4.Occupational Health and Safety (OHS) requirements, and hazards associated with implementing control procedures, are identified and appropriate action is taken to minimise risks to self and others.</p> <p>1.5.Criteria for implementing control procedures are decided and agreed to satisfy relevant standards and protocols with minimal livestock or crop destruction and property damage.</p> <p>1.6.Contingency plans for effective control of emergency disease or plant pest are prepared.</p>
2. Manage the implementation of control procedures	<p>2.1.Control procedures are coordinated to achieve effective emergency disease or plant pest control outcomes.</p> <p>2.2.Ongoing consultation and communication links are maintained with all stakeholders, field staff, property owners/managers and others in control centre.</p> <p>2.3.Control procedures and services supplied under contract are implemented according to standards, protocols and contractual requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Written and verbal reports are prepared and submitted as required.
3. Monitor and review the effectiveness of control procedures	3.1. Personnel are monitored to ensure that they are achieving specified objectives. 3.2. Supply of resources is monitored to ensure that it is appropriate and available to carry out required tasks. 3.3. Implementation of control procedures is monitored to ensure cost-effective compliance with relevant standards and protocols. 3.4. Priorities for emergency disease or plant pest control operations are reviewed, and confirmed or revised as appropriate, according to relevant standards and protocols.
4. Implement review findings	4.1. Control activities are revised as required. 4.2. Revisions to control activities are promptly and effectively communicated to relevant stakeholders and personnel for implementation.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- applying relevant standards and protocols such as Australian Veterinary Emergency Plan (AUSVETPLAN) or Australian Emergency Plant Pest Response Plan (PLANTPLAN) to determine requirements and/or guidelines applying to on-site control and eradication procedures
- managing resources effectively to achieve emergency disease or plant pest control and eradication
- operating effectively under stress in tasks involving high-level problem solving and decision making
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures



## REQUIRED SKILLS AND KNOWLEDGE

- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- emergency animal disease or plant pest control program
- common reactions and behaviours of people working under stressful conditions
- OHS requirements, particularly for use of chemicals, specific control procedures and managing personnel under emergency conditions
- relevant public sector policies, practices and constraints in relation to emergency disease or plant pest management
- relevant standards and protocols, such as AUSVETPLAN or PLANTPLAN
- OHS and environmental protection legislation, codes of practice and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- manage emergency disease or plant pest control operations at a number of operational sites
- ensure procedures implemented at operational sites conform to relevant standards and protocols
- manage resources across operational sites
- monitor performance of personnel.

#### Context of and specific resources for assessment

Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in an emergency disease or plant pest response simulation or in a response to an outbreak.

<b>EVIDENCE GUIDE</b>	
<b>Method of assessment</b>	<p>For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to manage active operational emergency disease or plant pest sites.</p> <p>The candidate must also have access to a functional control centre established as part of an emergency disease or plant pest response simulation, or in response to an actual outbreak.</p>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to manage active operational emergency disease or plant pest sites must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. For example, this could include managing the implementation of different control procedures required in different responses or on different sites.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Stakeholders may include:	<ul style="list-style-type: none"> <li>• industry representatives and organisations</li> <li>• local community</li> <li>• local government authorities and other government departments</li> <li>• property owners, operators and managers</li> <li>• suppliers of goods and services.</li> </ul>
Relevant standards and protocols may include:	<ul style="list-style-type: none"> <li>• approved standard operating procedures</li> <li>• commonwealth, state and territory legislation</li> <li>• emergency disease or plant pest response agreements</li> <li>• emergency disease or plant pest specific</li> </ul>

<b>RANGE STATEMENT</b>	
	<p>guidelines and manuals included in the relevant national response plans such as AUSVETPLAN and PLANTPLAN</p> <ul style="list-style-type: none"> <li>• other relevant guidelines for handling an emergency disease or plant pest incursion, such as local government regulations.</li> </ul>
Resources may include:	<ul style="list-style-type: none"> <li>• contractors and other service providers</li> <li>• documents such as: <ul style="list-style-type: none"> <li>• plans</li> <li>• pro formas</li> <li>• maps</li> </ul> </li> <li>• equipment such as: <ul style="list-style-type: none"> <li>• trucks</li> <li>• tankers</li> <li>• pumps</li> </ul> </li> <li>• facilities such as: <ul style="list-style-type: none"> <li>• portable shower blocks</li> </ul> </li> <li>• operations personnel and teams responsible for: <ul style="list-style-type: none"> <li>• clerical and administrative duties</li> <li>• decontamination</li> <li>• destruction</li> <li>• disposal</li> <li>• pest control</li> <li>• site supervision of infected premises</li> <li>• valuation.</li> </ul> </li> </ul>
Control procedures required may cover:	<ul style="list-style-type: none"> <li>• decontamination</li> <li>• destruction</li> <li>• disposal</li> <li>• pest control</li> <li>• security</li> <li>• surveillance and testing</li> <li>• treatment</li> <li>• vaccination</li> <li>• valuation</li> <li>• vector control measures</li> <li>• wild animal control measures.</li> </ul>
Reports may include:	<ul style="list-style-type: none"> <li>• input into situation reports and control centre planning activities</li> <li>• use of emergency disease or plant pest</li> </ul>

<b>RANGE STATEMENT</b>	
	management software <ul style="list-style-type: none"> <li>• verbal progress and activity reports</li> <li>• written reports.</li> </ul>
Personnel monitoring may involve consideration of:	<ul style="list-style-type: none"> <li>• appropriate resources</li> <li>• first aid</li> <li>• meals</li> <li>• OHS</li> <li>• personal protective equipment</li> <li>• providing information to personnel</li> <li>• right range of skills on sites</li> <li>• shelter</li> <li>• staff rosters</li> <li>• stress levels.</li> </ul>
Implementation of control procedures may be monitored through:	<ul style="list-style-type: none"> <li>• site inspections</li> <li>• specific software</li> <li>• usage levels of major resources such as time, equipment and materials</li> <li>• verbal and written reports.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Biosecurity
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHC BIO502A Manage the implementation of an emergency disease or plant pest control program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers management and implementation of an emergency disease or plant pest control program and defines the standard required to: direct and monitor activities of one or more operational units; source resources; work effectively under stressful conditions; apply approved standards and protocols for emergency disease or plant pest control within a specific area; provide accurate and detailed reports to appropriate authorities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Initiate emergency disease or plant pest control program	1.1. Control procedures needed to manage an infection or infestation are identified, sourced or developed according to standards, protocols and situational variables. 1.2. Operational plans are developed for own area of responsibility. 1.3. Contributions are made as required to other plans and strategies. 1.4. Resources required to control or eradicate emergency disease or plant pest are sourced.
2. Direct implementation of emergency disease or plant pest control procedures	2.1. Implementation of emergency disease or plant pest control plan and procedures is managed according to operational plan, other specified guidelines and situational variables. 2.2. Reports on progress of emergency disease or plant pest control are disseminated as required. 2.3. Relevant management systems are implemented, and confirmed as functioning and available as required.
3. Monitor emergency disease or plant pest control procedures	3.1. Emergency disease or plant pest status of properties is monitored in line with relevant guidelines and operational or control plan. 3.2. Appropriateness and effectiveness of emergency disease or plant pest control procedures being used are monitored.

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Resource expenditure and availability are monitored to ensure adequacy for job.</p> <p>3.4. Effectiveness of emergency disease or plant pest control information management system is monitored.</p>
<p>4. Review emergency disease or plant pest control program</p>	<p>4.1. Emergency disease or plant pest control operational plans and procedures are reviewed and revised.</p> <p>4.2. Emergency disease or plant pest control information management procedures are revised as appropriate to ensure a complete set of records.</p> <p>4.3. Where required, resources are reallocated or acquired.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- accessing standards and protocols such as Australian Veterinary Emergency Plan (AUSVETPLAN) or Australian Emergency Plant Pest Response Plan (PLANTPLAN) to interpret and determine requirements for implementing specific emergency animal disease or plant pest control programs
- collating, interpreting and analysing relevant information
- operating effectively under stress in tasks involving high-level problem solving and decision making
- managing people under stressful conditions
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge



## REQUIRED SKILLS AND KNOWLEDGE

- application of emergency management principles when implementing an emergency disease or plant pest control program
- common reactions and behaviours of people working under stressful conditions
- occupational health and safety requirements, particularly for use of chemicals, specific control procedures and managing personnel under emergency conditions
- relevant public sector policies, practices and constraints in relation to emergency disease or plant pest management
- relevant standards and protocols, such as AUSVETPLAN or PLANTPLAN
- requirements of relevant commonwealth, state and territory legislation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances. Competency requires the application of work practices under work conditions.

- direct and monitor activities of one or more operational units
- source resources
- work effectively under stressful conditions
- apply approved standards and protocols for emergency disease or plant pest control within a specific area
- provide accurate and detailed reports to appropriate authorities.

#### Context of and specific resources for assessment

For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to manage the implementation of an emergency disease or plant pest control program.

<b>EVIDENCE GUIDE</b>	
	The candidate must also have access to a functioning emergency disease or plant pest control centre, or a control centre established for an emergency disease or plant pest response simulation exercise.
<b>Method of assessment</b>	<p>For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to manage the implementation of an emergency disease or plant pest control program.</p> <p>The candidate must also have access to a functioning emergency disease or plant pest control centre, or a control centre established for an emergency disease or plant pest response simulation exercise.</p>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to manage the implementation of an emergency disease or plant pest control program must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. For example, this could include work within control centres established to deal with a range of different emergency disease or plant pest incursion responses.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Relevant standards and protocols may include:	<ul style="list-style-type: none"> <li>• approved standard operating procedures</li> <li>• emergency disease or plant pest specific guidelines such as AUSVETPLAN or PLANTPLAN</li> <li>• jurisdiction's approved response plan</li> <li>• state and territory legislation defining legal</li> </ul>

<b>RANGE STATEMENT</b>	
	<p>powers in an emergency disease or plant pest situation</p> <ul style="list-style-type: none"> <li>• other relevant guidelines for handling an emergency disease or plant pest.</li> </ul>
Emergency diseases or plant pests include:	<ul style="list-style-type: none"> <li>• disease that may affect animals, fish and other marine animals including: <ul style="list-style-type: none"> <li>• disease that is exotic to Australia</li> <li>• serious infectious disease of unknown or uncertain cause</li> <li>• severe outbreak of a known endemic disease that is considered to be of national significance with serious social or trade implications</li> <li>• variant of an endemic disease</li> </ul> </li> <li>• species, biotype or strain of invertebrate pest or pathogen injurious to plants or plant health.</li> </ul>
Emergency disease or plant pest control procedures may include:	<ul style="list-style-type: none"> <li>• cleaning and decontaminating</li> <li>• collecting samples</li> <li>• destruction</li> <li>• disposal</li> <li>• epidemiological assessments</li> <li>• movement control</li> <li>• permits</li> <li>• quarantine</li> <li>• surveillance</li> <li>• tracing</li> <li>• vaccination</li> <li>• vector control measures</li> <li>• wild animal control measures.</li> </ul>
Formats that may be used for reports include:	<ul style="list-style-type: none"> <li>• electronic</li> <li>• paper-based.</li> </ul>
Management systems may include:	<ul style="list-style-type: none"> <li>• electronic</li> <li>• paper-based.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Biosecurity
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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# AHC BIO601A Plan and oversee an emergency disease or plant pest control program

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning and overseeing an emergency disease or plant pest control program according to the relevant standards and protocols provided in a national response plan and defines the work practices required to: plan for contingencies; plan, oversee and monitor a response to an emergency disease or plant pest incursion; build, maintain and motivate a team in response to an emergency disease or plant pest incursion; prioritise allocation of resources; implement best options for problem solving based on risk assessment.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the planning and management of an emergency response to a disease or plant pest outbreak.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan emergency disease or plant pest control program	1.1. Effective strategies to control emergency disease or plant pest are identified to support the emergency disease or plant pest control. 1.2. All components of emergency disease or plant pest control program comply with relevant standards and protocols, jurisdiction's nationally approved response plan, relevant state/territory and commonwealth legislation, and emergency management principles. 1.3. Expert advice is sought and used to identify source of emergency disease or plant pest and gauge its likely spread. 1.4. Declared areas are identified in line with expert advice and available evidence of presence of emergency disease or plant pest. 1.5. Plans are developed to effectively and efficiently control emergency disease or plant pest. 1.6. Plans are submitted to appropriate authorities for approval. 1.7. Likely developments and consequences of emergency disease or plant pest outbreak are identified and appropriate personnel are advised according to established lines of command and control.
2. Oversee emergency disease or plant pest control program	2.1. Emergency disease or plant pest control plans are implemented and monitored. 2.2. Information recording and dissemination are

ELEMENT	PERFORMANCE CRITERIA
	<p>monitored to ensure compliance with standards and protocols.</p> <p>2.3. Reports are sent, received and acted upon according to relevant standards and protocols.</p> <p>2.4. Relevant organisations/agencies and personnel are briefed in relation to management of emergency disease or plant pest.</p>
<p>3. Monitor and review the emergency disease or plant pest control program</p>	<p>3.1. Emergency disease or plant pest control strategies are monitored continually to ensure that they are achieving the intended outcomes.</p> <p>3.2. Emergency disease or plant pest control plans are amended as appropriate in line with expert advice, standards and protocols.</p> <p>3.3. Resource requirements are monitored continually to ensure strategies are achieved.</p>
<p>4. Revise emergency disease or plant pest control program</p>	<p>4.1. Emergency disease or plant pest control strategies and/or plans are revised as required. Changes to emergency disease or plant pest control strategies are communicated to appropriate personnel.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- accessing relevant standards and protocols such as Australian Veterinary Emergency Plan (AUSVETPLAN) or Australian Emergency Plant Pest Response Plan (PLANTPLAN) to determine requirements for a specific emergency disease or plant pest response
- demonstrating flexibility by modifying priorities and procedures in response to new findings
- developing briefing materials for use by others to communicate sensitive and complex information in an appropriate manner
- making effective judgements to achieve a balance of taking authority and delegating appropriately
- managing a team of people under stressful conditions
- managing collection, analysis and dissemination of data to guide the ongoing emergency disease or plant pest response

**REQUIRED SKILLS AND KNOWLEDGE**

- operating effectively under stress while performing tasks requiring high-level problem solving and decision making
- preparing or commissioning a detailed plan to manage an emergency disease or plant pest response, including identifying an outbreak of the emergency disease or plant pest, monitoring its presence, investigating its source and pattern of infection, estimating its likely spread and implementing measures and planning procedures for its control or eradication
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- detailed knowledge of relevant state, territory and commonwealth Acts of parliament with respect to emergency disease or plant pest control, emergency powers and notification of appropriate authorities
- extensive knowledge of emergency disease or plant pest control strategies for emergency disease or plant pest situations
- extensive knowledge of standards and protocols, such as AUSVETPLAN or PLANTPLAN
- extensive knowledge of where to source technical information and/or expert advice and expertise to effectively manage an emergency disease or plant pest incursion
- knowledge of common reactions and behaviours under stress
- knowledge of relevant public sector policies, practices and constraints in relation to emergency disease or plant pest management
- knowledge of occupational health and safety requirements, particularly when managing personnel in an emergency under stressful conditions.

**Evidence Guide**

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**



<b>EVIDENCE GUIDE</b>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>Competency is demonstrated in this standard if the candidate is able to:</p> <ul style="list-style-type: none"> <li>• plan for contingencies</li> <li>• plan, oversee and monitor a response to an emergency disease or plant pest incursion</li> <li>• build, maintain and motivate a team in response to an emergency disease or plant pest incursion</li> <li>• prioritise allocation of resources</li> <li>• implement best options for problem solving based on risk assessment.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>For valid assessment, one must have opportunities to participate in a range of exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to plan and oversee an emergency disease or plant pest control program.</p> <p>The candidate must also have access to a functioning control centre, or a control centre established for an emergency disease or plant pest response simulation exercise.</p>
<p><b>Method of assessment</b></p>	<p>Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in an emergency disease or plant pest response simulation exercise or in responses to an emergency disease or plant pest incursion.</p>
<p><b>Guidance information for assessment</b></p>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to plan and oversee an emergency disease or plant pest control program must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. For example, this could include work within control centres established for other emergency diseases or plant pest incursions.</p>

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Strategies to control the emergency disease or plant pest may include:	<ul style="list-style-type: none"> <li>• application of plant pesticides</li> <li>• cleaning and decontamination</li> <li>• collecting samples</li> <li>• commonwealth, state, territory and industry response agreements</li> <li>• destruction</li> <li>• disinfestation</li> <li>• disposal</li> <li>• emergency management approach</li> <li>• epidemiological assessments</li> <li>• movement control</li> <li>• quarantine</li> <li>• tracing and surveillance</li> <li>• vaccination</li> <li>• vector control</li> <li>• whole of government approach</li> <li>• wild animal control measures</li> </ul>
Emergency diseases or plant pests may include:	<ul style="list-style-type: none"> <li>• diseases that may affect animals, fish and other marine animals including:                             <ul style="list-style-type: none"> <li>• disease that is exotic to Australia</li> <li>• serious infectious disease of unknown or uncertain cause</li> <li>• variant of an endemic disease</li> <li>• severe outbreak of a known endemic disease that is considered to be of national significance with serious social or trade implications</li> </ul> </li> <li>• species, biotype or strain of invertebrate pest or pathogen injurious to plants or plant health.</li> </ul>
Relevant standards and protocols may include:	<ul style="list-style-type: none"> <li>• directions from state control headquarters</li> <li>• emergency disease or plant pest response agreements such as:                             <ul style="list-style-type: none"> <li>• Emergency Animal Disease Response Agreement (EADRA)</li> <li>• Emergency Plant Pest Response Deed (EPPRD)</li> </ul> </li> <li>• emergency disease or plant pest specific</li> </ul>

<b>RANGE STATEMENT</b>	
	<p>guidelines and manuals included in the relevant national response plan such as AUSVETPLAN and PLANTPLAN</p> <ul style="list-style-type: none"> <li>• emergency management principles</li> <li>• standard operating procedures</li> <li>• state and territory legislation defining legal powers in an emergency disease or plant pest incursion</li> <li>• state response plans.</li> </ul>
Declared areas may include:	<ul style="list-style-type: none"> <li>• areas in which defined conditions apply to the access or egress of specified plants, animals, fish and other marine animals or things</li> <li>• control areas</li> <li>• dangerous contact premises and suspect premises</li> <li>• infected premises</li> <li>• quarantine premises</li> <li>• restricted areas</li> <li>• stand still areas</li> <li>• any other areas declared.</li> </ul>
Information recording and dissemination requirements may include:	<ul style="list-style-type: none"> <li>• electronic systems</li> <li>• mapping systems</li> <li>• message systems, including:</li> <li>• records of conversation</li> <li>• telephone messages</li> <li>• task requests</li> <li>• event logs</li> <li>• record keeping systems.</li> </ul>
Relevant organisations may include:	<ul style="list-style-type: none"> <li>• community organisations</li> <li>• industry organisations</li> <li>• local, commonwealth and state or territory government agencies, including emergency service organisations</li> <li>• whole of government.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Biosecurity
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCBUS301A Use hand held e-business tools

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the use of hand held tools for e-business and defines the standard required to: use relevant technology to support business operations; enter and process data according to technical and business requirements; generate data in the format required by the e-business supply chain.
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### Application of the Unit

<b>Application of the unit</b>	Using hand held e-business tools is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare hand held e-business tools for use	<p>1.1.E-business tools are selected according to requirements of the task and business practices.</p> <p>1.2.Relevant start-up procedures are completed in accordance with technical and business requirements.</p> <p>1.3.Tools are configured with relevant business data as required.</p> <p>1.4.Connectivity is tested, as required, according to technical and business requirements.</p>
2. Use hand held e-business tools	<p>2.1.E-business tools are used according to technical and business requirements.</p> <p>2.2.Equipment faults are addressed, as required, according to technical and business requirements.</p> <p>2.3.Data is checked for accuracy and errors are addressed, as required, according to technical and business requirements.</p>
3. Process business data	<p>3.1.Business data is generated and compiled, as required, with reference to technical and business requirements.</p> <p>3.2.Business data is processed according to technical and business requirements.</p> <p>3.3.Procedures to maintain the integrity of data and data security are followed.</p> <p>3.4.Performance of hand held e-business tools is reviewed and recommendations made for improvements to hardware, software and/or their use in accordance with e-business strategy and budget.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow protocols for equipment use and data storage
- use relevant e-business technology
- generate data in the format required by the e-business supply chain
- print reports as required
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- operating procedures of relevant business tools
- relevant protocols for electronic data interchange
- personal identification and password for online access between businesses for access to inventory data and purchasing, payment or supply processes.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• use relevant technology such as computers, handheld scanners, and barcoding equipment</li> <li>• enter and process data according to technical and business requirements</li> <li>• generate data in the format required by the e-business supply chain.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
E-business tools may include:	<ul style="list-style-type: none"> <li>• computers</li> <li>• personal data assistants (PDAs)</li> <li>• radio frequency (RF) scanners</li> <li>• microchip scanners</li> <li>• mobile phone enabled email and SMS</li> <li>• data recording devices</li> <li>• barcoding equipment.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Business
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCBUS401A Administer finance, insurance and legal requirements

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers administering finance, insurance and legal requirements and defines the standard required to: administer the legal requirements of the business; process and maintain the insurance requirements for the business; identify sources, types and cost of finance; prepare an application for finance or investment.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to being part of a management team making decisions on the financial, insurance and legal requirements of the business.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Administer the legal requirements of the business	<p>1.1.Legislative requirements are identified, monitored and processed to ensure compliance.</p> <p>1.2.Legal documents are identified, maintained and stored in accordance with organisational requirements.</p> <p>1.3.Legislative requirements are reviewed regularly in accordance with organisational requirements.</p>
2. Process and maintain the insurance requirements for the business	<p>2.1.Insurance requirements are identified and assessed in consultation with the management team.</p> <p>2.2.Suitable insurers or insurance brokers are identified and quotations obtained.</p> <p>2.3.Adequate insurance policies and cover are acquired in consultation with management team.</p> <p>2.4.Legislative requirements and insurance cover are reviewed regularly in accordance with organisational requirements.</p> <p>2.5.Documentation filed is in accordance with organisational requirements to ensure security and accessibility.</p>
3. Identify sources, types and cost of finance	<p>3.1.Research is conducted on the different types of finance available to primary production-based businesses.</p> <p>3.2.Costs associated with different forms of finance are determined.</p> <p>3.3.Re-payment structures for finance options are assessed in consultation with the management team.</p>
4. Prepare application	4.1.Farm business and financial data are accessed and an

ELEMENT	PERFORMANCE CRITERIA
for finance or investment	<p>application for finance or investment prepared.</p> <p>4.2. Overview of the finance application is checked by the management team and submitted to the relevant body.</p> <p>4.3. Documentation is maintained and stored in accordance with organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- work independently
- research information using technology
- calculate cost of finance
- interpret financial reports and farm business data
- maintain basic accounts
- prepare applications for finance and/or investment
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- business processes and legal requirements
- insurance processes and legal requirements
- finance processes and legal requirements
- taxation and account keeping requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• administer the legal requirements of the business</li> <li>• process and maintain the insurance requirements for the business</li> <li>• identify sources, types and cost of finance</li> <li>• prepare an application for finance or investment.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Legal requirements may include:	<ul style="list-style-type: none"> <li>• obligations imposed by the choice of the business structure</li> <li>• marketing the business in accordance with consumer legislation</li> <li>• operating with a duty of care (Law of Torts).</li> </ul>
Relevant legislation may include:	<ul style="list-style-type: none"> <li>• all levels of government that affect business operations, especially: <ul style="list-style-type: none"> <li>• Occupational Health and Safety (OHS)</li> <li>• environmental</li> <li>• award and enterprise agreements</li> <li>• equal opportunity</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• anti-discrimination.</li> </ul>
Insurance requirements may include:	<ul style="list-style-type: none"> <li>• workers' compensation</li> <li>• public liability</li> <li>• superannuation</li> <li>• life</li> <li>• personal accident and sickness</li> <li>• buildings</li> <li>• plant</li> <li>• crops</li> <li>• vehicles.</li> </ul>
Sources of finance may include:	<ul style="list-style-type: none"> <li>• banks</li> <li>• merchant banks</li> <li>• building societies</li> <li>• credit unions</li> <li>• co-operatives</li> <li>• finance companies</li> <li>• solicitors</li> <li>• accountants</li> <li>• private treaty.</li> </ul>
Business and financial data in an application for finance may include:	<ul style="list-style-type: none"> <li>• balance sheets</li> <li>• profit and loss statements</li> <li>• production yields</li> <li>• sales</li> <li>• income</li> <li>• security</li> <li>• assets and liabilities</li> <li>• cash flow performance.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Business
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCBUS402A Cost a project

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers costing a project and defines the standard required to: identify resources for a project; investigate options for material supplies, services, contractors and consultants; research prices for required resources; calculate costs for the project; document a summary of project costs.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to supervisors and managers who establish and oversee projects to the best financial advantage of the enterprise.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Obtain current prices for project resources	<p>1.1. Project objectives, required work activities and available finance are identified and interpreted according to the project plan and enterprise guidelines.</p> <p>1.2. Resources required for project works are identified according to the project plan.</p> <p>1.3. Factors affecting resource costs are identified using available information.</p> <p>1.4. Add-on costs are taken into consideration according to enterprise guidelines.</p> <p>1.5. Appropriate tools and equipment are selected and used for the calculation and documentation of project costs.</p>
2. Calculate individual itemised costs of the project	<p>2.1. Unit and total cost for each resource item is calculated according to enterprise guidelines.</p> <p>2.2. Total itemised resource costs are evaluated against the financial schedule for the project.</p> <p>2.3. Adjustments are made where required to reconcile resource costs with project schedules in strict adherence to enterprise guidelines for costing a project.</p>
3. Prepare a summary of the cost of the project	<p>3.1. Resource costs are collated and scheduled according to the project plan and enterprise guidelines.</p> <p>3.2. Total project costs are accurately calculated and recorded according to enterprise guidelines.</p> <p>3.3. Financial summary is collated, organised and submitted to management for approval.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and evaluate information
- accurately complete financial calculations, collate and organise quantitative and financial information
- comply with legislative requirements
- document financial summaries for the understanding of staff, managers and contractors
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant State and Federal legislation, awards, enterprise agreements and management policies relating to labour hire and employment terms, and Occupational Health and Safety (OHS)
- current pricing structures and options for material supplies, services, contractors and consultants
- enterprise and industry standards and practices for formatting, organising and presenting financial and quantitative information.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Competence in costing a project requires evidence that a person is able to obtain current prices for required resources, calculate costs and present a summary of project costs that provides for cost effective project outcomes. The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify resources for a project</li> <li>• investigate options for material supplies, services, contractors and consultants</li> <li>• research prices for required resources</li> <li>• calculate costs for the project</li> <li>• document a summary of project costs.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Projects may include:	<ul style="list-style-type: none"> <li>• those carried out in horticultural or land management enterprises.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Business
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCBUS403A Support and review business structures and relationships

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting and reviewing business structures and relationships and defines the standard required to: research and identify appropriate bodies and sources of information; select an appropriate business structure; establish roles and expectations for family positions in a rural business; negotiate and resolve disputes; manage stress.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to those who identify and assist in the establishment of a primary production business and communicate the roles and responsibilities of family members within such a business.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and assist in establishing/reviewing a rural business structure	1.1.Options for the business structure are identified and legal and taxation ramifications assessed. 1.2.Administrative procedures are followed to ensure full compliance with the chosen structure.
2. Identify and assist in the review of roles and responsibilities within the business unit	2.1.Roles and responsibilities within the business are clearly communicated to members of the business unit. 2.2.Business organisational structure is established/reviewed in consultation with members of the business unit. 2.3.Roles and responsibilities of family members are reviewed regularly in accordance with succession and estate planning requirements. 2.4.Wills are prepared, updated and stored in accordance with organisational requirements.
3. Assist in the development and implementation of stress management strategies	3.1.Potential causes of stress within a rural business environment are identified. 3.2.Stress management strategies are developed in consultation with family and other employees. 3.3.Strategies are implemented to minimise stress within the family and the workplace. 3.4.Stress management strategies are reviewed regularly in accordance with organisational requirements.
4. Access rural networks	4.1.Relevant rural networks and support groups are

ELEMENT	PERFORMANCE CRITERIA
and support group	identified. 4.2. Appropriate interpersonal skills are used to facilitate and promote positive relations. 4.3. Relationships are developed and maintained to promote the rural business in accordance with organisational goals and objectives. 4.4. Networking opportunities are identified and accessed in accordance with organisational requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and identify appropriate bodies and sources of information
- utilise technology
- implement strategies to resolve problems
- implement Occupational Health and Safety (OHS) and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant legislation and statutory requirements including those relating to OHS and anti-discrimination
- organisational structure
- organisations policies, plans and procedures
- environmental policies and procedures including sustainable energy work practices

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>and techniques</p> <ul style="list-style-type: none"> <li>• principles of effective communication in relation to listening, questioning and non-verbal communication</li> <li>• workplace communication channels</li> <li>• principles and techniques to use feedback to achieve positive outcomes</li> <li>• rural networks and support groups</li> <li>• stressors in the rural business environment.</li> </ul>
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## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• research and identify appropriate bodies and sources of information</li> <li>• select an appropriate business structure</li> <li>• establish roles and expectations for family positions in a rural business</li> <li>• negotiate and resolve disputes</li> <li>• manage stress.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Business structures and relationships may include:	<ul style="list-style-type: none"> <li>• sole trader</li> <li>• partnership</li> <li>• company</li> <li>• family trust.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Business
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCBUS404A Operate within a budget framework

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers operating within a budget framework and defines the standard required to: obtain and confirm the operational budget has been allocated; review projected income and expenditure and compare to budget; record transactions and allocate to cost and income categories; identify and report budget variations; review production and expenditure plans to meet financial targets.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervisors and managers in agriculture, horticulture and land management enterprises who have responsibility to participate in formulation of a budget, and supervise and monitor financial transactions.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Participate in formulation of a cash flow budget	1.1.Budget consultation is followed in line with enterprise policy. 1.2.Budget variations are requested to suit enterprise needs.
2. Supervise financial transaction	2.1.Expenditure is arranged within budget delegations. 2.2.Transactions are recorded to meet taxation and accounting requirements according to enterprise practices. 2.3.Actual sales and expenditure are compared to the enterprise budget. 2.4.Financial reports are checked to ensure operations are within forecast limits. 2.5.Expenditure is adjusted to meet financial targets as required. 2.6.Actual and potential variations in budgeted income are reported to the manager according to enterprise requirements. 2.7.Recommendations to address budget variations are developed.

## Required Skills and Knowledge

**REQUIRED SKILLS AND KNOWLEDGE**

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- arrange income and expenditure
- record transactions
- monitor income and expenditure
- compare budgeted figures to actuals
- participate in formulation of a budget
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- income and expenditure categories
- budgeting procedures and templates
- taxation and accounting requirements for recording financial transactions
- costing mechanisms
- forecasting mechanisms
- banking routines
- cash flow analyses and records
- recording systems
- records of receipts and expenditure
- work reports
- factors that impact upon the timing of sales and purchases (taxation, GST, market conditions).

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• obtain and confirm the operational budget has been allocated</li> <li>• review projected income and expenditure and compare to budget</li> <li>• record transactions and allocate to cost and income categories</li> <li>• identify and report budget variations</li> <li>• review production and expenditure plans to meet financial targets.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Budget documentation may include:	<ul style="list-style-type: none"> <li>• projected expenditure by item</li> <li>• projected income by source</li> <li>• cash flow budgets</li> <li>• budget delegations</li> <li>• variation and review procedures</li> <li>• credit and credit limits</li> <li>• security measures</li> <li>• reporting mechanisms</li> <li>• additional funds for particular projects</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• self-generated funds</li> <li>• fundraising requirements</li> <li>• project grants</li> <li>• funds received for winning tenders</li> <li>• enterprise procedures and policies.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Business
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCBUS405A Participate in an e-business supply chain

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers participation in an e-business supply chain and defines the standard required to: define the business model and how it can use e-business; develop procedures and systems for e-business; implement an e-business supply chain; monitor and review e-business systems as part of managing the business.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to farm managers who use an e-business supply chain to adjust production to meet the requirements of that supply chain.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare e-business systems and procedures	1.1. Supply chain requirements are identified and validated as required. 1.2. Technology requirements are identified. 1.3. Technology is brought online in accordance with requirements and budget. 1.4. Policies and procedures are designed to guide business relations and operations in accordance with supply chain requirements. 1.5. Supporting business processes and outputs are designed or re-designed to support requirements of the e-business supply chain. 1.6. Information and development support is provided to staff, customers and suppliers to assist in implementation the requirements of the e-business supply chain.
2. Implement e-business systems and procedures	2.1. Production processes required by e-business supply chain are implemented. 2.2. Online purchasing, selling and payments are conducted as required by the e-business supply chain with reference to associated risk management strategies and relevant legal and ethical requirements. 2.3. Business processes and data flows required by the e-business supply chain are identified and adjusted as required. 2.4. Actions to build trust and foster a supply chain culture are implemented in accordance with supply chain ethos.



ELEMENT	PERFORMANCE CRITERIA
<p>3. Monitor and review e-business systems and procedures</p>	<p>3.1.E-business innovation/s are integrated into the business and monitored to gauge their usefulness and maximise implementation.</p> <p>3.2.E-business innovation is reviewed in consultation with users and recommendations for improvement or further innovation documented and evaluated.</p> <p>3.3.Business data and reports are used to compare outcomes, budgets, timelines and forecasts to actual performance.</p> <p>3.4.Technology performance is reviewed and recommendations made for improvements to hardware, software and/or their use in accordance with e-business strategy and budget.</p> <p>3.5.Feedback and evaluation results are used to plan and improve future supply chain management strategies.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use relevant technology such as computers, handheld scanners, bar-coding equipment
- prepare production data in the format required by the e-business supply chain
- meet production deadlines required by e-business supply chain
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• the entire supply chain from raw materials to producers, component suppliers, manufacturers, wholesalers, third party service providers, retailers, customers and recyclers, plus freight, distribution and cash flow</li> <li>• technology hardware and software requirements of the e-business supply chain</li> <li>• protocols for electronic data interchange</li> <li>• personal identification and password for online access between businesses for access to inventory data and purchasing, payment or supply processes</li> <li>• banking information for electronic funds transfer</li> <li>• protocols for to e-business legal and security issues</li> <li>• e-business terminology.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• define the business model and how it can use e-business</li> <li>• develop procedures and systems for e-business</li> <li>• implement an e-business supply chain</li> <li>• monitor and review e-business systems as part of managing the business.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Elements of the e-chain may include:	<ul style="list-style-type: none"> <li>• entire cycle from raw materials to producers</li> <li>• component suppliers</li> <li>• manufacturers</li> <li>• wholesalers</li> <li>• third party service providers</li> <li>• retailers</li> <li>• customers and recyclers</li> <li>• freight, distribution and cash flow.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Business
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCBUS501A Manage staff

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the management of staff and defines the standard required to: prepare task descriptions and person specifications; arrange employment of workforce members; implement Occupational Health and Safety (OHS) policies and procedures; review labour productivity.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes managing staff and applies to both operational and strategic managers in agriculture, horticulture and land management.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare task descriptions and person specifications	<p>1.1.Tasks are identified and described along with the range of conditions under which performance may need to occur.</p> <p>1.2.Most appropriate employment arrangements are determined based on employer and employee needs, and responsibilities and rights.</p> <p>1.3.Person specifications are prepared with due regard to legislation, codes and national standards.</p>
2. Manage workforce performance	<p>2.1.Induction programs are designed for each employee consistent with legislative requirements and enterprise guidelines.</p> <p>2.2.Terms of engagement for consultants and contractors are clarified and established.</p> <p>2.3.Induction programs are conducted for new appointees and appropriate records established.</p> <p>2.4.Strategies for communicating with workers are designed and implemented.</p> <p>2.5.Performance management strategies are designed and implemented.</p> <p>2.6.Processes for the termination of non-performing staff are identified and followed as necessary.</p>
3. Support workforce training programs	<p>3.1.Strategies to identify skill and knowledge gaps are designed and implemented with workers, and strategies to address these gaps are implemented.</p> <p>3.2.On-the-job training is provided to optimise worker performance and to ensure safety and fairness in the workplace.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. Off-the-job training requirements are identified and training is sourced and supported as appropriate.
4. Manage administrative support	4.1. Processes and procedures for the administration of staff records are implemented. 4.2. Administrative procedures and processes to meet legislated requirements are implemented. 4.3. Industrial relations are established and monitored; awards adhered to, enterprise agreements and/or contracts of employment negotiated, and disputes and conflicts resolved.
5. Implement OHS priorities and procedures	5.1. Safety policies are developed and communicated within the enterprise. 5.2. Safe work practices are identified/ designed for all aspects of the operation of the enterprise. 5.3. Safe work practices are communicated and enforced among all members of the workforce. 5.4. All members of staff are involved in hazard identification and risk assessment for OHS. 5.5. New staff are inducted into the workplace OHS system.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- apply enterprise policies and procedures for staff management
- prepare task descriptions and person specifications
- arrange employment of workforce members
- performance manage staff
- administer staff records
- manage industrial relations
- implement OHS priorities and procedures
- review labour productivity
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• task descriptions and person specifications</li> <li>• equal opportunity and equal employment opportunity legislation</li> <li>• OHS legislation</li> <li>• relevant industrial awards</li> <li>• performance management approaches</li> <li>• personnel management strategies</li> <li>• employee induction programs</li> <li>• contracts of employment</li> <li>• unfair dismissal legislation</li> <li>• job specifications</li> <li>• interviewing procedures.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>Competence in managing staff requires evidence that staff have been successfully managed within an enterprise according to the criteria outlined in this standard. The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare task descriptions and person specifications</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• arrange employment of workforce members</li> <li>• implement OHS priorities and procedures</li> <li>• review labour productivity.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Managing staff may include:	<ul style="list-style-type: none"> <li>• all legal requirements for managing staff in the workplace including award and enterprise agreements and relevant industrial instruments</li> <li>• relevant legislation from all levels of government that affects business operation, especially in regard to OHS and environmental issues</li> <li>• equal opportunity</li> <li>• industrial relations</li> <li>• anti-discrimination</li> <li>• relevant industry codes of practice.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Business
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCBUS502A Market products and services

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the marketing of products and services and defines the standard required to collect, analyse and present data in the internal and external business environment; assess alternative marketing strategies and techniques to meet business plan objectives; plan and implement a marketing strategy; and monitor product, pricing and distribution policies to improve market performance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who market products and services in an agricultural, horticultural or land management enterprise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Analyse market information	<p>1.1. Markets for existing or new products or services are identified, researched and analysed for possible entry or development.</p> <p>1.2. Past trends and developments are analysed to determine market variability and associated risks.</p> <p>1.3. Market environment is continually monitored in a consistent manner to ensure information is current and reliable.</p> <p>1.4. The legal, ethical and environmental constraints of the market(s) and their effect on the enterprise are identified.</p> <p>1.5. Product mix that suits market requirements/price advantage at the time is adopted.</p>
2. Develop a marketing plan	<p>2.1. Alternative marketing strategies and techniques are assessed and interpreted to identify marketing targets and methods.</p> <p>2.2. Marketing strategies are based on reliable data, market environment and substantiated trends.</p> <p>2.3. Marketing options incorporate suitable advice from marketing professionals.</p> <p>2.4. A measurable cost-effective marketing plan is developed incorporating a reasoned analysis of market research and business plan objectives.</p>
3. Implement marketing activities	<p>3.1. Planned marketing activities are scheduled within appropriate timeframes.</p> <p>3.2. Measurable performance targets are developed and meet business plan objectives.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Distribution channels are organised, and product and service information is accurate and readily available to clients.</p> <p>3.4. Marketing activities are implemented within budgetary constraints to meet legal, ethical and enterprise requirements.</p>
4. Evaluate marketing performance	<p>4.1. Product, pricing and distribution policies are monitored in relation to market changes, marketing objectives and enterprise requirements.</p> <p>4.2. Areas of positive performance are identified and corrective action is taken to remedy poor performance areas.</p> <p>4.3. An objective assessment of the marketing plan and implementation is made by a comparison of valid and reliable data against performance targets.</p> <p>4.4. Relevant information is documented for continual analysis and effective planning management.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse with regard to market research and assessments
- manage information
- assess financial strategies and prepare budgets
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

## REQUIRED SKILLS AND KNOWLEDGE

- price risk management
- performance evaluation measures
- competitors strengths and weaknesses
- business planning process
- customer relations policies
- market conditions and forces
- enterprise goals, objectives and directions
- markets and market analysis
- communication and promotion skills
- marketing principles and practice
- principles of trend analysis.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- collect, analyse and present data in the internal and external business environment
- assess alternative marketing strategies and techniques to meet business plan objectives
- plan and implement a marketing strategy
- monitor product, pricing and distribution policies to improve market performance.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Markets may include:	<ul style="list-style-type: none"> <li>• wholesalers</li> <li>• retailers</li> <li>• exporters</li> <li>• local, national and/or international customers</li> <li>• private and public sector organisations and enterprises.</li> </ul>
Marketing strategies may include:	<ul style="list-style-type: none"> <li>• various information with regard to:                             <ul style="list-style-type: none"> <li>• pricing</li> <li>• promotion</li> <li>• product quality</li> <li>• service standards</li> <li>• distribution channels.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Business
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCBUS503A Negotiate and monitor contracts

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the negotiation and monitoring of contracts and defines the standard required to: establish agreements with sources external to the enterprise; complete contract documentation; monitor the performance of contracts.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose work involves negotiating contracts with clients and others.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Establish agreements with sources external to the enterprise</p>	<p>1.1.The enterprise requirements of a business relationship with external sources are identified and defined.</p> <p>1.2.The ranges of acceptable outcomes from a negotiation are established.</p> <p>1.3.Contact is made with individuals, bodies or corporations, the appropriate individual is identified, and requirements of an agreement are discussed and mutually acceptable terms agreed.</p> <p>1.4.Sound practice and procedure for business meetings are maintained and all agreements are documented.</p>
<p>2. Complete contract documentation</p>	<p>2.1.Requirements of the contract are clearly documented and understood by the relevant parties.</p> <p>2.2.Areas of ambiguity or concern are clarified and resolved.</p> <p>2.3.Conditions for service or supply are agreed between the parties including the determination of key performance indicators.</p> <p>2.4.Alternative processes are undertaken where agreement is unable to be reached in accordance with enterprise procedures.</p> <p>2.5.Negotiations conform to established enterprise requirements and relevant legislation.</p> <p>2.6.Contract documentation is signed and exchanged between the relevant parties.</p>
<p>3. Monitor the performance of contracts</p>	<p>3.1.The rights and obligations of parties to a contract are identified, and appropriate methods of addressing non-performance are implemented.</p> <p>3.2.Professional and regulatory bodies available to support commercial grievance processes are identified and consulted when required.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3.Completion of contract against key performance indicators is monitored. 3.4.Issues in respect to non-compliance are advised to the other party in writing.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- establish agreements with sources external to the enterprise
- complete contract documentation
- monitor the performance of contracts
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- contract/commercial law applicable to the type of agreement
- processes of formulation and negotiation of contracts
- enterprise business policies and plans including procedures for maintenance of confidentiality
- selection and appropriate application of technology, information systems and procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish agreements with sources external to the enterprise</li> <li>• complete contract documentation</li> <li>• monitor the performance of contracts.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Contract requirements may include:	<ul style="list-style-type: none"> <li>• quality or enterprise work specifications and procedures</li> <li>• manufacturer's specifications and/or supplier's handling and storage advice</li> <li>• workplace operating procedures and policies</li> <li>• supplier and/or client instructions</li> <li>• legal and contract documentation</li> <li>• Materials Safety Data Sheets (MSDSs)</li> <li>• communications technology equipment</li> <li>• personal and work area work procedures and practices</li> <li>• relevant State, Territory and Commonwealth</li> </ul>

<b>RANGE STATEMENT</b>	
	legislative <ul style="list-style-type: none"> <li>• framework concerning contracts and trade practices</li> <li>• Occupational Health and Safety (OHS) in terms of duties of employers, employees, suppliers and contractors contracts</li> <li>• hazardous substances and dangerous goods</li> <li>• environment protection</li> <li>• equal opportunity</li> <li>• equal employment opportunity</li> <li>• affirmative action standards</li> <li>• certification requirements</li> <li>• license, patent or copyright arrangements</li> <li>• quality assurance procedures</li> <li>• emergency procedures.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Business
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBUS504A Prepare estimates, quotes and tenders

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the processes involved with preparation of estimates, quote and tenders and defines the standard required to: research the details of the quoted service and clarify with the client; identify requirements for estimate, quote or tender including format, specifications and deadline for submission; identify and cost the resources and services required to fulfil the tender and check for availability; investigate options for supplies, services, contractors and consultants with current pricing structures and availability; develop a work schedule with timelines and expenditure; consider potential problems and risks and develop contingency plans; develop detailed costing sheets with the final quoted cost, including an estimated margin for risk; submit the completed tender to the client with supporting information including details of organisations previous work and client feedback; seek feedback from the client to ensure information supplied is sufficient.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to those who prepare estimates, quotes and tenders in a horticultural, agricultural or land management enterprise.</p>
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out preliminary planning activities for estimating, quoting and/or tendering	<p>1.1. Nature and scope of the project are identified in consultation with the client according to enterprise policy.</p> <p>1.2. Format, specifications and deadline for submission of the estimate, quote or tender are identified and confirmed with the client.</p> <p>1.3. Available relevant documentation is obtained and interpreted.</p> <p>1.4. Project site is inspected and reconciled with scaled drawings, project and other site plans in consultation with the client, agent or other authority.</p>
2. Determine resource requirements	<p>2.1. Detailed project information and monetary sums are interpreted and recorded from client specifications.</p> <p>2.2. Size, type and quantity of required project resources are identified and estimated according to client specifications.</p> <p>2.3. Sources are identified and evaluated for the</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>procurement of suitable project resources consistent with client requirements.</p> <p>2.4. Appropriate tools and equipment are selected and used to calculate the correct size, type and quantity of each resource item.</p> <p>2.5. Unit and total cost for each resource item are calculated and documented.</p> <p>2.6. Necessary and appropriate contingency sums to complete the estimate, quote or tender are interpreted and documented.</p> <p>2.7. Calculations are accurately recorded on a price summary sheet.</p>
3. Prepare schedules for the estimate, quote or tender	<p>3.1. Works schedule is documented according to client specifications.</p> <p>3.2. Scheduling of resources is accurately documented consistent with the requirements of the works schedule.</p> <p>3.3. Scheduling of financial requirements is accurately documented according to enterprise guidelines.</p>
4. Prepare and document the estimate, quote or tender for submission to the client	<p>4.1. Estimate, quote or tender price is calculated and checked according to enterprise guidelines.</p> <p>4.2. Costed summaries and works, resource and financial schedules are compiled according to client specifications.</p> <p>4.3. Quality assurance requirements, enterprise customer service procedures, conventional formatting and industry standards are strictly adhered to in the development of documentation.</p> <p>4.4. Total estimate, quotation and/or tender is completed accurately and submitted to the client within the specified deadline.</p> <p>4.5. Further information is provided and adjustments made according to client requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<p><b>Required skills</b></p> <ul style="list-style-type: none"> <li>• research and evaluate information</li> <li>• comply with legislative requirements</li> <li>• use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• relevant State and Federal legislation, awards, enterprise agreements and management policies relating to labour hire and employment terms</li> <li>• current pricing structures and options for supplies, services, contractors and consultants</li> <li>• enterprise and industry standards and practices for formatting, organising and presenting financial and quantitative information</li> <li>• business ethics in relation to confidentiality and the tendering process.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• research the details of the quoted service and clarify</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<p>with the client</p> <ul style="list-style-type: none"> <li>• identify requirements for estimate, quote or tender including format, specifications and deadline for submission</li> <li>• identify and cost the resources and services required to fulfil the tender and check for availability</li> <li>• investigate options for supplies, services, contractors and consultants with current pricing structures and availability</li> <li>• develop a work schedule with timelines and expenditure</li> <li>• consider potential problems and risks and develop contingency plans</li> <li>• develop detailed costing sheets with the final quoted cost, including an estimated margin for risk</li> <li>• submit the completed tender to the client with supporting information including details of organisations previous work and client feedback</li> <li>• seek feedback from the client to ensure information supplied is sufficient.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The subject of the estimate, quote or tender may include:	<ul style="list-style-type: none"> <li>• works relating to agricultural production</li> <li>• horticultural production</li> <li>• amenity horticulture projects</li> <li>• conservation and land management-related projects.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Business
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCBUS505A Develop a marketing plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a marketing plan and defines the standard required to: identify the marketable features of the product and potential markets; develop a range of marketing alternatives; collect and analyse data to assess alternatives in a marketing plan; evaluate performance targets and recommend modifications or improvements; implement and evaluate a marketing plan; and plan to manage promotional activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who develop marketing plans for any agricultural and horticultural products or related services.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Evaluate commercial information	<p>1.1.Relevant information is researched and analysed to identify market trends.</p> <p>1.2.Competing products are identified and evaluated to determine strengths and weaknesses of own products.</p> <p>1.3.Collated information is presented in a manner which provides clear and concise information.</p> <p>1.4.Market and situation analysis is conducted using established techniques in accordance with available budget and the need for external assistance.</p>
2. Identify marketing requirements	<p>2.1.Promotional materials are created that enhance the product and commercial presentation.</p> <p>2.2.Priorities, responsibilities, timelines and budgets are recorded and communicated to appropriate colleagues.</p>
3. Determine promotional strategies	<p>3.1.Detailed plans for promotional activities are prepared and recorded according to enterprise guidelines.</p> <p>3.2.Outlined in the promotional plan are objectives, level of exposure to be achieved and available markets.</p> <p>3.3.Strategies take account of feedback from operational staff, time management and scheduling issues, and resource constraints.</p> <p>3.4.Marketing objectives are established based on new and retained business consistent with product and operational business plans.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Organise implementation	4.1. Criteria are established to measure impact and success of promotional activities. 4.2. Adjustments to the promotional strategy product distribution are made promptly to ensure consistency of promotion. 4.3. Required distribution channels are defined and established. 4.4. Product documentation is distributed on time in the specified quantities.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse, research information and develop a marketing plan
- implement and evaluate a marketing plan
- research and determine the best marketing options in order to achieve the organisations objectives
- problem solve to overcome impediments
- manage time
- evaluate performance targets and recommend modifications or improvements
- collect and analyse data to assess marketing alternatives
- make presentations to groups
- plan to manage promotional activities
- manage budgets
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• financial management and budgeting</li> <li>• rural organisations policies and procedures for marketing and promotions</li> <li>• sales and marketing principles and practices</li> <li>• sound knowledge of promotional activities including, trade shows, in-house promotions, advertising, public relations, familiarisations, signage and display</li> <li>• relevant State/Territory legislative requirements with regard to Occupational Health and Safety (OHS) and risk management procedures for management of promotional activities</li> <li>• legal issues that affect marketing activities (trade practices, Fair Trading Acts, Sales of Goods Acts)</li> <li>• industry and marketing knowledge including sales networks and distribution systems, and customer trends and preferences</li> <li>• demographic studies and their application in the development of a marketing plan.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify the marketable features of the product and potential markets</li> <li>• develop a range of marketing alternatives</li> <li>• collect and analyse data to assess alternatives in a marketing plan</li> <li>• evaluate performance targets and recommend modifications or improvements</li> <li>• implement and evaluate a marketing plan</li> <li>• plan to manage promotional activities.</li> </ul>

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Purpose for marketing plan may include:	<ul style="list-style-type: none"> <li>• achieving or not achieving sales targets</li> <li>• increased access to new markets</li> <li>• customer/client feedback</li> <li>• level of public/purchaser awareness</li> <li>• increased recognition rates of products</li> <li>• market penetration.</li> </ul>
Information may include:	<ul style="list-style-type: none"> <li>• sales data</li> <li>• expected revenues</li> <li>• expenditure</li> <li>• attributable costs</li> <li>• market share figures</li> <li>• trends in consumer purchases</li> <li>• demographic data</li> <li>• borrowing costs</li> <li>• transport costs</li> <li>• delivery times.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Business
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCBUS506A Develop and review a business plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing and reviewing a business plan and defines the standard required to: set strategic goals, targets and directions for the enterprise; determine clear and measurable indicators of operational performance; identify and design risk management and mitigation strategies; develop appropriate operational plans; document the business plan; monitor the business plan to identify strengths, weaknesses and areas for improvement.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose role is to set the short, medium or long term goals and targets for the business plan and may relate to marketing and production targets, resource and asset development and management, acquisitions, capital, property improvements, and operational systems.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine scope	<p>1.1.Scope of the business plan and associated systems is determined in consultation with key and specialist personnel.</p> <p>1.2.Accurate information is accessed to inform business plan development.</p> <p>1.3.Trends and seasonal variations are accounted for and incorporated into the business plan.</p> <p>1.4.Strategic goals, targets and directions of the enterprise are accounted for in the development of the business plan.</p> <p>1.5.Legal obligations are understood and complied with in developing the business plan.</p>
2. Prepare business plan	<p>2.1.Operational goals and targets that enhance opportunities to meet the enterprise strategic plan are developed.</p> <p>2.2.Supply chains are identified and incorporated into the business plan.</p> <p>2.3.Risk management needs are identified and addressed within the business plan.</p> <p>2.4.Trial systems are incorporated in order to test budgetary impact and operational potential prior to full implementation of the business plan.</p> <p>2.5.Indicators of operational performance are clear and measurable and allow for realistic analysis of</p>

ELEMENT	PERFORMANCE CRITERIA
	performance.
3. Document and review business plan	3.1.Fiscal and operational systems that enhance performance management and suit enterprise requirements are included. 3.2.Resource considerations are incorporated into the business plan. 3.3.Business plan is accurately documented and clearly communicated to all relevant parties. 3.4.Performance against the business plan is monitored to identify strengths, weaknesses and areas for improvement. 3.5.Recommendations to improve the business plan and associated systems are made as required.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- set realistic goals
- operate manual and/or electronic commercial systems
- consider and evaluate alternatives
- develop and manage supply chains
- design performance criteria, and operational and tactical plans that are incorporated into a business plan
- analyse information and results
- identify and design risk management and mitigation strategies
- identify and design appropriate operational plans
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• budgeting</li> <li>• forecasting</li> <li>• relevant industrial awards and agreements</li> <li>• communication techniques</li> <li>• risk management factors and priorities</li> <li>• indicators of operational performance</li> <li>• the fiscal and operational systems, and the resource considerations, that are relevant to business planning</li> <li>• logical and analytic methods</li> <li>• profit and loss and cash flow systems</li> <li>• working knowledge of environmental, OHS, industrial relations, taxation, corporate and industry legislation as they relate to the enterprise</li> <li>• capital investment analysis.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Competence in developing and reviewing a business plan requires evidence that demonstrates ability to scope the business plan and determine key objectives and targets. The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• set strategic goals, targets and directions for the enterprise</li> <li>• determine clear and measurable indicators of operational performance</li> <li>• identify and design risk management and mitigation</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>strategies</p> <ul style="list-style-type: none"> <li>• develop appropriate operational plans</li> <li>• document the business plan</li> <li>• monitor the business plan to identify strengths, weaknesses and areas for improvement.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Business plans may include:	<ul style="list-style-type: none"> <li>• the goals and targets for the business plan which may be short, medium or long term and may relate to marketing and production targets</li> <li>• resource and asset development and management, acquisitions</li> <li>• capital</li> <li>• property improvements</li> <li>• operational systems.</li> </ul>
Operational goals and targets may include:	<ul style="list-style-type: none"> <li>• link directly to the enterprise strategic plan and also to Occupational Health and Safety (OHS), environment, quality and customer/market satisfaction key result areas.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Business
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCBUS507A Monitor and review business performance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers monitoring and reviewing business performance and defines the standard required: to gather and analyse data relating to enterprise performance; review operational structures to determine effectiveness; identify available resources to assess capacity; develop realistic performance indicators; review enterprise operations against performance indicators; plan to improve business performance by addressing results of review.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role covers the functions associated with monitoring and reviewing the business performance of a rural enterprise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Evaluate commercial performance	<p>1.1.Data relating to enterprise performance is gathered and analysed to identify historical and current performance.</p> <p>1.2.Operational structures are reviewed and analysed to determine the suitability of organisational processes to enterprise objectives.</p> <p>1.3.Enterprise strengths and weaknesses are evaluated against market conditions to determine current and future capacities.</p> <p>1.4.Enterprise objectives are evaluated to identify variations and scope for future development.</p>
2. Allocate and co-ordinate business resources	<p>2.1.Roles and responsibilities of personnel are identified and communicated.</p> <p>2.2.Resource requirements for enterprise are identified and costed using standard financial analysis techniques.</p> <p>2.3.Costs of ensuring sustainability of enterprise operations are calculated and factored into business planning for the enterprise.</p>
3. Identify performance requirements	<p>3.1.Performance indicators are developed and are realistic within available timeframes and resources.</p> <p>3.2.Factors inhibiting performance against objectives are identified and minimised.</p> <p>3.3.Market conditions are monitored and assessed based on relevant data and assumptions that are transferable and justifiable.</p> <p>3.4.Strategies and programs to promote the sustainability</p>



ELEMENT	PERFORMANCE CRITERIA
	of operations are prepared and incorporated into enterprise procedures.
4. Review business performance	<p>4.1. Enterprise operations are regularly reviewed to identify opportunities for improvements in performance.</p> <p>4.2. Impact of natural conditions on enterprise are monitored and anticipated to assess sustainability of resource use.</p> <p>4.3. Costs and estimates are compared with resource allocation.</p> <p>4.4. Operational plans are reviewed to determine schedule of activities.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse market requirements
- match the enterprise to resources
- set enterprise objectives and make financial and economic determinations
- monitor and manage resources (human, physical, environmental)
- evaluate land capability and natural resources (where applicable to the enterprise)
- research, analyse and evaluate enterprise information and requirements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- rates of return for products and/or services

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• financial analysis techniques</li> <li>• structure and operation of small businesses relevant State/Territory Occupational Health and Safety (OHS)</li> <li>• legislative requirements</li> <li>• environmental conditions, positive environmental practices and negative impact minimisation measures</li> <li>• human resource requirements for the enterprise</li> <li>• transport requirements for the enterprise</li> <li>• enterprise/property improvement requirements.</li> <li>• market performance in commodities</li> <li>• statutory marketing requirements</li> <li>• regulations related to exports of Australian agricultural products</li> <li>• animal husbandry.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• gather and analyse data relating to enterprise performance</li> <li>• review operational structures to determine effectiveness</li> <li>• identify available resources to assess capacity</li> <li>• develop realistic performance indicators</li> <li>• review enterprise operations against performance indicators</li> <li>• plan to improve business performance by addressing results of review.</li> </ul>

**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Data that may be gathered for analysis may include::

- sales figures
- expected revenues
- expenditures
- attributable costs
- market share figures
- trends in consumer purchases
- borrowing costs
- transport costs
- delivery times.

The operational structures that may be included for review and analysis include:

- management processes
- reporting arrangements
- decision-making authorities
- financial accounting procedures
- promotional activities
- operational resources.

Factors in market conditions that may be considered include:

- product and service demand
- availability of funds
- cost of financing
- supplier costs
- delivery constraints
- availability of substitutes
- competitors.

Standard financial analysis techniques may include:

- cost benefit analysis
- 'what if?' analyses
- time series and trend
- expenditure and revenue ratios
- break-even analysis

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• accounting standards</li> <li>• cash flow schedules.</li> </ul>
The indicators of business performance may include:	<ul style="list-style-type: none"> <li>• sales targets</li> <li>• revenue estimates</li> <li>• waste reduction</li> <li>• erosion replacement and reversal</li> <li>• environmental sustainability</li> <li>• variable cost ratios</li> <li>• investment returns</li> <li>• diversification.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Business
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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# AHCBUS508A Prepare and monitor budgets and financial reports

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers preparing and monitoring budgets and financial reports and defines the standard required to: prepare a budget using most likely costs and income; develop and monitor budgets in an enterprise; prepare financial reports to meet industry standards.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to enterprise managers who prepare and monitor budgets and financial reports in an agricultural, horticultural or land management enterprise.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare a budget	<p>1.1. Information on past receipts and payments is obtained from previous records, compared to current prices and cost trends, and compiled in a form that enables projections of future receipts and expenditures.</p> <p>1.2. A plan is prepared for a period which allows for expected expenditure and financial reporting requirements, using the 'most likely' prices and costs.</p>
2. Implement and monitor a budget	<p>2.1. Receipts and payments are monitored and reconciled against the original budget.</p> <p>2.2. Variances against the original plan are identified, and the impact on overall profit/loss and cash flow is calculated.</p> <p>2.3. Funds are allocated in accordance with budget objectives and parameters.</p> <p>2.4. Adjustments are made where necessary to respond to unacceptable variations.</p> <p>2.5. Budgets and plans are renegotiated/ restructured where necessary to optimise enterprise performance.</p>
3. Prepare financial report	<p>3.1. Records of financial performance are properly maintained within enterprise systems.</p> <p>3.2. Information with source documents is assembled according to the requirements of the report recipient.</p> <p>3.3. Documentation is forwarded in a timely and efficient manner.</p> <p>3.4. Non-financial objectives are reported in the context of overall enterprise performance.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare a budget
- monitor receipts and payments
- negotiate and restructure budgets
- implement and monitor a budget
- maintain financial records
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- budget formulation
- financial information systems
- business transactions
- banking and reconciliation
- standards for organisational recordkeeping and audit requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Competence in preparing and monitoring budgets and financial reports requires evidence that budgets have been successfully and appropriately developed and monitored in an enterprise, and that financial reports meet industry standards in their content and structure. The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare a budget using most likely costs and income</li> <li>• develop and monitor budgets in an enterprise</li> <li>• prepare financial reports to meet industry standards.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Budgets may include:	<ul style="list-style-type: none"> <li>• recurrent operating or project based funds.</li> </ul>
Financial reports may be:	<ul style="list-style-type: none"> <li>• prepared for Taxation Commissioner</li> <li>• financing agencies</li> <li>• boards of management</li> <li>• committees</li> <li>• councils</li> <li>• executive management.</li> </ul>



### Unit Sector(s)

<b>Unit sector</b>	Business
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCBUS601A Manage capital works

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing the planning and construction of capital works and defines the standard required to: negotiate with contractors and suppliers, and internal and external clients; design a strategy to achieve project outcomes and client requirements; monitor, evaluate and report on progress of works; resolve disagreements and disputes satisfactorily, analyse project outcomes; evaluate project achievements.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to managing a capital works program.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify scope of capital works	<p>1.1. Analysis is undertaken as required and the results are analysed to determine the scope of the proposed capital works.</p> <p>1.2. Planning is initiated in accordance with organisational and other relevant policies and guidelines and the organisation's strategic direction in consultation with stakeholders.</p> <p>1.3. Conceptual and analytical skills are applied to develop a strategy to achieve objectives, outcomes and client requirements for the capital works.</p> <p>1.4. An effective risk management system is developed and applied to ensure objectives can be met within the enterprises allocated budget.</p>
2. Acquire resources	<p>2.1. Resources, equipment and infrastructure are identified, acquired and allocated.</p> <p>2.2. Scope and objectives of works are analysed to determine the tasks to achieve agreed outcomes on time and within budget.</p> <p>2.3. Processes for monitoring, evaluating and reporting performance against objectives are developed and applied.</p> <p>2.4. Roles and responsibilities of team members and stakeholders are identified and agreed.</p>
3. Manage construction activities	<p>3.1. Tasks are implemented in accordance with plans and specifications.</p> <p>3.2. Communication process is established including responsibilities for conflict resolution.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. Progress is monitored to ensure time, performance, cost and quality of works is achieved. 3.4. Proposed variations are investigated and negotiated in consultation with stakeholders.
4. Complete capital works and evaluate and report on activities	4.1. Inspection is undertaken to ensure all outcomes are met. 4.2. Evaluation of completed project is undertaken against agreed objectives and reported to stakeholders.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- negotiate with contractors and suppliers, and internal and external clients
- design a strategy to achieve project outcomes and client requirements
- monitor, evaluate and report on progress of works
- resolve disagreements and disputes satisfactorily
- analyse project outcomes
- evaluate project achievements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- human resource management and policies
- capital works specifications and objectives
- project management systems
- project management tools and techniques

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• cost schedule control systems</li> <li>• enterprise procurement guidelines</li> <li>• enterprise project management policies</li> <li>• risk management techniques</li> <li>• business and commercial issues</li> <li>• basics of contract law</li> <li>• physical resource management.</li> </ul>
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## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• negotiate with contractors and suppliers, and internal and external clients</li> <li>• design a strategy to achieve project outcomes and client requirements</li> <li>• monitor, evaluate and report on progress of works</li> <li>• resolve disagreements and disputes satisfactorily, analyse project outcomes</li> <li>• evaluate project achievements.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The variables for this unit may include:	<ul style="list-style-type: none"> <li>the range of capital works projects undertaken in primary production or similar enterprises.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Business
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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# AHCBUS602A Review land management plans and strategies

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of reviewing and assessing effectiveness of management plans and strategies and defines the standard required to: determine mechanisms and criteria for reviewing management plans and strategies; analyse existing management plans and strategies; modify management plans and strategies; implement modified management plans and strategies.
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## Application of the Unit

<b>Application of the unit</b>	This unit is carried out at a strategic level, with the capacity to devolve responsibilities and tasks if required.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Determine mechanisms and criteria for reviewing management plans and strategies</p>	<p>1.1.Reasons for reviewing management plans and strategies are clearly established.</p> <p>1.2.Analysis of data is carried out to recognise internal policy and procedural influences impacting on management plans and strategies.</p> <p>1.3.Trends are interpreted to identify changes occurring in the management plans and strategies beyond normal variations.</p> <p>1.4.Industry information is regularly reviewed to establish the need for reviewing management plans and strategies within the organisation.</p> <p>1.5.Realistic timeframes for review process are determined.</p>
<p>2. Analyse existing management plans and strategies</p>	<p>2.1.Trends and threats are assessed against the objectives of the management plans and strategies.</p> <p>2.2.Existing management plans and strategies relevant to the issue under consideration are identified and assessed for their effectiveness, relevance, and impact on resource management.</p> <p>2.3.Gaps in management plans and strategies are identified and prioritised.</p> <p>2.4.Management plans and strategies are analysed taking account of the relevant historical, social, cultural, political and economic contexts in which they apply.</p> <p>2.5.Persons contributing to review of management plans and strategies are fully informed regarding relevant enterprise requirements.</p> <p>2.6.Consultation with stakeholders is undertaken to</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>ensure support for implementation of adjusted management plans and strategies.</p> <p>2.7.Problems are clearly identified and resolved taking into consideration the views of stakeholders.</p>
3. Modify management plans and strategies	<p>3.1.Modified management plans and strategies are prepared covering required aspects using clear and concise language in a standardised format.</p> <p>3.2.Modified management plans and strategies developed are consistent with business plan and identified needs.</p> <p>3.3.Feedback from employees on existing management plans and strategies is evaluated.</p> <p>3.4.Staff are instructed and trained in changes to management strategies and monitoring recording processes.</p> <p>3.5.Proposed changes to management plans and strategies are submitted for approval according to enterprise procedures.</p> <p>3.6.Amended management plans and strategies incorporate outcomes of the consultative process, and agreement is sought from stakeholders where appropriate.</p> <p>3.7.Modified management plans and strategies comply with relevant legislation.</p>
4. Implement modified management plans and strategies	<p>4.1.Modifications are made to operational processes to obtain additional key data and/or to monitor changes to conservation strategies and plans.</p> <p>4.2.Education and training is given to employees to ensure effective implementation.</p> <p>4.3.Education and information is provided to stakeholders to promote implementation.</p> <p>4.4.Implementation of modifications is made in a timely manner to reflect the need for changes confirmed through the review process.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit.

**Required skills**

- assess current strategies and plans
- adjust on-going monitoring plan
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- ecosystems including the interrelationship of geophysical, hydrological, biological and meteorological factors
- normal and abnormal life cycles of the biodiversity
- knowledge of the monitoring parameters and techniques utilised in biological monitoring
- threats, both natural and from human activity, to places of natural significance
- international, national and local standards and codes of practice
- monitoring processes for particular types of land
- pollution sources and damage potential
- general understanding of range of cultural issues
- legislation under which enterprise operates
- accepted scientific processes.

**Evidence Guide**

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

<b>EVIDENCE GUIDE</b>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine mechanisms and criteria for reviewing management plans and strategies</li> <li>• analyse existing management plans and strategies</li> <li>• modify management plans and strategies</li> <li>• implement modified management plans and strategies.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

### Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Areas that may be affected as a result of reviewing strategies may include:</p>	<ul style="list-style-type: none"> <li>• protection of places containing natural or cultural resource significance:                             <ul style="list-style-type: none"> <li>• rare species or rock art with fencing</li> <li>• pest management and fauna management.</li> </ul> </li> </ul>

### Unit Sector(s)

<p><b>Unit sector</b></p>	<p>Business</p>
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCBUS603A Develop and review a strategic plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing and reviewing a strategic plan and defines the standard required to: determine the scope and desired business outcomes of the strategic plan; analyse the competitive environment; document performance measures to address all key aspects of enterprise performance; evaluate opportunities and the viability and feasibility of the production, business and marketing plans; document, monitor and review the strategic plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the application of knowledge and skills to determine the scope and desired business outcomes of the strategic plan.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Clarify goals and direction	<p>1.1.Focus, direction and structure of the enterprise are considered and accounted for in the development and review of the strategic plan.</p> <p>1.2.Need for development and change is assessed and identified.</p> <p>1.3.Competitive and collaborative factors are identified.</p> <p>1.4.Legal obligations and estate considerations are identified and considered.</p> <p>1.5.Measurable goals and targets, which are enterprise consistent, are considered and developed.</p>
2. Undertake strategic analysis	<p>2.1.Accurate data is accessed using reliable sources for use in review and development.</p> <p>2.2.Value chain analysis is completed for the enterprise and competitive implications are identified.</p> <p>2.3.Competitive and collaborative opportunities are analysed and assessed.</p> <p>2.4.Expansion opportunities are assessed for viability and feasibility.</p> <p>2.5.Comprehensive analysis of all relevant data and information is undertaken to formulate a viable and realistic strategic plan.</p>
3. Develop and document strategic plan	<p>3.1.Performance measures are clear and address all key aspects of enterprise performance.</p> <p>3.2.The implications of the strategic plan for the enterprise are identified, documented and incorporated.</p> <p>3.3.Value adding activities and opportunities are</p>

ELEMENT	PERFORMANCE CRITERIA
	systematically introduced. 3.4.Strategic plan initiatives and desired outcomes are clearly communicated to all relevant parties. 3.5.Strategic performance is evaluated for gaps and strengths, and appropriate remedial action implemented.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- set goals and directions for a business
- analyse information and results
- consider and evaluate alternatives
- design performance criteria
- manage projects
- think logically and strategically
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the external environment
- working knowledge of market forces
- resource availability and accessibility
- feasible enterprises and opportunities
- business structures
- forecasting
- value adding concepts

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• strategic planning methodologies</li> <li>• data collection and analysis methods</li> <li>• risk management techniques</li> <li>• knowledge of legislation codes and by-laws relevant to the organisations operation and potential expansion</li> <li>• organisational design and change processes.</li> </ul>
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## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the scope and desired business outcomes of the strategic plan</li> <li>• analyse the competitive environment</li> <li>• document performance measures to address all key aspects of enterprise performance</li> <li>• evaluate opportunities and the viability and feasibility of the production, business and marketing plans</li> <li>• document, monitor and review the strategic plan.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Relevant businesses may include:	<ul style="list-style-type: none"> <li>• small, medium and large enterprises.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Business
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCBUS604A Design and manage the enterprise quality management system

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of designing and managing the enterprise quality management system for an agricultural or horticultural enterprise and defines the standard required to: compare enterprise systems and processes with industry benchmarks; identify areas for improvement within the enterprise; document procedures to mitigate risks to quality and address areas for improvement; undertake continuous monitoring of systems and processes.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes required to compare enterprise systems and processes with industry benchmarks, identify areas for improvement.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Compare enterprise systems and processes with industry benchmarks	1.1. Industry benchmarks for best practice are sourced and acquired. 1.2. Production performance is examined using comparative analysis techniques. 1.3. Relevant codes of practice are identified and implemented. 1.4. Business systems are audited against best practice criteria. 1.5. Marketing plans are analysed and Quality Assurance (QA) schemes evaluated. 1.6. Human Resources management practices are audited against best practice criteria. 1.7. Environmental/natural resources parameters are identified and assessed against best practice.
2. Identify areas for improvement within the enterprise	2.1. Measurable targets and performance indicators are established. 2.2. Systematic strategic planning is implemented within the business. 2.3. An ethos for producing quality products is embedded in the enterprise culture. 2.4. Quality standards are defined for products, physical and natural resources, and inputs. 2.5. Targets and performance indicators are established. 2.6. Commitment to knowledge and learning is established.

ELEMENT	PERFORMANCE CRITERIA
	2.7. Effective communication strategies are implemented with staff and other stakeholders.
3. Undertake continuous monitoring of systems and processes	3.1. Mechanisms for gaining feedback information are implemented. 3.2. Performance is reviewed against targets and performance indicators in an appropriate evaluation cycle. 3.3. Reporting and documenting procedures are designed. 3.4. Improvements to systems and processes are implemented.

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• compare enterprise systems and processes with industry benchmarks</li> <li>• identify areas for improvement within the enterprise</li> <li>• undertake continuous monitoring of systems and processes</li> <li>• use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• Quality Management (QM) objectives</li> <li>• leadership strategies to establish QM business culture</li> <li>• analysis skills related to the product market, QA programs</li> <li>• performance measurement</li> <li>• benchmarking strategies for analysing production and financial performance</li> <li>• environmental standards and monitoring processes</li> </ul>

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• codes of practice</li> <li>• strategic planning processes</li> <li>• scanning techniques for strengths, weaknesses, opportunities and threats</li> <li>• techniques and formats for establishing measurable performance targets</li> <li>• recording and reporting systems</li> <li>• human resource management and training practices/systems related to continuous improvement standards.</li> </ul>
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## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• compare enterprise systems and processes with industry benchmarks</li> <li>• identify areas for improvement within the enterprise</li> <li>• document procedures to mitigate risks to quality and address areas for improvement</li> <li>• undertake continuous monitoring of systems and processes.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Quality Assurance programs may include:	<ul style="list-style-type: none"> <li>those designed by industry groups, processors and retailers.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Business
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCBUS605A Manage human resources

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing human resources in an agricultural, horticultural or land management enterprise and describes the standard required to: implement strategies for personal development and appropriate self-management; identify skill requirements and prepare task descriptions and person specifications; arrange employment of workforce members; support career and professional development of workforce members; implement Occupational Health and Safety (OHS) priorities and procedures; review labour productivity.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managing human resources in an enterprise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement strategies for personal development and appropriate self-management	1.1. Own management strengths and weaknesses are regularly audited and addressed through training and family and professional support. 1.2. Priorities in management and operations are determined, and time is allocated to achieve effective outcomes. 1.3. Strategies for managing conflicting demands and pressure are investigated and implemented.
2. Identify skill requirements and prepare task descriptions and person specifications	2.1. Tasks are identified and described along with the range of conditions under which performance may need to occur. 2.2. Most appropriate employment arrangements are determined based on employer and employee needs, responsibilities and rights. 2.3. Person specifications are prepared with due regard to Equal Opportunity Employment Legislation, OHS and work based harassment regulations. 2.4. Opportunities to use government-supported employment and training programs are explored and applied as appropriate.
3. Arrange employment of workforce members	3.1. Options for filling job vacancies are assessed. 3.2. Resources and materials for recruitment are prepared and placed with media and employment agencies as appropriate. 3.3. Criteria for assessing job applicants are determined,



ELEMENT	PERFORMANCE CRITERIA
	<p>and applicant evaluation processes and procedures are prepared.</p> <p>3.4.Applicants are assessed against the criteria and selection decision is finalised.</p> <p>3.5.All applicants are advised appropriately.</p>
4. Manage workforce performance	<p>4.1.Induction programs are designed for each employee consistent with legislative requirements and effective management.</p> <p>4.2.Terms of engagement for consultants and contractors are clarified and established.</p> <p>4.3.Induction programs are conducted for new appointees and appropriate records established.</p> <p>4.4.Work plans are developed with all members of the workforce (family and non-family).</p> <p>4.5.Strategies for communicating with workers are designed and implemented.</p> <p>4.6.Performance management strategies are designed and implemented.</p> <p>4.7.Processes for the termination of non-performing staff are identified and followed as necessary.</p>
5. Support personal development, training and career development of workers	<p>5.1.Strategies to identify skill and knowledge gaps are designed and implemented with workers, and strategies to address these are implemented.</p> <p>5.2.On-job training is provided to optimise worker performance and to ensure safety and fairness in the workplace.</p> <p>5.3.Off-job training requirements are identified and training is sourced and supported as appropriate.</p> <p>5.4.Opportunities for career development are identified and provided and strategies for succession are designed and implemented.</p> <p>5.5.Prior learning, experience and training is recognised and rewarded where appropriate.</p>
6. Manage administrative support	<p>6.1.Processes and procedures for the administration of staff records are designed and implemented.</p> <p>6.2.Administrative procedures and processes to meet legislated requirements are designed and implemented.</p> <p>6.3.Industrial relations are established and monitored, awards adhered to, enterprise agreements and/or contracts of employment negotiated, and disputes</p>

ELEMENT	PERFORMANCE CRITERIA
	and conflicts resolved.
7. Implement OHS priorities and procedures	7.1. Safety policies are developed and communicated within the enterprise. 7.2. Safe work practices are identified/ designed for all aspects of the operation of the enterprise. 7.3. Safe work practices are communicated and enforced among all members of the workforce.
8. Review labour productivity	8.1. Strategies for monitoring labour costs are established. 8.2. Benchmarks for labour productivity are sourced and analysed to review the performance of the enterprise. 8.3. Opportunities to develop more efficient work practices are established by consulting peers, staff and consultants as appropriate. 8.4. Appropriate industrial relations are established and monitored, awards adhered to, enterprise agreements and/or contracts of employment negotiated, and disputes and conflicts resolved. 8.5. Strategies for improving labour productivity are implemented.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- implement strategies for personal development and appropriate self-management
- identify skill requirements and prepare task descriptions and person specifications
- arrange employment of workforce members
- implement OHS priorities and procedures
- review labour productivity
- terminate employment of particular staff as necessary
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>clarification, negotiating solutions and responding to a range of views</p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• personal development</li> <li>• time management</li> <li>• task descriptions and person specifications</li> <li>• equal opportunity and Equal Employment Opportunity legislation</li> <li>• OHS legislation</li> <li>• relevant industrial awards</li> <li>• employee induction programs</li> <li>• interviewing strategies and protocols</li> <li>• works compensation instance and superannuation</li> <li>• contracts of employment</li> <li>• unfair dismissal legislation.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• implement strategies for personal development and appropriate self-management</li> <li>• identify skill requirements and prepare task descriptions and person specifications</li> <li>• arrange employment of workforce members</li> <li>• support career and professional development of</li> </ul>

<b>EVIDENCE GUIDE</b>	
	workforce members <ul style="list-style-type: none"> <li>• implement OHS priorities and procedures</li> <li>• review labour productivity.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Strategies may include:	<ul style="list-style-type: none"> <li>• implementing strategies for personal development and appropriate self-management</li> <li>• identify skill requirements</li> <li>• prepare task descriptions and person specifications</li> <li>• arrange employment of workforce members</li> <li>• implement OHS priorities and procedures</li> <li>• review labour productivity.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Business
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### Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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# AHCBUS606A Develop a monitoring, evaluation and reporting program

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing a monitoring, evaluation and reporting program for an organisation and defines the standard required to: define terms of reference and context; identify key stages and outcomes; assess and define data management requirements; identify the resources needed to undertake the program.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the design and development of Monitoring Evaluation and Reporting (MER) strategy to measure performance and the value of investment decisions.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Define terms of reference & evaluation context	1.1. Identify and clarify the outcomes sought, who will use the information and for what purpose. 1.2. Identify the key stakeholders who will be consulted. 1.3. Select evaluation and monitoring methods which are suitable to the size and significance of the program, and the terms of reference. 1.4. Complete a review of existing evidence and literature relevant to the proposed evaluation. 1.5. Develop an evaluation methodology that supports broader management targets, Natural Resource Management (NRM) standards, targets and outputs.
2. Identify the key stages and outcomes of the program	2.1. Define key stages, milestones and timeframe. 2.2. Communicate with clients and stakeholders the details of the program and delivery timeline for endorsement. 2.3. Identify potential risks which may impact on the proposed program. 2.4. Refine targets and objectives as required.
3. Define reporting and record keeping requirements for data management	3.1. Identify data collection, management and reporting requirements to meet the objectives of the program. 3.2. Identify existing data sets that may be accessed for the program. 3.3. Design data collection protocols so relevant standards and required formats are met. 3.4. Identify how data will be stored to ensure security and appropriate access taking into account required formats.

ELEMENT	PERFORMANCE CRITERIA
	3.5. Identify the information products required taking into account clients and stakeholders needs and use in decision making. 3.6. Produce reports to suit program audience types.
4. Identify the resources needed to implement the program	4.1. Identify the personnel and skills sets required to implement the monitoring and evaluation program. 4.2. Assess the material resources required to undertake the work. 4.3. Determine the cost of the program and develop a budget.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- scoping a project
- data collection and management
- budgeting and identifying program costs
- project management and design
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- program design considerations (cost, equality, technically valid, ethics)
- quantitative and qualitative methods for monitoring and evaluation
- data management.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• define terms of reference and context</li> <li>• identify key stages and outcomes</li> <li>• assess and define data management requirements</li> <li>• identify the resources needed to undertake the program.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Programs may include:	<p>different types of projects under a range of programs including:</p> <ul style="list-style-type: none"> <li>• commonwealth government community programs under the Natural Heritage Trust</li> <li>• rural industry programs</li> <li>• business programs</li> <li>• state government community programs related to the environment.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Business
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCBUS607A Implement a monitoring, evaluation and reporting program

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a monitoring, evaluation and reporting program for an organisation and defines the standard required to: implement a monitoring and evaluation strategy; collect and manage data; analyse complex information; prepare reports and information products.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the implementation of a Monitoring Evaluation and Reporting (MER) strategy to measure progress against targets and reporting responsibilities.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement a monitoring and evaluation strategy	1.1. Collect relevant baseline data. 1.2. Consult with stakeholders and the community. 1.3. Brief colleagues, staff and contractors who will be involved in implementing the program on the monitoring and evaluation methods selected and justification. 1.4. Implement chosen monitoring and evaluation methods in accordance with defined strategy. 1.5. Ensure standard procedures and recording templates are available for use. 1.6. Ensure program timelines are communicated and monitored. 1.7. Monitor program expenditure and compare with budget.
2. Collect and analyse data	2.1. Ensure data and information is collected following relevant standards and format. 2.2. Assess if further data or information is needed to answer key evaluation questions and adjust design as required. 2.3. Ensure data is appropriately stored and can be accessed as needed. 2.4. Facilitate colleagues and contractors involved in the monitoring and evaluation process. 2.5. Evaluate the effectiveness, efficiency and appropriateness of investment and project priorities as required by the evaluation design.
3. Prepare reports and	3.1. Report against milestones and outputs.

ELEMENT	PERFORMANCE CRITERIA
information products	3.2. Produce appropriate information products to keep stakeholders informed and engaged. 3.3. Communicate findings and activities to stakeholder groups according to program schedule. 3.4. Negotiate changes to projects and programs with stakeholders. 3.5. Apply findings to improve the delivery and alignment of projects and policy decisions with organisational targets and mission. 3.6. Ensure the style of reporting reflects the audience and how the information is to be used.
4. Review the monitoring and evaluation process	4.1. Foster a culture of self-evaluation and learning through encouraging ongoing participation, consultation and communication with stakeholders. 4.2. Review and adapt ongoing evaluation strategy and processes and provide feedback on the implementation and the evaluation design.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- application of monitoring and evaluation methods to ensure integrity and validity
- data collection and management
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- quantitative and qualitative methods for monitoring and evaluation

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• data management processes and systems</li> <li>• policy and program management processes</li> <li>• adaptive management and review cycles.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• implement a monitoring and evaluation strategy</li> <li>• collect and manage data</li> <li>• analyse complex information</li> <li>• prepare reports and information products</li> <li>• review the evaluation process.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Monitoring and evaluating responsibilities may include:</p>	<ul style="list-style-type: none"> <li>• the range of targets and reporting responsibilities of any monitoring evaluation</li> </ul>

<b>RANGE STATEMENT</b>	
	and reporting program.

**Unit Sector(s)**

<b>Unit sector</b>	Business
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCBUS608A Manage risk

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the performance outcomes, skills and knowledge required to manage risks in a range of contexts across the organisation or for a specific business unit or area. The unit has been designed to be consistent with AS/NZS 4360:2004 Risk management. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.
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### Application of the Unit

<b>Application of the unit</b>	This unit addresses the management of the risk across the organisation or within a business unit or area. It does not assume any given industry setting.
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### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish risk context	1.1. Review organisational processes, procedures and requirements for undertaking risk management. 1.2. Determine scope for risk management process. 1.3. Identify internal and external stakeholders and their issues. 1.4. Review political, economic, social, legal, technological and policy context. 1.5. Review strengths and weaknesses of existing arrangements 1.6. Document critical success factors, goals or objectives for area included in scope. 1.7. Obtain support for risk management activities. 1.8. Communicate with relevant parties about the risk management process and invite participation.
2. Identify risks	2.1. Invite relevant parties to assist in the identification of risks. 2.2. Research risks that may apply to scope. 2.3. Use tools and techniques to generate a list of risks that apply to the scope, in consultation with relevant parties.
3. Analyse risks	3.1. Assess likelihood of risks occurring. 3.2. Assess impact or consequence if risks occur. 3.3. Evaluate and prioritise risks for treatment.
4. Select and implement treatments	4.1. Determine and select most appropriate options for treating risks. 4.2. Develop an action plan for implementing risk

ELEMENT	PERFORMANCE CRITERIA
	treatment. 4.3. Communicate risk management processes to relevant parties. 4.4. Ensure all documentation is in order and appropriately stored. 4.5. Implement and monitor action plan. 4.6. Evaluate risk management process.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication and literacy skills to consult and negotiate, to prepare communications about risk management, and to encourage stakeholder involvement
- organisational and management skills to plan and implement risk management processes
- problem-solving and innovation skills to find practical ways to manage identified risks
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- AS/NZS 4360:2004 Risk management.
- legislation, codes of practice and national standards, for example:
  - duty of care
  - company law
  - contract law
  - environmental law
  - freedom of information
  - industrial relations law

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• privacy and confidentiality</li> <li>• legislation relevant to organisation's operations</li> <li>• legislation relevant to operation as a business entity</li> <li>• organisational policies and procedures, including:                             <ul style="list-style-type: none"> <li>• risk management strategy</li> <li>• policies and procedures for risk management</li> </ul> </li> <li>• overall operations of organisation</li> <li>• reasonable adjustment in the workplace for people with a disability</li> <li>• types of available insurance and insurance providers.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• risk management plan which includes a detailed stakeholder analysis, explanation of the risk context, critical success factors, identified and analysed risks, and treatments for prioritised risks</li> <li>• details of monitoring arrangements for risk management plan and an evaluation of the risk management plan's efficacy in treating risks</li> <li>• knowledge of relevant legislation, codes of practice and national standards.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Risks may include those relating to:	<ul style="list-style-type: none"> <li>• commercial relationships</li> <li>• economic circumstances and scenarios</li> <li>• human behaviour</li> <li>• individual activities</li> <li>• legislation</li> <li>• management activities and controls</li> <li>• natural events</li> <li>• political circumstances</li> <li>• technology.</li> </ul>
Scope may apply to:	<ul style="list-style-type: none"> <li>• given project</li> <li>• specific business unit or area</li> <li>• specific functional such as:                             <ul style="list-style-type: none"> <li>• financial management</li> <li>• Occupational Health and Safety (OHS) governance</li> </ul> </li> <li>• external environment</li> <li>• internal environment</li> <li>• whole organisation.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Business
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCCCF401A Prepare project acquittal

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the preparation of a project acquittal statement and defines the standard required to: collate budgeted resources and inputs to project from planning document; access accounts and develop a list of transactions related to the project; prepare the project acquittal for reporting and auditing; arrange for an audit of the acquittal, the final report and the full list of transactions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to community program managers who have to prepare project acquittal statements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish acquittal records	1.1. Records of materials, equipment and labour that are provided by group for project are established prior to project commencement to obtain information for acquittal report.
2. Identify transactions and reports relating to project	2.1. Accounting transactions and reports incorporated in group accounts and relating to project are identified for use in acquittal. 2.2. Funds provided by program and the group are identified to develop separate statements of program and group contributions. 2.3. In kind donations of materials, loan of equipment and donation of labour are identified and financial values are estimated for use in acquittal statements.
3. Prepare acquittal in required format	3.1. Acquittal is prepared from accounting and other information to program and contract requirements. 3.2. Program funds and expenditure are reported to show use on project and group operations, separately from group contributions to project. 3.3. Group contributions to project are reported to program and contract requirements. 3.4. Report is consolidated for approval and auditing.
4. Arrange audit of acquittal and transaction	4.1. Audit of report is arranged to program and contract requirements. 4.2. Approval of report is arranged to group, program and contract requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- program objectives and guidelines
- group procedures and recording, including group management and committee procedures
- project background, processes and outcomes
- agency procedures
- basic financial reporting format and procedures
- knowledge of capability of word processing and spreadsheet packages.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy



<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• collate budgeted resources and inputs to project from planning document</li> <li>• access accounts and develop a list of transactions related to the project</li> <li>• prepare the project acquittal for reporting and auditing</li> <li>• arrange for an audit of the acquittal, the final report and the full list of transactions.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Acquittal may include:	<ul style="list-style-type: none"> <li>• Commonwealth Government community programs under the Natural Heritage Trust</li> <li>• Rural Industry Programs</li> <li>• Business Programs and State Government community programs related to the environment.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCCCF402A Report on project

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers preparation of reporting on projects and defines the standard required to: collate the documentation for the background and aims, budget, timelines, and resources allocated for the project; prepare a report template that complies with organisational and funding organisations requirements; write a project report to draft stage; implement consultation processes to obtain information and obtain consensus on report; respond to feedback on draft report and finalise the version to be published and distributed.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who prepare a report on a community project such as Landcare or similar for future group and program reference.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify project processes and outcomes	<p>1.1.Scope of report and target audience is identified in contract, program guidelines, agency procedures, and group committee decisions.</p> <p>1.2.Background to project is researched from available records.</p> <p>1.3.Information is collated from project records, monitoring records, and information provided by group and other stakeholders.</p>
2. Prepare report	<p>2.1.Framework of report is prepared to required scope, target audience and guidelines.</p> <p>2.2.Project report is prepared from researched information to contract, agency and group requirements.</p> <p>2.3.Conclusions are prepared in consultation with informed personnel.</p> <p>2.4.Draft report is circulated to identify stakeholders for comment according to group requirements and agency procedures.</p>
3. Revise report for distribution	<p>3.1.Draft report is revised to address comments from consultation.</p> <p>3.2.Any unresolved issues are submitted to group committee for decisions.</p> <p>3.3.Approval is obtained for revised report in accordance with contract, group and agency requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research through records and oral reports
- collate qualitative and quantitative information
- develop report framework to suit requirements
- implement consultation processes to obtain information and obtain consensus on report
- use word processing and spreadsheet packages
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- program objectives and guidelines
- group procedures and recording, including group management and committee procedures
- monitoring approaches
- project background, processes and outcomes
- agency procedures
- knowledge of capability of word processing packages.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• collate the documentation for the background and aims, budget, timelines, and resources allocated for the project</li> <li>• prepare a report template that complies with organisational and funding organisations requirements</li> <li>• write a project report to draft stage</li> <li>• implement consultation processes to obtain information and obtain consensus on report</li> <li>• respond to feedback on draft report and finalise the version to be published and distributed.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Project reports may include:	<ul style="list-style-type: none"> <li>• incorporating records monitoring conditions before, during and after the project, or monitoring covering factors considered important in terms of the program and/or project. They may be documented as numeric data, samples, photographs, and descriptions, and may report on issues such as biodiversity, state of soil, water and/or air, health and behaviour of living things, or comments and</li> </ul>

**RANGE STATEMENT**

	observations by clients.
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**Unit Sector(s)**

<b>Unit sector</b>	Community coordination and facilitation
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCCCF403A Obtain and manage sponsorship

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers obtaining and managing sponsorship and defines the standard required to: identify sponsorship opportunities through mutual benefits to organisations; screen potential sponsors in terms of cultural protocols and community sensibilities; negotiate an appropriate sponsorship arrangement to support a project; document a sponsorship arrangement, detailing all arrangements and responsibilities; meet legal, financial, cultural, ethical, equity and other requirements for the duration of the sponsorship arrangement; review a sponsorship arrangement and plan its renegotiation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who plan and obtain sponsorship for a community program such as Landcare.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify sponsorship opportunities	<p>1.1.Potential sponsors are targeted on the basis that they would be appropriate partners to the program.</p> <p>1.2.A rationale for sponsoring the program and/or activities is developed which achieves a balance between the sponsors' requirements and the program goals, and benefits to the sponsor and program.</p> <p>1.3.Feasibility of sponsorship opportunities is confirmed by research and analysis.</p> <p>1.4.Mutual benefits are itemised and list of targets is developed.</p> <p>1.5.Community, cultural and equity requirements in the group operations are considered in developing list of targets.</p>
2. Prepare and deliver sponsorship pitch	<p>2.1.Contact with potential sponsor is made in accordance with program and enterprise procedures and guidelines.</p> <p>2.2.The best interests of the program, group and agency are maintained in sponsorship approach.</p> <p>2.3.Presentation support materials are prepared with appropriate accuracy, style and degree of information.</p> <p>2.4.Presentation and approach demonstrates an understanding of and respect for sponsors' business, and shows how sponsorship will be mutually beneficial.</p> <p>2.5.Outcomes of any prior sponsorship arrangements are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>appropriately included in pitch and negotiations.</p> <p>2.6.Presentation is followed up in a professional manner that preserves the integrity of the negotiations.</p>
3. Successfully negotiate sponsorship deal	<p>3.1.Terms are agreed which satisfy both the sponsor and the program and the associated agency where appropriate.</p> <p>3.2.Nature of sponsorship and of the benefits to the sponsor are expressed in explicit terms and understood by both parties.</p> <p>3.3.Commitments under the sponsorship arrangements are clearly identified to assist maintenance of relationship.</p>
4. Maintain sponsorship deal	<p>4.1.Legal, financial, cultural, ethical, equity and other requirements are met throughout the sponsorship period.</p> <p>4.2.Commitments under the sponsorship arrangements are met promptly and benefits are delivered to the sponsor as agreed.</p> <p>4.3.Role of sponsor in supporting program/project is recognised in literature, reports and on-site as appropriate.</p> <p>4.4.Timing for the start of discussions to extend or complete the sponsorship is identified.</p>

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
<p>This section describes the skills and knowledge required for this unit.</p>
<p><b>Required skills</b></p>
<ul style="list-style-type: none"> <li>• conduct effective presentations</li> <li>• undertake face-to-face and written marketing techniques</li> <li>• develop presentation support materials</li> <li>• negotiate and close contracts</li> <li>• coordinate others to develop presentation</li> <li>• coordinate others to deliver commitments</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly</li> </ul>

**REQUIRED SKILLS AND KNOWLEDGE**

- information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
  - use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
  - use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- sources of information about the community and organisations, businesses, groups and individuals
- strategy, goals, ethics, program and activities of community group and/or agency
- effective marketing techniques
- acts, policies and guidelines governing programs and activities
- relevant Occupational Health and Safety (OHS) and public safety requirements
- sources of legal and financial advice
- understanding of operation of contracts and agreements
- approach to other people that creates professional image.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify sponsorship opportunities through mutual benefits to organisations
- screen potential sponsors in terms of cultural protocols and community sensibilities

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• negotiate an appropriate sponsorship arrangement to support a project</li> <li>• document a sponsorship arrangement, detailing all arrangements and responsibilities</li> <li>• meet legal, financial, cultural, ethical, equity and other requirements for the duration of the sponsorship arrangement</li> <li>• review a sponsorship arrangement and plan its renegotiation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Sponsorship may include:	<ul style="list-style-type: none"> <li>• arrangements covering cash or kind and may be offered in support of a particular event, activity or project, or towards the general running costs of the community group, program or park/reserve.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCCCF404A Contribute to association governance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved with contributing to association governance and defines the standard required to: complete a checklist for association governance covering meeting procedure, finances, staff management, legislative compliance, ethical conduct and community consultation; conduct a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis for the associations operations; participate in board/committee meetings.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who contribute to association governance are an effective committee member of an incorporated association.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor association activities	<p>1.1. Activities undertaken by group are monitored to ensure:</p> <p>1.1.1. association objectives are being adhered to</p> <p>1.1.2. resolutions of committee and members meetings are being followed</p> <p>1.1.3. finances are properly managed</p> <p>1.1.4. any employees are managed and volunteers are appropriately supervised</p> <p>1.1.5. legislative requirements are being met</p> <p>1.1.6. ethical requirements are being met</p> <p>1.1.7. group operations and approaches are sensitive to and inclusive of community and sections within the community.</p> <p>1.2. Variations from expected standards are noted, and where required, immediate or routine action taken.</p>
2. Identify opportunities, threats and risks	<p>2.1. Opportunities for the group to commence new projects or activities are identified and submitted to the committee.</p> <p>2.2. Threats to the ongoing operation of the group are identified and raised at committee meetings.</p> <p>2.3. Risks associated with the group's activities and ongoing operation is identified.</p> <p>2.4. Risks and proposed risk control measures are submitted to the committee.</p>
3. Participate in board/committee meeting	<p>3.1. Committee agendas are reviewed prior to meetings.</p> <p>3.2. Agenda items and reports to committee are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>submitted as required.</p> <p>3.3. Committee meetings are attended and issues discussed as placed on the agenda or as modified.</p> <p>3.4. Good communications are established and maintained with other committee members to ensure competent management of group affairs.</p> <p>3.5. Personal observations and concerns including opportunities, threats and risks are raised at committee meetings.</p> <p>3.6. Actions are taken on personal commitments made at committee meeting and reported to the committee.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare brief verbal and written reports
- contribute to conflict resolution
- requires knowledge of relevant legislation, basic financial statements, committee meeting and members meeting procedures, objectives and rules of association and community goals and plans, and diversity in community and range of views and goals
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- requirements of relevant legislation
- interpretation of basic financial statements



**REQUIRED SKILLS AND KNOWLEDGE**

- requirements of programs
- committee meeting and members meeting procedures
- objectives and rules of association
- basic management practice including practices in employing people
- community goals and plans
- diversity in community and range of views and goals
- Occupational Health and Safety (OHS) and corporate governance legislation and codes of practice
- public safety requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- complete a checklist for association governance covering meeting procedure, finances, staff management, legislative compliance, ethical conduct and community consultation
- conduct a SWOT analysis for the associations operations
- participate in board/committee meetings.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Areas of employee supervision may include:

- direct supervision and appropriateness
- recruitment of paid employees and volunteers
- appraisal of paid employees including any disciplinary actions
- employment conditions including remuneration and benefits
- training provided
- relationships and cooperation between employees
- employees and volunteers
- committee.

## Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCCCF405A Develop community networks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing community networks and defines the standard required to: identify groups in the community and key contacts within the community; investigate equity requirements and cultural protocols for dealing with community groups; establish networks of common interests through individual contacts and contacts with other groups; promote land management activities and issues to community groups through networking; document networks and community contacts to provide a consultation mechanism for land management programs.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who develop relationships that support the establishment and development of the group and provide support from within the community for the group.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Make contacts within community	<p>1.1. Connections are made through business, social and personal contacts and programs to the community.</p> <p>1.2. Connections are identified for the potential in regard to some group program or activity.</p> <p>1.3. Plans for developing contacts and relationships are formulated in conjunction with relevant group members and leaders.</p> <p>1.4. Equity requirements and cultural backgrounds of people being contacted are respected.</p> <p>1.5. Appropriate cultural protocols are observed to establish positive contacts.</p> <p>1.6. Appropriate mechanisms are followed to establish contacts with Indigenous communities.</p> <p>1.7. Community requests for information on or participation in programs or activities are addressed to promote the group(s) and program.</p>
2. Form and create links	<p>2.1. Contact is developed through promotional activities, programs and activities of mutual interest to community members and groups.</p> <p>2.2. Activities, programs and personal contact are structured to allow trust and understanding to develop within group and community.</p> <p>2.3. Working relationships are developed in areas of common interest and goals to bring benefit to all</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>parties.</p> <p>2.4.Feedback on programs and community group activities is sought from participants and community, and used to modify their application.</p> <p>2.5.Appropriate records are developed to maintain ongoing contracts and relationships.</p>
3. Build networks	<p>3.1.Individual contacts and contacts with other groups are used to establish networks of common interest.</p> <p>3.2.Programs and activities are reviewed to incorporate networks and the network resources in areas of common interest and goals.</p> <p>3.3.Progress in establishing links and networks is evaluated and opportunities for further action are identified.</p> <p>3.4.Relationships and networks are managed to ensure compliance with cultural protocols and with agency/enterprise procedures and guidelines.</p>
4. Report on community liaison	<p>4.1.Community liaison activities are evaluated in terms of their costs, benefits to the group(s) program and contribution to the community.</p> <p>4.2.Reports on community liaison activities are prepared and submitted in line with group and program/agency guidelines.</p>

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• identify community cultures and goals</li> <li>• use manual or electronic index systems</li> <li>• give presentations to diverse groups of people</li> <li>• handle contentious issues raised by others in conjunction with strong views</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as</li> </ul>

**REQUIRED SKILLS AND KNOWLEDGE**

specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- community structures, organisations and cultures
- relevant government community action program(s)
- process of delivery of program(s)
- broad Australian and regional history
- current social and environmental affairs for local community and wider region
- rural industry operations and structures (for rural programs)
- relevant legislation
- affirmative action and anti-discrimination policies
- occupational health and safety requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify groups in the community and key contacts within the community
- investigate equity requirements and cultural protocols for dealing with community groups
- establish networks of common interests through individual contacts and contacts with other groups

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• promote land management activities and issues to community groups through networking</li> <li>• document networks and community contacts to provide a consultation mechanism for land management programs.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Networks may include:	<ul style="list-style-type: none"> <li>• the range of business and community networks associated with agriculture, horticulture and land management.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCCCF406A Facilitate ongoing group development

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers facilitating ongoing group development and defines the standard required to: maintain contacts with group leaders to facilitate community networking; share ideas between groups to foster initiative and innovation; maintain contacts with community groups; identify sources of conflict and issues that detract from the effective and equitable functioning of a group; resolve group conflict and refer group issues for specialist advice if required; use a range of facilitation strategies to work with groups.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who support a community Landcare group or similar, in its ongoing management and resolution of issues.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain contact on group activities	<p>1.1. Contact is maintained with group leaders/officers on current and proposed group activities and projects.</p> <p>1.2. Advice on group operation and opportunities is provided when sought by leaders/officers.</p> <p>1.3. Role of facilitator/coordinator in group operations is clearly defined with the management committee to avoid misunderstanding.</p>
2. Provide fresh input into group	<p>2.1. Relevant new initiatives and ideas from other groups and program areas are identified for input into/suggestion to the group.</p> <p>2.2. New initiatives and ideas are systematically sought from appropriate sources.</p> <p>2.3. Any suggestions are developed before submission to include local group and program context.</p>
3. Maintain network of contacts	<p>3.1. Contacts with members of the group and community are maintained to provide interchange of ideas and information.</p>
4. Facilitate resolution of group operating difficulties	<p>4.1. Group issues with potential to hinder group operations are identified before damage has occurred.</p> <p>4.2. External threats are assessed to facilitate negotiation of solutions between the group and external parties.</p> <p>4.3. Internal operating difficulties are resolved where possible through facilitation and use of relevant expert advice.</p> <p>4.4. Groups requiring major restructuring are identified</p>

ELEMENT	PERFORMANCE CRITERIA
	to implement change management processes.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop network of contacts in groups and communities
- resolve conflict
- negotiate within the group
- negotiate on behalf of the group
- implement change management processes
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- group development and facilitation techniques
- basic financial statements and procedures
- program guidelines
- general understanding of natural resource management, sciences and technologies associated with program
- legislative requirements for group operations, programs and projects
- Strengths, Weaknesses, Opportunities and Threats (SWOT) analyses
- risk analysis
- committee and group procedures
- legislative requirements associated with operation of incorporated groups
- community and sector cultures and perspectives.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• maintain contacts with group leaders to facilitate community networking</li> <li>• share ideas between groups to foster initiative and innovation</li> <li>• maintain contacts with community groups</li> <li>• identify sources of conflict and issues that detract from the effective and equitable functioning of a group</li> <li>• resolve group conflict and refer group issues for specialist advice if required</li> <li>• use a range of facilitation strategies to work with groups.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Strategies and approaches may include:	<ul style="list-style-type: none"> <li>• the development of relationships with committee and individual members</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• negotiation</li> <li>• facilitation of meetings</li> <li>• provision of information</li> <li>• situation analysis</li> <li>• clear problem solving approaches.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Community coordination and facilitation
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCCCF407A Obtain resources from community and groups

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers obtaining resources from community and groups and defines the standard required to: develop a list of resources required to carry out a project or function; identify resources that may be able to be donated, purchased or borrowed from community; apply for access to resources from community with details of proposed use and justification; negotiate use of resources in a way that maintains community support; document the use of resources as part of project management and to allow acknowledgement of community contribution.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who source resources from within the community and group to support Landcare or similar group activities and projects.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify potential resources	<p>1.1.Potential resources in the group, community and agency are identified to match project requirements as documented in plan.</p> <p>1.2.Likely conditions under which alternative resources can be sourced are identified to determine suitable sources and conditions of sourcing.</p>
2. Seek commitment of resources	<p>2.1.Owners of resources are approached to discuss resource availability and conditions of availability.</p> <p>2.2.Costs of alternative arrangements are reviewed in context of the project or group budget to determine which arrangements can be accepted or renegotiated.</p> <p>2.3.Arrangements are reached with resource owners on the use of resources within overall project plan and budget.</p> <p>2.4.Approach and relationship with resource owners caters for range of viewpoints to ensure a positive image of program is maintained.</p>
3. Coordinate use of resource	<p>3.1.Provision of resources is coordinated to suit project and project plan and any changes in timing and availability of complementary resources.</p> <p>3.2.Use of resources is documented to program and project requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify potential resources
- seek commitment of resources and coordinate use of resources
- negotiate and complete agreements
- apply networking strategies
- develop alternative plans
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- project resource requirements
- task analysis, including hazard and risk analysis
- occupational health and safety and public safety obligations
- network of resources in the community
- program guidelines
- project contract
- group liability
- basic skills analysis
- licensing requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment



<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop a list of resources required to carry out a project or function</li> <li>• identify resources that may be able to be donated, purchased or borrowed from community</li> <li>• apply for access to resources from community with details of proposed use and justification</li> <li>• negotiate use of resources in a way that maintains community support</li> <li>• document the use of resources as part of project management and to allow acknowledgement of community contribution.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Resources may include:	<ul style="list-style-type: none"> <li>• the range of resources that can be sourced from the community or group covering paid, trainee and volunteer labour</li> <li>• labour and equipment from clients</li> <li>• equipment borrowed, hired and bought</li> <li>• materials bought, donated and discounted</li> <li>• Occupational Health and Safety (OHS) equipment</li> <li>• may include the discussion and negotiation of what volunteers will do and with whom.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCCCF408A Promote community programs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the promotion of community programs and defines the standard required to: identify the potential of a program to appeal to sections of community or industry based on benefits and costs; identify communication channels appropriate for promotion; present in a range of direct promotional situations; develop promotional materials including a range of audio/written/graphic materials; evaluate the promotion program based on stakeholder feedback and effectiveness; respond to queries and enquiries generated by the promotion program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who promote community Landcare programs or similar, which raise public interest and commitment and attract users, clients or customers of the program and group services.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify target markets	<p>1.1.Potential of program to appeal to sections of community or industry is identified in terms of benefits and costs.</p> <p>1.2.Sectors of local community and industry that are potential users/customers/audiences of program are identified.</p> <p>1.3.A plan to promote program and/or local projects and/or group activities is developed in conjunction with other communication activities.</p>
2. Develop promotional materials	<p>2.1.Range of promotional channels to reach target sectors is identified.</p> <p>2.2.Promotional materials to suit promotional channels and target sectors are sourced or developed.</p> <p>2.3.Impact of promotional materials is tested with group or community members.</p> <p>2.4.Specialist marketing support is obtained to address specific marketing issues within budget, and program and agency guidelines.</p>
3. Promote program to potential users	<p>3.1.Potential users of program and services are approached through promotional channels and directly.</p> <p>3.2.Impact of promotional activities is assessed to determine any changes required.</p> <p>3.3.Promotional plan and activities are adjusted to</p>

ELEMENT	PERFORMANCE CRITERIA
	achieve an improved impact.
4. Obtain commitment to use program services where appropriate	4.1. Proposals for delivery of program services are presented to interested potential users in terms of benefits, costs and other factors. 4.2. Issues raised by potential users are addressed to overcome objections. 4.3. Commitments to use program services or support program are obtained to agency or program guidelines.
5. Respond to enquiries	5.1. Enquiries by members of community, industry and program are addressed in terms of good customer service and to program and agency guidelines. 5.2. Records are kept of contacts, enquiries and presentations for reporting and follow-up. 5.3. Enquiries and presentations are followed up to obtain commitments to program services and objectives.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop a promotional plan
- develop a range of written/graphic materials
- present in a range of direct promotional situations
- present a specific proposal
- overcome objections
- maintain office records, especially of programs, enquiries, contacts and presentations
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data

**REQUIRED SKILLS AND KNOWLEDGE**

- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- program services, objectives, goals and guidelines
- group goals and plans
- project and other activities
- basic marketing principles
- local advertising channels
- local or regional community and industries.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify the potential of a program to appeal to sections of community or industry based on benefits and costs
- identify communication channels appropriate for promotion
- present in a range of direct promotional situations
- develop promotional materials including a range of audio/written/graphic materials
- evaluate the promotion program based on stakeholder feedback and effectiveness
- respond to queries and enquiries generated by the promotion program.

**Context of and specific resources for**

Competency requires the application of work practices

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Programs may include:	<ul style="list-style-type: none"> <li>• Commonwealth Government community programs under the Natural Heritage Trust</li> <li>• Rural Industry programs</li> <li>• business programs</li> <li>• State Government community programs related to the environment.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCCCF409A Participate in assessments of project submissions

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of participating in the submission assessment process at regional and State/Territory levels for public-funded community programs. It requires the ability to participate in committees, appropriately question and discuss cultural and social issues, rank competing projects, and maintain probity of the assessment. Participating in assessments of project submissions requires knowledge of rural industries and/or natural resource management principles, scope of programs, regional areas, community and issues in areas of communities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who participate in the submission assessment process at regional and State/Territory levels for public-funded community programs.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Research the applicable program guidelines	<p>1.1. Policy and program information required to participate in the assessment of projects within a region or State/Territory is obtained and reviewed.</p> <p>1.2. Own role and responsibilities are identified within applicable program guidelines and legislative requirements.</p> <p>1.3. Own knowledge of policy and program information and legislative requirements is built through involvement in development activities to achieve an understanding of the program aims and goals.</p> <p>1.4. Changes in policy and program information are identified for impact on assessment processes.</p>
2. Review the submissions	<p>2.1. Project submissions are reviewed prior to the assessment committee meeting in the context of policy and program information.</p> <p>2.2. Personal review and ranking of projects is completed in preparation for the assessment committee meeting, in accordance with program guidelines.</p>
3. Participate in committee assessment process	<p>3.1. Projects which meet program guidelines are identified by the committee for further assessment.</p> <p>3.2. Submissions seeking further funding for existing projects are identified and reviewed under separate criteria according to program guidelines.</p> <p>3.3. Assessments of projects, which have been processed</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>through a local or regional assessment panel, are given a balanced consideration to manage the time taken on the assessment, and to ensure equity and fairness in the process.</p> <p>3.4. Projects are reviewed and ranked by the committee in terms of the priorities and other factors defined in the program guidelines.</p> <p>3.5. Active listening approaches and appropriate questioning techniques are used to develop an understanding and a team approach across a diverse committee/panel.</p> <p>3.6. Projects are selected for recommendation in accordance with program guidelines and available funds.</p>
4. Maintain probity of assessment	<p>4.1. Confidentiality requirements of the assessment process are maintained.</p> <p>4.2. Ethical and legislative standards and procedures of the assessment process are followed.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- participate in committees
- understand team development
- rank competing projects
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- rural industries and/or natural resource management principles
- scope of programs
- regional areas, community and issues in areas of communities
- wide understanding of legislative and program guidelines at appropriate local, regional and State levels.
- project assessment processes
- program probity requirements
- awareness of diversity in community
- relevant legislation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- use monitoring techniques suitable for the environment and species
- install and use monitoring equipment
- develop systems to capture, maintain and analyse data
- make observations and record data on species diversity and abundance
- review data to ensure the monitoring process is correctly targeted and implemented.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Submissions may include:

- a community group or a number of community groups. Submissions may be for a local area or for a wider region, and may incorporate funding from more than one program.

**Unit Sector(s)****Unit sector**

Community coordination and facilitation

**Co-requisite units****Co-requisite units**


**Competency field****Competency field**

# AHCCCF410A Support individuals in resource management change processes

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting individuals in resource management change processes and defines the standard required to: assess the resource management change and its potential impact on individuals; predict issues that are likely to arise from change, based on community feedback and statistical information; provide information and support to individuals and families facing resource management changes; review the methodology and effectiveness of support to improve support services for resource management change.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to persons who provide support for a person or business to change their management of resources within the context of the program.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify change processes	<p>1.1.Changes that will impact individuals' and families' business operations and private lives are identified to assess their impact.</p> <p>1.2.Impacts are assessed in terms of the degree of impact on businesses and personal lives.</p>
2. Conceptualise impact of changes	<p>2.1.Discussions are initiated with individuals and families to identify their life-style, values and views on resource management and program issues to identify potential for change.</p> <p>2.2.Potential difficulties individuals and families may have in implementing change in their business and private lives are identified.</p> <p>2.3.Appropriate information and support approaches that address potential difficulties and are inclusive of cultural and equity are identified as part of change process.</p>
3. Implement support techniques	<p>3.1.Information is obtained to support individuals and families facing change.</p> <p>3.2.Information is provided in appropriate format and context to support individuals and families considering the change.</p> <p>3.3.Individuals and families are given positive encouragement and support as they consider and implement change.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4.Support approach and information given is provided in a culturally sensitive and equitable manner. 3.5.People are invited to seek additional assistance and provided with avenues of assistance where this will assist in their management of change.
4. Review support outcomes	4.1.Results of support provided are progressively assessed in terms of resources spent, change achieved and potential for further change. 4.2.Support approach is modified in light of results.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify change processes
- conceptualise impact of changes
- conduct informal discussions/interviews
- develop networks
- implement personal support techniques and processes
- review support outcomes
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant rural business practices and best practice within local context
- local natural resource management issues
- community lifestyle and practices, some with impact on natural resources



**REQUIRED SKILLS AND KNOWLEDGE**

- relevant approaches to different cultures
- change management theory and practices
- action learning approaches
- networks of assistance.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess the resource management change and its potential impact on individuals
- predict issues that are likely to arise from change, based on community feedback and statistical information
- provide information and support to individuals and families facing resource management changes
- review the methodology and effectiveness of support to improve support services for resource management change.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Change processes may include:	<ul style="list-style-type: none"> <li>a range of contexts covering business practice to conserve natural resources in both personal living and organisational activities.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCCCF411A Develop approaches to include cultural and human diversity

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing approaches to include cultural and human diversity and defines the standard required to: identify the range of cultural and social groups in a land management area; determine the linkages and potential impacts between natural resource issues and cultures; negotiate and maintain cultural protocols for dealing with land management issues; develop working relationships with representatives of cultural groups; and facilitate the involvement of culturally diverse groups in community issues related to land management.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes identifying and accessing culturally diverse groups in the community so that they are included in program development and implementation. A high level of cultural awareness and the need to observe cultural protocols are important parts of the process. Note: for indigenous contexts, the delivery and assessment against this unit must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify potential for cultural diversity	<p>1.1.Information on the population is used to identify the range of cultural diversity.</p> <p>1.2.Potential involvement of individuals and groups of people are identified in the context of the program.</p> <p>1.3.Adjustments to program and program promotional materials are identified to meet cultural frameworks of different peoples.</p>
2. Develop processes to include culturally diverse groups	<p>2.1.Cultural protocols are identified to ensure contacts with individuals/communities are successful.</p> <p>2.2.Key persons who may influence relationships are identified.</p> <p>2.3.Steps to develop and maintain contact with culturally diverse groups are formulated in line with understanding of the cultures, goals of the relationship, and any relevant enterprise guidelines.</p> <p>2.4.Processes are inclusive of an equitable involvement of various sections of the community and their</p>

ELEMENT	PERFORMANCE CRITERIA
	perspectives.
3. Communicate potential and support for culturally diverse group	3.1. People and groups of culturally diverse background in the area are approached to promote their potential involvement in groups and programs in line with formulated steps. 3.2. Potential of program and group activities is communicated in a culturally relevant manner. 3.3. Approaches are adjusted in light of any new information on cultural groups and protocols. 3.4. Links between individuals and culturally diverse groups are facilitated to ensure good community relationships and development of the program.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- flexibility in the application of program guidelines and policy
- conflict resolution
- negotiation skills
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- sources of culturally relevant materials and verbal information
- understanding of indigenous peoples and history
- cultural protocols and perspectives

**REQUIRED SKILLS AND KNOWLEDGE**

- relevant legislation and guidelines
- principles of equal opportunity and affirmative action
- current relationships between culturally diverse groups in the area
- understanding of the role of various sections of the community in historical and relationship terms.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify the range of cultural and social groups in a land management area
- determine the linkages and potential impacts between natural resource issues and cultures
- negotiate and maintain cultural protocols for dealing with land management issues
- develop working relationships with representatives of cultural groups
- facilitate the involvement of culturally diverse groups in community issues related to land management.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Culturally diverse groups include:	<ul style="list-style-type: none"> <li>• indigenous peoples</li> <li>• immigrant peoples of overseas birth</li> <li>• people born in Australia who conform with overseas cultures, practices and beliefs in part or in full, and male and female perspectives in the communities.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCCCF412A Coordinate board/committee elections

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers coordinating board/committee elections and defines the standard required to: seek and check nominations; conduct elections and monitor voting irregularities; deal with complaints and grievances about the election process; record and declare results.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to community program leaders who coordinate committee or board elections for an unincorporated group or incorporated association.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Seek nominations	<p>1.1.Election requirements required under the rules and past practice are identified to establish correct election procedures.</p> <p>1.2.Nominations are called for officers and committee positions that will become vacant according to the group/association rules and practice.</p> <p>1.3.Nominations are checked for validity according to the group/association rules and practice.</p> <p>1.4.Procedures to fill positions where there are no nominations are implemented according to the group/association rules and practice.</p>
2. Conduct elections	<p>2.1.Nominations for uncontested positions are declared filled according to the group/association rules and practice.</p> <p>2.2.Election date is set according to group/association rules and practice.</p> <p>2.3.Ballot papers are prepared according to the number of nominations and the voting method described in the group/association rules and practice.</p> <p>2.4.Voting is managed to ensure a fair ballot by persons eligible to vote according to the group/association rules and practice.</p> <p>2.5.Any voting irregularities are assessed for impact on result, with any invalid elections being declared void.</p>
3. Promote a positive election atmosphere	<p>3.1.Positive attitude of co-operation between candidates is promoted to maintain group harmony.</p> <p>3.2.Issues and complaints are addressed in a positive</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>manner according to the rules, to ensure group satisfaction with the election process.</p> <p>3.3.Minority interests are facilitated to ensure equitable representation.</p>
4. Declare results	<p>4.1.Votes are counted using a counting method that ensures a fair count according to the group/association rules and practice.</p> <p>4.2.Results are announced or provided to the group/association chair according to the group/association rules and practices.</p> <p>4.3.Records of results are completed according to group/association rules and practice.</p> <p>4.4.Grievances are addressed according to articles of association, group rules and practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- seek nominations
- conduct elections
- declare results
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- articles, rules and practice of the group

**REQUIRED SKILLS AND KNOWLEDGE**

- election procedures used by other groups and in other voluntary organisations
- voting method to be used
- understanding of range of community perspectives and perspectives brought by individuals to group.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- seek and check nominations
- conduct elections and monitor voting irregularities
- deal with complaints and grievances about the election process
- record and declare results.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Requirements may include:

- vacancies

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• procedures for election</li> <li>• eligible persons</li> <li>• time between elections as defined in the rules or practice.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Community coordination and facilitation
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCCCF413A Service committees

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers service committees and defines the standard required to: organise formal meetings; prepare business papers and additional information for meetings; conduct meetings and carry out follow up actions; plan other events for a committee; maintain records, including the operating budget, for a committee.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to community program leaders who organise meetings for committees and sub-committees at the group and regional levels to support the operation of community groups.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Organise meetings	<p>1.1.Purpose of meeting(s) is clarified with the chair, secretary or coordinator.</p> <p>1.2.Schedule of meetings is prepared and maintained in line with any group, regional and/or agency requirements.</p> <p>1.3.Venue and date of meeting is organised according to meeting schedule, group or regional requirements and within any budget constraints.</p> <p>1.4.Participants are advised of any changes to original meeting details.</p> <p>1.5.All appropriate individuals are advised of details of meetings and followed up for confirmation of attendance according to instructions.</p> <p>1.6.Any apologies are accepted and accurately recorded for presentation at meeting.</p> <p>1.7.Meeting room is set up in a timely manner to suit arrangements and according to instructions.</p>
2. Prepare business papers for meetings	<p>2.1.Notice of meeting and agenda are accurately prepared to instructions and details provided.</p> <p>2.2.Reports required for meeting are prepared or collated as appropriate.</p> <p>2.3.All business papers are distributed to appropriate individuals following established group or regional meeting guidelines.</p>
3. Record and produce minutes of meeting	<p>3.1.Notes are taken of meeting activities and decisions to ensure an accurate record of meeting.</p> <p>3.2.Minutes of the meeting are produced in required</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>format to provide an accurate account of meeting.</p> <p>3.3.Minutes are checked for accuracy, approved and distributed to instructions.</p>
4. Follow up after meetings	<p>4.1.Action lists on work following from meetings are prepared according to instructions.</p> <p>4.2.Requests for information from group members or officers are dealt with promptly and accurately.</p> <p>4.3.Correspondence associated with meetings is dealt with in a timely manner according to instructions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use office equipment, such as computers, photocopiers and facsimiles
- plan events
- manage budgets
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- meeting procedures, both formal and informal
- agency guidelines where applicable or instructions
- relevant program and incorporation requirements for group where applicable
- local facilities for meetings
- local arrangements for authorising expenditure
- local community and activities

**REQUIRED SKILLS AND KNOWLEDGE**

- office and related business procedures
- Occupational Health and Safety (OHS) and public safety requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- organise formal meetings
- prepare business papers and additional information for meetings
- conduct meetings and carry out follow up actions
- plan other events for a committee
- maintain records, including the operating budget, for a committee.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Service may include:

- meetings including group management



**RANGE STATEMENT**

	meetings, group general or annual meetings <ul style="list-style-type: none"> <li>• training/extension sessions</li> <li>• sub-committee meetings related to a project or other specific activity</li> <li>• regional meetings for coordination or for management of regional plan</li> <li>• agency related meetings associated with management of program.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Community coordination and facilitation
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCCCF414A Coordinate fund-raising activities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers coordinating fund-raising activities and defines the standard required to: present ideas for fund-raising at meetings; approach and enlist support of volunteers; coordinate committees/teams and the sites and resources required for fund-raising; coordinate activities and implement general risk management.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to community program leaders who coordinate fundraising activities for local Landcare community groups or programs.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Seek fundraising ideas	<p>1.1. Requirements for funds are identified to determine extent of fundraising.</p> <p>1.2. Successful fundraising activities used by this or other groups are identified for further investigation.</p> <p>1.3. Potential new fundraising activities are compared to existing methods to determine preferred fundraising activities.</p> <p>1.4. Potential fundraising ideas are reviewed in conjunction with other leaders to identify preferred fundraising activity(s).</p> <p>1.5. Views of individuals in groups are considered in determining preferred fundraising activities.</p>
2. Select and develop ideas	<p>2.1. Required resources and potential net income from preferred fund raising activities are estimated.</p> <p>2.2. Selected fundraising activities are submitted with reasons to group for approval according to group practices to obtain group agreement.</p>
3. Conduct fundraising	<p>3.1. Volunteers to manage and/or support required activities in fundraising program are sought and duties negotiated.</p> <p>3.2. Volunteers required to organise fundraising are organised into committee and/or teams.</p> <p>3.3. Fund raising activities comply with public safety, occupational health and safety, and other legislative and local government requirements.</p> <p>3.4. Fundraising activities are supervised according to group requirements to ensure optimum return for</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>group with available resources, and to present a positive image of the group.</p> <p>3.5.Cash handling procedures are used to ensure security of money collected.</p> <p>3.6.Sites of activities are checked to ensure they are tidy to requirements before and after.</p> <p>3.7.Results from fundraising activities are recorded for review.</p>
4. Review results	<p>4.1.Results are reviewed and submitted to group for discussion.</p> <p>4.2.Discussion on relative value of fundraising activities and potential suitability for future is coordinated.</p> <p>4.3.Results and review are submitted to group management committee for noting, recording and further action.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- presentation of ideas at meetings
- approach and enlist support of volunteers
- coordinate committees/teams
- negotiate for sites and resources
- plan and coordinate activities
- implement general risk management
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• network to seek ideas</li> <li>• group practices/protocols</li> <li>• scope of acceptable activities within various cultures/groups in the community</li> <li>• budgets for management of costs</li> <li>• basic money/cash handling and recording of expenses and income</li> <li>• summarising results of activities</li> <li>• basic financial statements</li> <li>• public safety</li> <li>• Occupational Health and Safety (OHS) approaches and procedures</li> <li>• relevant local government by-laws</li> <li>• permits required for some fundraising activities</li> <li>• meeting procedures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• present ideas for fund-raising at meetings</li> <li>• approach and enlist support of volunteers</li> <li>• coordinate committees/teams and the sites and resources required for fund-raising</li> <li>• coordinate activities and implement general risk management.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources

<b>EVIDENCE GUIDE</b>	
	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Fund raising activities may include:	<ul style="list-style-type: none"> <li>• activities with the potential to provide a source of funds for the groups operation, from the group members, contacts of the group members, or from the wider community</li> <li>• activities seeking donations, payment for goods and services provided and funds from social activities such as local events, stalls and large scale community events</li> <li>• activities combined with promotion or sponsorship at community events to promote group, projects and/or program.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCCCF415A Coordinate social events to support group purposes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers coordinating social events to support group purposes and defines the standard required to: facilitate small ad-hoc groups to complete activities; coordinate group officers to perform appropriate roles in events; plan and follow-up tasks to be completed for the social event.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to community program leaders who coordinate social events in the context of a workplace or a community group as a method of creating community interest in a Landcare program.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan social events	<p>1.1.Place of social events within group's activities is identified to ensure contribution to group goals.</p> <p>1.2.Group members' preferences for activities and frequency are obtained to obtain their support.</p> <p>1.3.Concept, timing and resources required for social event are developed in cooperation with others to suit members' wishes and any community involvement.</p> <p>1.4.Community views and safety issues are reviewed to ensure risk to group image and public safety is managed.</p> <p>1.5.Social event is promoted to members and relevant section of the community.</p> <p>1.6.Personnel and required resources are coordinated for availability at social event.</p>
2. Coordinate activities	<p>2.1.Location of social activity is prepared to cater for activity and people.</p> <p>2.2.Coordination between people assisting in the social event is facilitated to provide a pleasant environment consistent with purpose of activity.</p> <p>2.3.Availability of resources is checked to ensure event will occur as planned.</p> <p>2.4.Shortages in personnel and resources are managed to minimise impact on social event.</p> <p>2.5.Visitors to events and members are welcomed and introduced to others to develop positive social environment.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.6. Personnel are coordinated to restore location of social activity to its original condition.</p> <p>2.7. Members' opinions of event are obtained to determine whether even should be repeated or altered.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- facilitate small ad-hoc group to complete activities
- coordinate group officers to perform appropriate roles in events
- timely plan and follow-up tasks to be completed for event
- manage any conflict
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic catering requirements
- resources available in the community
- basic costing for events
- basic money handling and group financial procedures
- resources required for different types of events
- negotiation of arrangements with caterers, hotels and clubs
- hiring and borrowing equipment
- group goals and aim of events
- community views and cultures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• facilitate small ad-hoc groups to complete activities</li> <li>• coordinate group officers to perform appropriate roles in events</li> <li>• plan and follow-up tasks to be completed for the social event.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Purposes for social events may include:	<ul style="list-style-type: none"> <li>• the promotion of a Landcare group or similar</li> <li>• the promotion of projects and programs to a community</li> <li>• to attract new members</li> <li>• to celebrate an event</li> <li>• to develop group cohesiveness</li> <li>• to provide an occasion for dignitaries to meet members and community.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCCCF416A Present proposed courses of action to meeting

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers presenting proposed courses of action to meeting and defines the standard required to: seek information from sources of knowledge and advice; develop solutions on own or in small groups; design a course of action and documentation; present recommendations to a meeting.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to community program facilitators.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop course of action and documentation	1.1.Course of action related to goal, action strategy, project or issue is identified to solve a problem or to advance the group. 1.2.Alternative courses of action are identified and compared to proposed course of action to find best alternative. 1.3.Known legislative and ethical requirements and diverse viewpoints are identified for inclusion in course of action. 1.4.Reason(s) for proposed course of action are identified including costs and benefits, for inclusion in presentation.
2. Present recommendation(s)	2.1.Recommendations are presented to committee with reasons for approval. 2.2.Reasons for selection of preferred course of action over alternatives are presented to committee as required for its consideration.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- seek information from sources of knowledge and advice
- develop solutions on own or in small groups
- develop course of action and documentation

**REQUIRED SKILLS AND KNOWLEDGE**

- prepare presentation on course of action with supporting reasoning and information
- present recommendations to a meeting
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- sources of knowledge and advice appropriate to submission, e.g., library, coordinator/leader
- structure for presenting reasoned submissions
- basic brainstorming techniques
- basic costing
- basic cost/benefit analysis
- cultural viewpoints in the community.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- seek information from sources of knowledge and advice

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• develop solutions on own or in small groups</li> <li>• design a course of action and documentation</li> <li>• present recommendations to a meeting.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Actions may include:	<ul style="list-style-type: none"> <li>• formal or semi-formal presentations to a meeting to obtain consent for a course of action or as part of a program submission.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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### Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCCCF501A Evaluate project submissions

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers evaluating project submission and defines the standard required to: develop an evaluation approach based on the original application; prepare appropriate forms, interview sheets and questionnaires; organise data collection on project inputs, processes, and outcomes according to the evaluation report; prepare reports including quantitative, qualitative and graphical data and analysis.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those persons who evaluate submissions for funding for community-based programs at regional and State/Territory levels usually working as part of a team decision making process and covers the process of participating in the submission assessment process for government funded community-based programs at regional and State/Territory levels.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Review previously planned project outcomes	<p>1.1. Proposed project outcomes and evaluation approaches are identified from original approved application and any updates.</p> <p>1.2. Consultations are conducted with community group leaders, coordinators and facilitators as required to identify any changes to original plan, timelines, outcomes, and to evaluation.</p> <p>1.3. Timing and evaluation in terms of project progress are determined to identify availability of data and suitable range of evaluation methods.</p>
2. Develop evaluation approach	<p>2.1. Evaluation approach is developed to include resources used and processes applied within the available data collection opportunities.</p> <p>2.2. Evaluation approach is developed around prior project evaluations, and program and agency requirements.</p> <p>2.3. Proposed evaluation approach is discussed with stakeholders to obtain comments and consent.</p> <p>2.4. Proposed evaluation approach is modified to cater for stakeholder views without compromising program and agency requirements and the evaluation results.</p> <p>2.5. Approval is obtained for evaluation approach and timing according to program and agency</p>

ELEMENT	PERFORMANCE CRITERIA
	requirements.
3. Organise data collection	<p>3.1.Data is collected on project inputs, processes and outcomes according to evaluation approach.</p> <p>3.2.Appropriate instructions are provided to others for them to collect data on behalf of the evaluator.</p> <p>3.3.Appropriate forms and questionnaires are designed to implement the evaluation.</p> <p>3.4.Interviews are conducted and observations made according to the planned evaluation approach.</p> <p>3.5.Data is recorded in format suitable for analysis and reporting.</p> <p>3.6.Accuracy of data is checked according to evaluation practice and program and agency requirements.</p>
4. Analyse data	<p>4.1.Data is analysed according to the evaluation plan to obtain required information on inputs, processes and outputs.</p> <p>4.2.Data is analysed progressively during evaluation to identify any deficiencies.</p> <p>4.3.Any deficiencies in data are rectified where possible by changes in evaluation and data collection methods.</p> <p>4.4.Appropriate software is used for quantitative analysis.</p> <p>4.5.Analysis is recorded to program and agency requirements.</p>
5. Report on and implement conclusions	<p>5.1.Report is prepared to program, agency and project requirements.</p> <p>5.2.Analysis and report conclusions are checked with key stakeholders to identify any deficiencies to be removed or additional information that should be included.</p> <p>5.3.Report meets required program and agency standards in terms of layout, format, style and process.</p> <p>5.4.Data collection, analysis and reporting are timely to project agency requirements.</p> <p>5.5.Report is submitted according to project, program and agency requirements.</p> <p>5.6.Report on conclusions is implemented to project, program and agency requirements and within the scope of the group resources and authority.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- review previously planned project outcomes
- develop evaluation approach
- organise data collection
- analyse data and report on conclusions
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- evaluation techniques and appropriate reporting methods
- concepts of maintaining valid evaluations
- identifying and documenting limitations
- natural resource management technologies
- data collection methods
- program and agency requirements, including reporting requirements
- agency procedures
- standard form of contract and agreement requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop an evaluation approach based on the original application</li> <li>• prepare appropriate forms, interview sheets and questionnaires</li> <li>• organise data collection on project inputs, processes, and outcomes according to the evaluation report</li> <li>• prepare reports including quantitative, qualitative and graphical data and analysis.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Project submissions may include:	<ul style="list-style-type: none"> <li>• submissions for funding for community-based Landcare programs or similar at regional and State/Territory levels.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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# AHCCCF502A Facilitate development of group goals and projects

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers facilitating development of group goals and projects and defines the standard required to: identify and discuss land management issues with local groups; work with groups to identify local actions that they can become involved in to promote improved land management outcomes; provide support to a group in preparing project proposals and submissions.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to those dealing with groups and communities involved in a Landcare or similar program and covers the facilitation role to assist a group to develop its direction and role in terms of goals, action plans and projects, and to prepare submissions for funding on relevant projects.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Promote the identification of environmental issues	<p>1.1. Group members are encouraged to identify local environmental issues within the context of the group's activities and program scope.</p> <p>1.2. Identified issues are developed in terms of the problem(s), the cause(s), and actions required.</p> <p>1.3. Group members are given opportunities to learn about environmental matters and to acquire additional related skills.</p>
2. Facilitate development of priorities for action	<p>2.1. Group members are facilitated to develop potential action strategies from identified issues to comply with program scope.</p> <p>2.2. Different action strategies are given priorities in terms of members' interests and skills, the impact in terms of solving environmental issues and promotion of solutions to environmental issues, and compliance with the program guidelines.</p> <p>2.3. Facilitation processes used are sensitive to the level of group development.</p>
3. Facilitate development of goals	<p>3.1. Group members are facilitated to develop goals of the group in terms of the locality and region environmental contexts, and to link these to action strategies to develop a cohesive action plan.</p> <p>3.2. Group is encouraged to document their goals and action strategies and to obtain membership approval.</p> <p>3.3. Group is encouraged to review previous goals and action plans as part of the development of new goals</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and action plans.</p> <p>3.4.Role of facilitator/coordinator in group development and management is clearly identified to reduce unrealistic expectations and conflict.</p> <p>3.5.Minority views and interests are managed to ensure group cohesion is maintained.</p> <p>3.6.Group is facilitated to develop its goals and projects within its rules of association and program guidelines.</p> <p>3.7.Goals and action strategies are correlated to regional plans and initiatives.</p>
4. Support group to identify and evaluate potential projects	<p>4.1.Group is facilitated to identify a range of potential projects within goals and action strategy.</p> <p>4.2.Group is facilitated through an evaluation process of alternative projects to determine: compliance with members' interests and skills, project scope within the resources of the group or network of regional groups, compliance within program scope, available funding and potential for acceptance.</p> <p>4.3.Group is encouraged to review the results of previous projects and submissions for funds as part of the development of new projects.</p> <p>4.4.Facilitation process is sensitive to individual members viewpoints, perspectives and cultures, and considerate of community goals and plans to manage any potential conflict.</p>
5. Support group in development of project proposals and submissions	<p>5.1.Group is facilitated to develop broad project plan within program guidelines and to develop costing.</p> <p>5.2.Group is assisted to prepare project proposal in terms of the program requirements and to complete submission for lodgement by the due date to the authorities.</p> <p>5.3.Group is assisted to document project evaluation requirements in accordance with program and proposal requirements.</p> <p>5.4.Relevant information is sourced to assist the group in the submission.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- facilitate groups
- present to groups
- develop strategic plans
- promote the identification of land management issues
- assist in setting priorities for action
- support a group to identify and evaluate potential projects
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the range of group facilitation styles
- previous group history
- regional and national environmental issues
- regional community, groups and cultures
- local and broader politics
- strategic planning principles
- program guidelines
- national, State and regional funding priorities
- legislative requirements
- community and sector perspectives.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify and discuss land management issues with local groups</li> <li>• work with groups to identify local actions that they can become involved in to promote improved land management outcomes</li> <li>• provide support to a group in preparing project proposals and submissions.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Goals, action plans and projects may range from:	<ul style="list-style-type: none"> <li>• a small area to a sub-catchment plan.</li> </ul>
Environment issues for this standard may include:	<ul style="list-style-type: none"> <li>• issues associated with the preservation of quality of soil, water and air, with protection of ecosystems or species, or the management of disturbance or degradation.</li> </ul>
Group activities may include:	<ul style="list-style-type: none"> <li>• previous and current range of activities of group</li> <li>• interests expressed by group members who may be independent or in co-operation with other groups</li> <li>• may relate to small area up to a sub-catchment</li> </ul>

<b>RANGE STATEMENT</b>	
	plan, may address one or more issues.
Stakeholders may include:	<ul style="list-style-type: none"> <li>indigenous cultures.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Community coordination and facilitation
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCCCF503A Promote group formation and development

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the promotion of group formation and development and defines the standard required to: investigate forming a group to progress a land management issue or project; promote the land management initiative to assist group formation and gain support from existing groups; use activities to facilitate group formation and bonding and to attract new members; respond to and solve conflict constructively; deal with groups with appropriate regard for cultural issues, equity and disability.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who bring people together to form and strengthen a Landcare group or similar, its processes and outcomes.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify potential for group	<p>1.1. Community research is carried out to determine potential interest in forming group in a locality or region.</p> <p>1.2. Members of existing groups are encouraged to use their networks of contacts to promote the group and program, and to obtain new members.</p>
2. Develop approach to create and maintain interest	<p>2.1. Community organisations and media are identified as potential avenues for promotion.</p> <p>2.2. Program is promoted in region or locality to create interest in it and its objectives.</p> <p>2.3. Approaches to diverse sections of the community are modified to cater for their perspectives and cultures.</p> <p>2.4. People interested in forming new groups are brought together to explore their potential.</p>
3. Communicate group potential and achievements	<p>3.1. Environmental issues that have the potential to be addressed by the community and group are identified and promoted to raise interest.</p> <p>3.2. Group and regional achievements are recorded and used to promote the group and the program.</p> <p>3.3. Any tension and/or conflict between people in group formation and development is identified and addressed using appropriate and consistent conflict resolution approaches.</p>
4. Enlist members and volunteers	<p>4.1. Contacts are invited to join the group and program to increase community involvement and resources.</p> <p>4.2. Interests and skills of community members are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>identified to introduce them to relevant program activities and others with mutual interests.</p> <p>4.3. People who wish to form new groups are given advice, support and access to information and program resources to form the new group.</p> <p>4.4. Approaches and dealings with individuals and groups include appropriate regard for cultural issues, equity and disability.</p> <p>4.5. Minority interests within the group are managed to develop group cohesiveness in line with program requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify the potential for the group
- facilitate groups
- speak and present in public
- use the media
- develop approaches to create and maintain interest
- facilitate meetings and discussion during group formation and development phases
- facilitate formation and development of committees
- attract members and volunteers
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- sources of local information



**REQUIRED SKILLS AND KNOWLEDGE**

- environmental issues
- structure and operation of community organisations
- range of one to one presentation methods
- range of group presentation methods
- group formation processes
- public relations principles
- principles of negotiation and conflict resolution
- program objectives, scope and guidelines
- agency procedures and related requirements
- public safety requirements
- local media outlets
- public relations principles
- legislative, agency and program requirements including occupational health and safety, equal opportunity and special requirements to support women, migrants and indigenous peoples
- principles of negotiation and conflict resolution.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- investigate forming a group to progress a land management issue or project
- promote the land management initiative to assist group formation and gain support from existing groups
- use activities to facilitate group formation and bonding and to attract new members
- respond to and solve conflict constructively

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>deal with groups with appropriate regard for cultural issues, equity and disability.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Groups may include:	<ul style="list-style-type: none"> <li>Landcare</li> <li>Bushcare</li> <li>Rivercare</li> <li>other community groups associated with restoration and rehabilitation projects.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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### Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCCCF504A Support group and community changes in resource management

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting group and community changes in resource management and defines the standard required to: identify required or impending changes and potential impacts on a group or community; develop change management strategies to deal with potential change issues; distribute information about changes and provide advice and response to queries; facilitate a group through a process of change.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who support change management processes in a group and community context.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify changes occurring at group and community levels	1.1.Changes occurring or due to occur at group and community level due to voluntary initiatives or legislative requirements are identified in terms of impact.
2. Identify potential impacts and reactions	2.1.Potential impact of changes and reactions at group and community level are identified. 2.2.Support in terms of change management initiatives that may be required to implement change in the group or community is identified. 2.3.Cultural and sector perspectives and viewpoints are identified to address different reactions to change.
3. Facilitate change management processes	3.1.Information related to the changes is distributed in terms that assist understanding and acceptance. 3.2.Group is facilitated to develop understanding of change, to manage reactions and to develop response(s). 3.3.Group is encouraged to develop and implement a plan to address change and its impacts.

## Required Skills and Knowledge

### **REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<b>Required skills</b>	
<ul style="list-style-type: none"> <li>• make formal and informal presentations</li> <li>• manage minority viewpoints and interests</li> <li>• chair meetings</li> <li>• lead discussion groups</li> <li>• prepare materials that target specific issues, especially in plain English for diverse groups.</li> <li>• use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• change management theories at individual and group level</li> <li>• meeting procedures</li> <li>• local networks and groups</li> <li>• community viewpoints and cultures.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• identify required or impending changes and potential impacts on a group or community</li> <li>• develop change management strategies to deal with potential change issues</li> <li>• distribute information about changes and provide advice and response to queries</li> <li>• facilitate a group through a process of change.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Change management may be brought about and include:	<ul style="list-style-type: none"> <li>• consultation</li> <li>• provision of information</li> <li>• negotiation</li> <li>• provision of alternative operating methods</li> <li>• identification of people requiring individual support.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCCCF505A Contribute to regional planning process

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers contribution to a regional planning process and defines the standard required to: participate in panels and group discussion on the planning process; collect information on local land management issues and relate to economic, industry and social factors; submit views on natural resource management priorities and solutions; review draft plans in terms of impact on the local and wider region to identify deficiencies and propose solutions; participate in community consultation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role requires them to contribute to and assist in the regional planning process under the broad direction of technical specialists, facilitator and/or group and panels.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Participate in panels and group discussion on the planning process	<p>1.1.Natural resource management issues, economic and social factors, and potential solutions/directions are submitted to panels/groups for discussion.</p> <p>1.2.Contributions to discussions and panels/groups are positive to assist panel/group to develop course of action and recommendations.</p> <p>1.3.Contributions to discussions and panels and groups are structured to comply with legislative, program and agency requirements.</p>
2. Collect data and background information	<p>2.1.Information on local natural resource management issues is collected through monitoring and surveys conducted in conjunction with local groups, projects and programs.</p> <p>2.2.Arrangements are made for additional data on natural resource management issues and associated economic, industry and social factors to be collected for input into analysis and the planning process.</p>
3. Contribute to the plan	<p>3.1.Local natural resource management issues are highlighted to the planning team for inclusion in planning considerations.</p> <p>3.2.Relationship between local and wider issues is explored to submit views on natural resource management priorities and solutions.</p> <p>3.3.Draft plans are reviewed in terms of impact on the local and wider region to identify deficiencies and propose solutions.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4. Participation in community consultation assists the facilitator/regional planner to obtain feedback on the draft plan.</p> <p>3.5. Proposals for improvement to draft plans are based on natural resource management within relevant economic, industry and social contexts.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret technical advice.
- research information.
- establish data collection processes.
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- local community including economic, industry and social factors.
- group development.
- natural resource management issues for local area/region.
- legislative, program and other requirements for regional plans and the planning process.
- regional planning concepts.
- natural resource management processes.
- consultation approaches.
- cross cultural and cultural factors relevant to social structures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• participate in panels and group discussion on the planning process</li> <li>• collect information on local land management issues and relate to economic, industry and social factors</li> <li>• submit views on natural resource management priorities and solutions</li> <li>• review draft plans in terms of impact on the local and wider region to identify deficiencies and propose solutions</li> <li>• participate in community consultation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Land management issues may include:	<ul style="list-style-type: none"> <li>• damage to natural resources</li> <li>• activities or lack of activity causing ecosystems operating outside their natural states</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• risk of damage and degradation to natural resources</li> <li>• restoration of degraded areas.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Community coordination and facilitation
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCCCF506A Manage the incorporation of a group

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing the incorporation of a group and defines the standard required to: identify association requirements; seek incorporation approvals; execute incorporation requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes coordinating activities related to the conversion of an unincorporated group into an incorporated entity.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify association requirements	<p>1.1. Legislative requirements for incorporation are obtained from relevant authorities.</p> <p>1.2. Readiness of group to proceed with incorporation is assessed against program and legislative requirements.</p> <p>1.3. Appropriate government agency and legal advice is sought during incorporation procedures.</p> <p>1.4. Changes required in group structure, membership and operating processes are documented for presentation to the group.</p>
2. Seek incorporation approvals	<p>2.1. Consents of members and committee are obtained at the various stages of incorporation in accordance with legislative requirements.</p> <p>2.2. Committee, public officer, treasurer, auditor and other officers are elected or appointed in accordance with proposed association rules.</p> <p>2.3. Consent to apply for incorporation and to advertise group's intention is obtained from membership in accordance with legislative requirements.</p>
3. Execute incorporation requirement	<p>3.1. Group's objectives and operating rules are defined in accordance with the legislation and program guidelines.</p> <p>3.2. Group name is selected and reserved in accordance with legislative requirements.</p> <p>3.3. Appropriate notice of incorporation is given in accordance with legislative requirements.</p> <p>3.4. Appropriate forms and fees are paid to implement incorporation according to legislative requirements.</p> <p>3.5. Changes in association documents and processes are implemented in accordance with legislative requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- present proposals to group
- establish groups and operating procedures
- seek and interpret advice
- give instructions for preparation of documents
- resolve conflict
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic legal processes and related legislation
- reporting procedures for incorporated groups and for groups in programs
- basic organisational structures and processes
- basic financial processes
- incorporation principles and local legislation
- incorporation and reporting requirements of program
- establishment of groups and operating procedures
- basic management and probity principles.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the



<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify association requirements</li> <li>• seek incorporation approvals</li> <li>• execute incorporation requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Groups may include:	<ul style="list-style-type: none"> <li>• community Landcare</li> <li>• Bushcare</li> <li>• Rivercare</li> <li>• similar groups involved in natural area restoration and rehabilitation projects.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCCCF601A Map regional issues and stakeholders

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of coordinating the development of regional plans in the context of natural resource management: review existing planning documents and sources of information to inform the plan; identify land management issues and potential solutions; identify stakeholders to form discussion groups and seek individual input to planning; organise for the collection and analysis of data to inform planning and monitor progress; work with stakeholders and technical advisers to develop goals and performance criteria; develop a draft plan for widespread consultation and feedback; finalise the regional resource management plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to the ability to scope requirements of a mapping process, determine regional boundaries, identify regional resource management issues, determine the stakeholders in a regional resource management planning process, and develop proposals for a regional plan.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Scope requirements	<p>1.1.Reasons for development of a regional plan are determined to identify broad goals and legislative requirements.</p> <p>1.2.Prior regional planning work is identified as input to proposed regional planning process.</p>
2. Determine regional boundaries	<p>2.1.Regional boundaries are determined from economic, environmental and social factors that will produce a coherent plan.</p> <p>2.2.Economic, environmental and social factors that overlap the proposed regional boundaries are identified to develop a scope and weighting of the factors.</p> <p>2.3.Prior plans and reports are reviewed to verify the suitability of the proposed regional boundaries.</p> <p>2.4.Program requirements for the development of regional plans are met in the identification of regional boundaries.</p>
3. Identify regional resource management issues	<p>3.1.Regional natural resource issues are researched from prior documentation and from stakeholder views.</p> <p>3.2.Economic, industry, environmental and social</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>factors are included in research to assess current and potential impacts of the natural resource management issues.</p> <p>3.3.The likely depth of research required is estimated to obtain sufficient information on issues for planning purposes.</p>
4. Scope stakeholders in regional resource management planning process	<p>4.1.Economic, industry, social and government activities are scoped to identify influential organisations, groups and people and their particular interests.</p> <p>4.2.Organisations and groups are approached to determine their interests, viewpoints on natural resource management issues, and willingness to participate in regional planning process.</p> <p>4.3.Nature of community involvement in planning process is identified from understanding of issues and community.</p>
5. Develop proposal for regional plan	<p>5.1.The objectives of the plan are reviewed after scoping to determine feasibility of proposed processes.</p> <p>5.2.Proposal for a new or revised plan is developed to obtain funding.</p> <p>5.3.Estimates are made of time to complete tasks including time for consultations and approvals, and including any discussion with Indigenous communities and groups.</p> <p>5.4.Costs associated with development of regional plan are identified from preliminary research.</p> <p>5.5.Proposal is prepared to address the requirements of program(s) and relevant legislation and agency policies and processes.</p> <p>5.6.Proposal for regional plan is submitted for approval and funding according to agency and program procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• ability to conduct formal presentations</li> <li>• research in economic, planning, environmental and social areas</li> <li>• estimate costing</li> <li>• use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• broad geographic indicators with particular emphasis on the region</li> <li>• regional and rural planning concepts from town planning, rural industry planning, and natural resource planning perspectives</li> <li>• impact of government processes and industry activities in social and economic terms.</li> <li>• consultative techniques</li> <li>• cross cultural and cultural factors relevant to social structures</li> <li>• local government operations</li> <li>• natural resource management and issues.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• review existing planning documents and sources of information to inform the plan</li> <li>• identify land management issues and potential solutions</li> <li>• identify stakeholders to form discussion groups and seek individual input to planning</li> <li>• organise for the collection and analysis of data to inform planning and monitor progress</li> <li>• work with stakeholders and technical advisers to develop goals and performance criteria</li> <li>• develop a draft plan for widespread consultation and feedback</li> <li>• finalise the regional resource management plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Issues and stakeholders may include:	<ul style="list-style-type: none"> <li>• the process of coordinating the development of regional plans in the context of natural resource management</li> <li>• land management issues to be considered in the regional resource management plan including: <ul style="list-style-type: none"> <li>• damage to natural resources</li> <li>• activities or lack of activity causing ecosystems to operate outside their natural states</li> <li>• restoration of degraded areas</li> <li>• risk of damage and degradation to natural resources.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Community coordination and facilitation
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCCFI501A Provide technical advice on the Carbon Farming Initiative

## Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

## Unit Descriptor

This unit covers the development and maintenance of knowledge on the Carbon Farming Initiative (CFI) and the provision of accurate and relevant advice to land managers about participation in the CFI. This knowledge will be broadly relevant to any other programs that generate carbon credits for land based activities.

## Application of the Unit

The unit applies to carbon service providers responsible for advising and informing land managers about participation in the Carbon Farming Initiative to generate carbon credits. Note that the 'advice' referred to in this unit does not relate to financial advice which requires an Australian financial services license. This unit does not address the skills or the generic knowledge requirements in "ASIC Regulatory Guide 146: Training of Financial Product Advisors".

## Licensing/Regulatory Information

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

## Pre-Requisites

Nil.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the                      Performance criteria describe the performance needed to

essential outcomes of a unit of competency.

demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop knowledge about the Carbon Farming Initiative	1.1 Information on the CFI is researched and maintained 1.2 Knowledge of climate change science and markets as it relates to carbon farming is developed 1.3 The distinction between carbon farming advice and advice about carbon credits that requires holding a financial services license is understood
2. Provide information to land managers	2.1 Information compliant with carbon farming legislation is interpreted and presented to land managers 2.2 Appropriate interpersonal skills are used to facilitate the exchange of information 2.3 Work practices reflect sensitivity to land managers' requirements, specific needs and cultural, family and individual differences 2.4 Stakeholder feedback is sought and evaluated
3. Respond to land managers' enquiries	3.1 Enquirers' needs are identified, analysed and clarified 3.2 Response is comprehensive, clear and delivered in the most appropriate form and within the agreed timeframe 3.3 Enquiries outside area of responsibility and knowledge are identified and assistance is sought or the enquiry is referred on to a relevant party
4. Maintain a professional relationship with land managers	4.1 Stakeholder requests and concerns are responded to positively, appropriately and consistently 4.2 Confidentiality and discretion is maintained 4.3 Discussions with land managers are handled in a professional manner 4.4 Formal and informal networks at local, regional and state levels are established and maintained

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

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- communication skills to:
  - liaise with others and share information about the CFI
  - use language and concepts appropriate to cultural differences
  - determine and respond to client requests for information
  - provide presentations to individuals and groups on the CFI
- language, literacy and numeracy skills to:
  - read and interpret CFI documentation and legislation
  - analyse information on CFI to ensure currency, accuracy and appropriateness to client needs
- interpersonal skills to:
  - establish rapport with clients
  - relate to people from diverse backgrounds and people with diverse abilities
  - positively interact with clients, other stakeholders, including regulatory personnel and technical experts
  - establish networks with relevant technical experts
- organising and time-management skills to:
  - sequence tasks
  - meet timelines
  - arrange meetings and visits to properties

## Required knowledge

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- climate change science overview
  - the impacts of increased carbon emissions on climate
  - basic mitigation and adaptation principles
- the carbon cycle and the land sector
  - the carbon cycle
  - the role of the land sector in the carbon cycle and Australia's emissions profile
  - the role of different land sector industries and regions within the land sector's emissions profile
  - the role of carbon as it relates to agricultural productivity
- carbon pricing and markets and the domestic and international policy and legal framework overview
  - the Australian Carbon Pricing Mechanism and link with the CFI
  - voluntary markets and the National Carbon Offset Standard
  - the Securing a Clean Energy Future Plan, including the land sector measures
  - the Kyoto protocol and emerging post-Kyoto framework and Australia's obligations - overview
- CFI and the requirements of the *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations relating to:
  - CFI scope, eligible activities and the types of carbon credits generated (Kyoto and non-Kyoto Australian Carbon Credit Units)
  - crediting periods
  - CFI offset integrity standards
    - additionality, the positive list and the common practice test
    - permanence and risk of reversal buffer, Carbon Maintenance Obligations
    - accounting for leakage
    - accounting for variability
    - conservative
    - international consistency and peer-reviewed
  - managing negative impacts
    - negative list
    - compliance with relevant laws, natural resource management plans
  - co-benefits
  - methodology requirements, methodology development and approval, including the role of the Domestic Offsets Integrity Committee
  - the role of the Clean Energy Regulator (CER)
  - project proponent requirements
    - become a Recognised Offsets Entity
    - creating and using an Australian National Register of Emissions Units account
  - project requirements

- applying for an Eligible Offsets Project
- implementing the project in accordance with the applicable approved offsets methodology
- writing and submitting offsets reports and arrange audit reports
- applying for a certificate of entitlement and receive credits
- closing a project
- varying a project
- withdrawing a project from the CFI
- relinquishing carbon credits
- scheme oversight, institutions and governance
- the Carbon Farming Initiative handbook
- guidelines for submitting methodologies
- approved methodologies for carbon sequestration and emissions avoidance - overview of approach and requirements
- role of different service providers under the CFI, including advisors, project developers, project aggregators, CFI auditors and carbon brokers
- circumstances when a financial services license is required to provide advice about carbon farming credits
- carbon farming project initiation
  - project feasibility analysis
  - project application and approval process
  - design, planning and implementation processes
- profiles of key stakeholder groups
- responsibilities under consumer law, workplace health and safety, privacy legislation, codes of conduct
- professional ethics
- cultural protocols and perspectives of land managers from a range of cultural, social and religious backgrounds

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• Provide accurate and contemporary knowledge of the CFI</li> <li>• Research and maintain information on the CFI</li> <li>• Provide information and respond to land managers and others enquirers</li> </ul>
Context of and specific resources for assessment	<p>Assessment must be undertaken in the context of the Carbon Farming Initiative.</p> <p>Assessment resources must be developed to determine the candidates' depth and breadth of knowledge of the CFI as well as their ability to provide accurate and up to date information to others in a professional manner.</p>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	<p>Assessment with other units relevant to the job role is recommended. The unit of competency can be assessed in the workplace or a simulated workplace environment.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>An approved offset methodology includes:</p>	<p>a methodology for which a determination has been made under the <i>Carbon Credits (Carbon Farming Initiative) Act 2011</i>.</p>
<p>Carbon service provider includes:</p>	<p>a person who provides advice about participation in or develops or manages a project under the Australian Government's Carbon Farming Initiative.</p>

## Unit Sector(s)

Carbon Farming.

# AHCCFI502A Assess the feasibility of a Carbon Farming Initiative project

## Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

## Unit Descriptor

This unit covers the process of analysing and assessing the feasibility of a carbon farming project using methodologies approved under the Carbon Farming Initiative (CFI).

## Application of the Unit

The unit applies to carbon service providers who determine the feasibility of a carbon farming project in the context of an approved CFI offsets methodology and the requirements of the CFI. Note that this unit does not relate to financial advice which requires an Australian financial services license. This unit does not address the skills or the generic knowledge requirements in "ASIC Regulatory Guide 146: Training of Financial Product Advisors".

When this unit is taught as part of the following Skill Sets, it applies in the context of at least one approved sequestration methodology and one approved emissions avoidance methodology under the Carbon Farming Initiative:

- Carbon Farming Initiative Advisor Skill Set
- Carbon Farming Initiative Business Skill Set

When this unit is taught as part of the following Skill Sets, it applies in the context of the methodologies relevant to the particular Skill Set. It should also apply the skills and knowledge applicable to new approved CFI methodologies relevant to these Skill Sets as they become available:

- Carbon Farming Initiative Vegetation Project Implementer Skill Set
- Carbon Farming Initiative Livestock Project Implementer Skill Set
- Carbon Farming Initiative Waste or Manure Project Implementer Skill Set
- Carbon Farming Initiative Soil or Biochar Project Implementer Skill Set
- Carbon Farming Initiative Savannah Burning, Feral Animal or Rangelands Project Implementer Skill Set
- Carbon Farming Initiative Soil or Crops Emissions Avoidance Project Implementer Skill Set



When this unit is taught as part of the Carbon Farming Initiative Business Skill Set, it applies in the context of assessing the feasibility of an aggregated CFI project.

## Licensing/Regulatory Information

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

## Pre-Requisites

AHCCFI501 Provide technical advice on the Carbon Farming Initiative

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify the rights of the project proponent and the stakeholder	1.1 The right of the project proponent to undertake the project on the proposed land is determined 1.2 The rights to the land, project boundaries and if appropriate the applicable carbon sequestration right are determined, with legal advice sought where required 1.3 All interest holders in the land are identified and their likely agreement to the project determined 1.4 The ownership of carbon sequestration rights, if relevant, is determined
2. Identify the project and its eligibility	2.1 The nature and scope of the project is confirmed 2.2 Approved CFI methodologies are assessed to determine if one is applicable to the project

- 2.3 Any negative impacts of the project are determined and checked against the CFI negative list
- 2.4 Whether the project, or any part of it, is required by law is determined
- 2.5 How the project is in accordance with relevant regional Natural Resource Management plans is determined
- 2.6 The project is checked for compliance with an approved offset methodology
3. Identify the contractual arrangements for the project
  - 3.1 Contract parties are identified
  - 3.2 The responsibilities of owning and managing a CFI project are identified
  - 3.3 The managerial and governance structure of the project is determined and roles of the parties are clarified
  - 3.4 Responsibilities and obligations of the parties under relevant carbon farming legislation are identified
  - 3.5 Financial relationships between the parties are identified, including for transfer of carbon rights if relevant
4. Analyse the project
  - 4.1 Specialist technical advice is sought as required
  - 4.2 Operational capabilities to successfully implement the project are assessed
  - 4.3 Means of calculating the baseline and project emissions in accordance with the relevant methodology are established
  - 4.4 Frequency of data collection, monitoring, ratification and verification requirements are determined
  - 4.5 The impact of differing crediting and reporting periods on project feasibility is assessed
  - 4.6 Approvals and restrictions associated with project implementation are determined
  - 4.7 Timelines for the application, development, approval and implementation of the project are estimated
  - 4.8 Potential risks in the project cycle and mitigation strategies are identified and responsibility assigned between parties involved in the project
  - 4.9 Analysis of stakeholders and their expectations is undertaken.
  - 4.10 The scope for project design, planning and implementation is defined
5. Evaluate project viability
  - 5.1 The distinction between administrative advice on CFI projects and advice about carbon credits that requires holding a financial services license is stated
  - 5.2 The impact of project location on the type of carbon credits generated, where relevant, is ascertained
  - 5.3 Funding requirements for the application, development and

- implementation of the project are calculated
- 5.4 The potential abatement and short and long term returns are identified
- 5.5 Capacity to complete project activities within timeframes is assessed
- 5.6 Issues that impact on project business viability, including methods of valuing carbon credits, are assessed
- 5.7 A business viability case for the project identifying the source and cost of project capital, long term project costs and revenue and non-carbon economic benefits of the project is developed
- 5.8 Project feasibility is determined and advised in a written report to project proponent

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

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- administration and management skills to:
  - manage documents
  - manage time, including planning and prioritising work
  - coordinate work across a range of disciplines
- communication skills to:
  - liaise with others, share information, seek advice and guidance
  - determine and confirm client requirements, using questioning and active listening as required
  - liaise with others, share information, listen and understand
- language, literacy and numeracy skills to:
  - read and interpret documentation from a variety of sources
  - access, interpret and manage complex information
  - use internet to research information
  - analyse information to ensure currency, accuracy and appropriateness to client needs
  - complete documentation accurately
  - estimate costs
  - interpret and apply complex information, including legislation, regulations, and codes and standards
- interpersonal skills to:
  - establish rapport with clients

- liaise with other team members and specialists
- relate to people from diverse backgrounds and people with diverse abilities
- interact with clients and other stakeholders, including planning and regulatory personnel and technical experts
- establish networks with relevant technical experts
- research and evaluative skills to:
  - apply outcomes of research
  - access, interpret and manage complex information

## Required knowledge

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Knowledge of:

- the *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations, particularly provisions that impact on the ability to undertake the project and the cost and benefits of doing so, including:
  - eligible projects
  - land tenure requirements, including for freehold, leasehold and native title
  - carbon sequestration rights requirements
  - project requirements
  - participant requirements e.g. Recognised Offset Entity
  - reporting and auditing requirements
  - crediting (e.g. obtaining credits, and monitoring and enforcement)
- details of relevant CFI methodologies that impact on the cost and benefits of undertaking a project including requirements for:
  - project eligibility
  - capital works and machinery
  - inputs including labour and resources
  - project establishment
  - ongoing maintenance, data collection, monitoring and reporting
  - calculation of baselines and project abatement
- productivity or other benefits of undertaking a project in accordance with the relevant CFI methodologies and their monetary value
- carbon farming project initiation and development:
  - project feasibility analysis
  - project application and approval process
  - administration and reporting requirements for the project
  - design, planning and implementation processes
  - the CFI negative list
- the types of relevant requirements of regional Natural Resource Management Plans and how to assess them
- circumstances when an Australian financial services license is required to provide advice

- about carbon farming credits
- legal and regulatory requirements relevant to the type of project, for example necessary permits and their costs
  - project design and implementation
  - risk management
  - principles of cost/benefit analysis
  - possible terms and conditions under a purchase and sales agreement including:
    - possible pricing mechanisms such as payment on delivery, spot, forward, upfront payment options, floor price, cap, fixed price, variable price
    - each contract party's obligations and responsibilities
    - delivery schedules
    - event of default

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• undertake background and preparatory work for a feasibility assessment</li> <li>• assess the feasibility of a CFI project for clients and land managers</li> <li>• develop a business viability case for a CFI project</li> </ul>
Context of and specific resources for assessment	<p>Assessment must be undertaken in the context of at least one approved sequestration methodology and one approved emissions avoidance methodology under the Carbon Farming Initiative.</p> <p>Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of carbon farming project feasibility as well as their ability to evaluate a project's feasibility.</p>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> </ul>

	<ul style="list-style-type: none"> <li>evaluating workplace documents and samples of work</li> <li>simulated projects, scenarios or case studies</li> <li>obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	Assessment with other units relevant to the job role is recommended. The unit of competency can be assessed in the workplace or a simulated workplace environment.

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
An approved offset methodology includes:	a methodology for which a determination has been made under the <i>Carbon Credits (Carbon Farming Initiative) Act 2011</i>
Contract parties include:	<ul style="list-style-type: none"> <li>land managers</li> <li>leaseholders</li> <li>project developers</li> <li>aggregators</li> <li>others</li> </ul>
Carbon service provider includes:	a person who provides advice about participation in or develops or manages a project under the Australian Government's Carbon Farming Initiative

## Unit Sector(s)

Carbon farming.

# AHCCFI503A Advise on Carbon Farming Initiative project planning and implementation

## Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

## Unit Descriptor

This unit covers the development and maintenance of knowledge on the processes involved for land managers and project proponents in planning, implementing and monitoring Carbon Farming Initiative (CFI) projects and providing accurate and relevant technical advice to land managers and project proponents about the administrative requirements of these processes.

## Application of the Unit

The unit applies to carbon service providers responsible for advising and informing land managers and project proponents about implementing CFI projects. Note that the 'advice' referred to in this unit does not relate to financial advice which requires an Australian financial services license. This unit does not address the skills or the generic knowledge requirements in "ASIC Regulatory Guide 146: Training of Financial Product Advisors".

This unit applies in the context of at least one sequestration methodology and at least one emissions avoidance methodology approved under the CFI.

## Licensing/Regulatory Information

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

## Pre-Requisites

AHCCFI501 Provide technical advice on the Carbon Farming Initiative

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define requisites for planning a CFI project	1.1 Project phases for planning a CFI project are described 1.2 Equipment, specialist services and service providers required to plan and implement a CFI project are defined 1.3 The means of determining the project area for sequestration and emissions avoidance methodologies are specified 1.4 The need for and use of relevant tools such as the CFI mapping tool and CFI rainfall map are determined 1.5 The impact of project location on the type of carbon credits generated, where relevant, is ascertained 1.6 The impact of differing crediting and reporting periods on project planning and implementation is assessed 1.7 The steps required to determine the baseline and project emissions are determined 1.8 The responsibilities of owning and managing a CFI project are outlined
2. Determine requisites for implementing a CFI project	2.1 The requirements and process for becoming a Registered Offsets Entity are detailed 2.2 The requirements and process for applying for an eligible offsets project are defined 2.3 Methods of data collection for emissions avoidance and sequestration projects are outlined 2.4 Systems and procedures for accurately measuring and recording project abatement are outlined 2.5 Procedures for maintaining records of procedures undertaken and abatement achieved under a CFI project are specified 2.6 Equipment maintenance and calibration requirements are established 2.7 Project audit requirements and the providers of audit services are detailed



- 3. Provide information on applying for carbon credits
  - 3.1 Requirements for completing an offsets report for the Clean Energy Regulator are outlined
  - 3.2 Steps involved in commissioning an audit report are defined
  - 3.3 Process for applying for a certificate of entitlement is specified
  - 3.4 Information on the circumstances under which the Clean Energy Regulator will issue carbon credits and their maintenance on the Australian Register of Emissions Units is provided
- 4. Provide information on CFI administration and implementation
  - 4.1 CFI project processes and administrative and compliance requirements are described
  - 4.2 Responses to stakeholder inquiries are comprehensive, clear and delivered in the most appropriate form and within the agreed timeframe
  - 4.3 Enquiries outside area of responsibility and knowledge are identified and assistance is sought or the enquiry is referred onto a relevant party

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

## Required skills

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- communication skills to:
  - liaise with others and share information about the CFI
  - use language and concepts appropriate to cultural differences
  - determine and respond to client requests for information
  - provide presentations to individuals and groups on CFI project administration
- language, literacy and numeracy skills to:
  - read and interpret CFI documentation and legislation
  - analyse information on CFI to ensure currency, accuracy and appropriateness to client needs
  - interpret and advise on complex information, including legislation, regulations, and codes and standards
- interpersonal skills to:
  - establish rapport with clients
  - relate to people from diverse backgrounds and people with diverse abilities
  - positively interact with clients, other stakeholders, including regulatory personnel and technical experts
  - establish networks with relevant technical experts
- organising and time-management skills to:
  - sequence tasks
  - meet timelines
  - arrange meetings and visits to properties
- leadership skills to:
  - build an effective project team
  - lead the team in the implementation of the project
  - anticipate, plan and organise required materials and resources
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## Required knowledge

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Knowledge of:

- requirements of approved CFI methodologies, including:
  - project eligibility and scope
  - identifying the baseline scenario
  - project area
  - estimating abatement
  - monitoring, record keeping and offsets reporting
- CFI and the requirements of the *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations relating to:

- project proponent requirements:
  - become a Recognised Offsets Entity
  - creating and using an Australian National Register of Emissions Units account
- project requirements:
  - applying for an Eligible Offsets Project
  - implementing the project in accordance with the applicable approved offsets methodology
  - writing and submitting offsets reports and arrange audit reports
  - applying for a certificate of entitlement and receive credits
  - closing a project
  - varying a project
  - withdrawing a project from the CFI
  - relinquishing carbon credits
- scheme oversight, institutions and governance
- phases in a CFI project
- equipment, specialist services and service providers required to plan and implement a CFI project
- impact of project location on the type of carbon credits generated
- impact of differing crediting and reporting periods on project planning and implementation
- stakeholder responsibilities of owning and managing a CFI project
- application process to become a Recognised Offsets Entity
- procedures for maintaining records of procedures undertaken and abatement achieved under a CFI project
- project audit requirements and the providers of audit services
- commissioning of audit reports
- application process for certificates of entitlement
- CER procedures for issuing carbon credits and maintenance on the Australian Register of Emissions Units
- CFI project processes and administrative and compliance requirements
- distinction between administrative advice on CFI projects and advice about carbon credits that requires holding a financial services license

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and	Evidence of the ability to:

evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> <li>• define requisites for planning a CFI project</li> <li>• apply for approval of a CFI project</li> <li>• define requisites for implementing a CFI project</li> <li>• apply for carbon credits</li> <li>• provide information on CFI administrative requirements</li> </ul>
Context of and specific resources for assessment	<p>Assessment must be undertaken in the context of the relevant CFI methodologies.</p> <p>Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of the administrative requirements of the CFI as well as their ability to provide accurate and up to date information to others in a professional manner.</p>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	<p>Assessment with other units relevant to the job role is recommended.</p> <p>The unit of competency can be assessed in the workplace or a simulated workplace environment.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
An approved offset methodology includes:	a methodology for which a determination has been made under the <i>Carbon Credits (Carbon Farming Initiative)</i>

	<i>Act 2011</i>
Carbon service provider includes:	a person who provides advice about participation in or develops or manages a project under the Australian Government's Carbon Farming Initiative
CFI project processes include:	planning, implementing and monitoring of CFI project works
CFI administrative requirements include:	those covered in the <i>Carbon Credits (Carbon Farming Initiative) Act 2011</i> and regulations

## Unit Sector(s)

Carbon farming.

# AHCCFI504A Monitor and report on a Carbon Farming Initiative project

## Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

## Unit Descriptor

This unit covers the monitoring, calculation, verification and reporting of abatement for Carbon Farming Initiative (CFI) projects in compliance with the requirements of the approved CFI methodology within the required reporting timeframe.

## Application of the Unit

The unit applies to carbon service providers responsible for ensuring that greenhouse gas abatement is accurately measured and reported in accordance with relevant carbon farming methodologies. Assessment must be undertaken in the context of at least one approved CFI methodology relevant to the subject matter of the Skill Set the unit is being taught under. This unit does not cover auditing a project.

When this unit is taught as part of the following Skill Sets, it applies in the context of the methodologies relevant to the particular Skill Set. It should also apply the skills and knowledge applicable to new approved CFI methodologies relevant to these Skill Sets as they become available:

- Carbon Farming Initiative Vegetation Project Implementer Skill Set
- Carbon Farming Initiative Livestock Project Implementer Skill Set
- Carbon Farming Initiative Waste or Manure Project Implementer Skill Set
- Carbon Farming Initiative Soil or Biochar Project Implementer Skill Set
- Carbon Farming Initiative Savannah Burning, Feral Animal or Rangelands Project Implementer Skill Set
- Carbon Farming Initiative Soil or Crops Emissions Avoidance Project Implementer Skill Set

## Licensing/Regulatory Information

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

## Pre-Requisites

AHCCFI501 Provide technical advice on the Carbon Farming Initiative

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor a CFI project	<p>1.1 Procedures and requirements of the methodology for monitoring abatement and collecting data are confirmed and observed</p> <p>1.2 Systems and procedures for accurately measuring and recording project abatement are outlined</p> <p>1.3 Procedures for maintaining records of procedures undertaken and abatement achieved under a CFI project are specified</p> <p>1.4 Equipment maintenance and calibration requirements are established</p> <p>1.5 Project audit requirements and the providers of audit services are detailed</p> <p>1.6 Equipment, technology and procedures for undertaking the monitoring are prepared and checked</p>
2. Verify collected data	<p>2.1 Data are collected and organised in a format suitable for calculating abatement and determining whether relevant methodology requirements have been met</p> <p>2.2 Methods of data analysis are reliable and compliant with the carbon farming methodology and any other relevant regulatory requirements</p> <p>2.3 Appropriate records are kept</p> <p>2.4 Abatement is calculated in accordance with the requirements</p>

- of the methodology
3. Submit an offsets report
    - 3.1 An offsets report is prepared as prescribed in the regulations and by the relevant methodology determination
    - 3.2 An audit of the offsets report is commissioned
    - 3.3 The Certificate of Entitlement form is completed

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

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- administration and management skills to:
  - manage documents
  - manage time, including planning and prioritising work
- communication skills to:
  - liaise with others, share information, seek advice and guidance
  - use language and concepts appropriate to cultural differences
  - determine and confirm client requirements, using questioning and active listening strategies
  - communicate with clients and contacts
- language, literacy and numeracy skills to:
  - read and interpret documentation from a variety of sources
  - complete documentation accurately
  - access, interpret and manage complex information
- IT & technology skills to access and use appropriate software, such as spread sheets and databases
- technical skills to:
  - use carbon methodology tools
  - interpret the methodology data collection, abatement calculation and verification requirements



- interpersonal skills to:
  - establish rapport with clients
  - relate to people from diverse backgrounds and people with diverse abilities
  - positively interact with clients and other stakeholders, including regulatory personnel and technical experts
  - establish networks with relevant technical experts

Required knowledge

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Knowledge of:

- procedures and requirements of the relevant methodologies for:
  - collecting data, monitoring and reporting on abatement
  - calculating abatement
  - equipment and technology and required standards for undertaking the monitoring
  - data verification
- offsets report preparation as prescribed in the regulations and/or by the relevant methodology determination
- requirements of the Certificate of Entitlement
- types of records required to be kept
- requirements for an audit report as specified in the project declaration, the relevant methodology and the CFI legislation
- project proponent responsibilities for an audit report
- how to engage a CFI auditor
- requirements and role of a CFI auditor
- requirements of an audit report
- National Greenhouse and Energy Reporting Act 2007 and National Greenhouse and Energy Reporting Regulations 2008
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## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: <ul style="list-style-type: none"> <li>• monitor a CFI project using appropriate methods and tools</li> <li>• collect and verify data</li> </ul>

	<ul style="list-style-type: none"> <li>• prepare and submit offset reports and relevant forms</li> <li>• commission a compliance audit</li> </ul>
Context of and specific resources for assessment	<p>Assessment must be undertaken in the context of the relevant CFI methodologies.</p> <p>Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of the CFI monitoring and reporting requirements as well as their ability to monitor and report on a carbon farming project.</p>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	<p>Assessment with other units relevant to the job role is recommended.</p> <p>The unit of competency can be assessed in the workplace or a simulated workplace environment.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
An approved offset methodology includes:	a methodology for which a determination has been made under the <i>Carbon Credits (Carbon Farming Initiative) Act 2011</i>
Carbon service provider includes:	a person who provides advice about participation in or develops or manages a project under the Australian

	Government's Carbon Farming Initiative
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**Unit Sector(s)**

Carbon farming.

## AHCCFI505A Aggregate Carbon Farming Initiative projects

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Unit Descriptor

This unit covers the process of aggregating Carbon Farming Initiative (CFI) projects using approved methodologies across multiple sites.

### Application of the Unit

The unit applies to project aggregators involved in the design and implementation of CFI projects using approved methodologies across multiple sites. It does not apply to those who wish to aggregate by purchasing carbon credits from multiple smaller projects and selling them, a role performed by carbon brokers.

Note that the 'advice' referred to in this unit does not relate to financial advice which requires an Australian financial services license. This unit does not address the skills or the generic knowledge requirements in "ASIC Regulatory Guide 146: Training of Financial Product Advisors".

This unit applies in the context of at least one sequestration methodology and at least one emissions avoidance methodology approved under the CFI.

### Licensing/Regulatory Information

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

### Pre-Requisites

Nil.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Incorporate aggregation into the scope and design of the project	1.1 The project type and circumstances in which aggregation is a viable or preferred option are identified 1.2 The scope and design of aggregation for different project types is determined 1.3 The means of aggregation for different project types that is confirmed as compliant with the legislation and regulations is determined 1.4 The nature of contractual arrangements with all parties is determined, landholder and project proponent responsibilities are negotiated, clearly defined and agreed, and aggregator obligations are detailed and identified 1.5 Costs associated specifically with aggregated projects are identified 1.6 Risks associated specifically with an aggregated project are identified 1.7 A business case for individual and/or groups of landholders is developed and presented
2. Identify potential project sites and communities	2.1 A strategy to identify potential landholders is prepared and implemented 2.2 Landholders are informed of the need to get independent legal and financial advice 2.3 For sequestration projects, the means of transfer of carbon rights is agreed 2.4 Appropriate terms for contracts with landholders are agreed
3. Document the aggregated project	3.1 Means of representing the form of aggregation in the project feasibility analysis, project design and project plan are determined 3.2 Project documentation is designed to meet both the needs of the Clean Energy Regulator and contracts formed with participating landholders.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

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- administration and management skills to:
  - manage documents
  - lead the building of a team and related project professionals
  - manage time, including planning and prioritising work
  - coordinate work across a range of disciplines
- communication skills to:
  - liaise with others, share information, seek advice and guidance
  - use language and concepts appropriate to cultural differences
  - determine and confirm client requirements, using questioning and active listening strategies
- language, literacy and numeracy skills to:
  - read and interpret documentation from a variety of sources
  - complete documentation accurately
  - access, interpret and manage complex information
  - estimate costs
- interpersonal skills to:
  - establish rapport with clients
  - liaise with other team members and specialists
  - relate to people from diverse backgrounds and people with diverse abilities
  - interact with clients and other stakeholders, including planning and regulatory personnel and technical experts
  - establish networks with relevant technical and other experts
- organising and time-management skills to:
  - sequence tasks
  - meet timelines
  - arrange meetings
- leadership skills to:
  - build an effective project team
  - lead the team in the implementation of the project
  - anticipate, plan and organise required materials and resources

### Required knowledge

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Knowledge of:

- requirements of approved CFI methodologies, including:
  - project eligibility and scope
  - how to identify the baseline scenario
  - project area
  - estimating abatement
  - monitoring, record keeping and offsets reporting.
- CFI and the requirements of the *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations relating to:
  - project proponent requirements
    - becoming a Recognised Offsets Entity
    - creating and using an Australian National Register of Emissions Units account
  - project requirements
    - applying for an Eligible Offsets Project
    - implementing the project in accordance with the applicable approved offsets methodology
    - writing and submitting offsets reports and arrange audit reports
    - applying for a certificate of entitlement and receive credits
    - closing a project
    - varying a project
    - withdrawing a project from the CFI
    - relinquishing carbon credits
  - scheme oversight, institutions and governance
- carbon rights
- Clean Energy Regulator (CER) requirements for project application and reporting
- options for aggregating CFI projects and the implications for the roles of landholders and aggregators in delivering the project including ownership of carbon sequestration rights where relevant
- contract management
- public liability, personal and professional liability and duty of care
- managing risk
- relevant obligations under Australian Securities and Investments Commission legislation, including potential requirements for an Australian financial services license as well as registering and reporting requirements for managed investment funds
- circumstances when an Australian financial services license is required to provide advice about carbon farming credits

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• identify sources of finance</li> <li>• prepare suitable contractual arrangements with landholders</li> <li>• manage multiple projects</li> </ul>
Context of and specific resources for assessment	<p>Assessment must be undertaken in the context of the Carbon Farming Initiative.</p> <p>Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of the CFI as well as their ability to identify potential projects and develop a business case for an aggregated project.</p>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	<p>Assessment with other units relevant to the job role is recommended. The unit of competency can be assessed in the workplace or a simulated workplace environment.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.



Project aggregator includes:	A person who acquires the legal right to carry out a carbon farming project on someone else's land and/or facility and is the project proponent. As the project proponent the aggregator receives the carbon credits. The project may be undertaken on one or more parcels of land/facilities owned by different people and aggregated into one project. If the project is a sequestration project, the aggregator must acquire the carbon rights to the land
The form and means of aggregation includes:	the means of calculating baseline and project emissions; project mapping where relevant; and monitoring, data collection and reporting arrangements for multiple sites

## Unit Sector(s)

Carbon farming.

## AHCCFI506A Plan a Carbon Farming Initiative livestock project

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Unit Descriptor

This unit covers the process of managing the design, planning and costing of a Carbon Farming Initiative (CFI) project to avoid emissions from livestock.

### Application of the Unit

The unit applies to those who wish to manage the implementation of or provide advice on implementing an approved CFI methodology to avoid emissions from livestock. Note that the 'advice' referred to in this unit does not relate to financial advice which requires an Australian financial services license. This unit does not address the skills or the generic knowledge requirements in "ASIC Regulatory Guide 146: Training of Financial Product Advisors".

Application of this unit must cover the skills and knowledge to plan for projects to avoid emissions from livestock as approved CFI methodologies for them become available.

### Licensing/Regulatory Information

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

### Pre-Requisites

Nil.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the                      Performance criteria describe the performance needed to

essential outcomes of a unit of competency.

demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Manage the project design	1.1 Areas of expertise and specialist services required to carry out the project are identified 1.2 A design brief is prepared 1.3 Project design and contract arrangements are agreed 1.4 Site elements and features that impact on project design and establishment are assessed 1.5 The impact of project location on the type of carbon credits generated, where relevant, is ascertained 1.6 The impact of differing crediting and reporting periods on project planning and implementation is assessed 1.7 A design is prepared that describes the detailed features, specifications and approach of the project 1.8 The design is checked for compliance with the relevant approved methodology and CFI requirements and agreed with the stakeholder
2. Carry out preliminary planning activities	2.1 The responsibilities of owning and managing a CFI project are identified 2.2 Project design and contract requirements are confirmed 2.3 The availability and quantity of materials and resources listed in the project specifications are verified 2.4 The availability of personnel with appropriate expertise to assist with or undertake project work is confirmed
3. Prepare a project plan	3.1 Resources, tools, labour and equipment required for project implementation are identified 3.2 Project risks are assessed and controls are established 3.3 A project plan outlining allocation of resources, work tasks and timing is prepared 3.4 Interdependencies, seasonal factors and impacts are identified and incorporated in the staging strategy
4. Cost implementation works	4.1 Current prices for project resources, tools, labour and equipment required for project implementation are obtained 4.2 Unit and total cost for each item is calculated

- 4.3 Total project costs are accurately calculated and documented
- 4.4 Adjustments are made where required to reconcile costs with project budget
- 4.5 The costed plan is agreed with the project proponent
- 4.6 The costed plan is checked with the relevant auditor to ensure that the methods proposed in applying the methodology will meet audit requirements

## **Required Skills and Knowledge**

This section describes the skills and knowledge required for this unit.

## Required skills

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- communication skills to:
  - determine and confirm client requirements using questioning and active listening as required
  - liaise with others, share information, listen and understand
- literacy skills to:
  - read and interpret documentation from a variety of sources
  - analyse information to ensure currency, accuracy and appropriateness to client needs
  - complete documentation accurately
- research and analytical skills to access, interpret and manage complex information
- numeracy and IT skills to:
  - interpret financial information and calculate client costs
  - access and use appropriate software
  - use the internet to research information
- information management skills to capture and record key project information
- interpersonal skills to:
  - establish rapport with clients
  - liaise with other team members and specialists
  - establish networks with relevant technical experts
- judgement skills to:
  - apply ethical principles to decision making in the advisory process
  - form suitable recommendations when advising
- self-management and team coordination skills to comply with ethical, legal and procedural requirements
- organising and time-management skills to:
  - sequence tasks
  - meet timelines and deliver agreed outcomes
  - arrange meetings
- leadership skills to:
  - build an effective project team
  - lead the team in the implementation of the project
  - anticipate, plan and organise required materials and resources

## Required knowledge

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Knowledge of:

- *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations, particularly provisions relevant to project planning and implementation, and including relevant eligible activities on the positive list
- any regulatory guidance included on the Clean Energy Regulator website for the relevant methodologies

- the science of livestock digestion, rumen physiology, rumination and eructation
- details of approved CFI livestock methodologies including eligibility requirements, project area requirements, net abatement calculation requirements, monitoring, reporting and auditing requirements and further information sources
- current pricing and options for project resources, tools, equipment and contractors
- formats for organising and presenting financial, qualitative and quantitative information
- stocking and feed-based strategies for reducing livestock methane production
- best practice livestock management
- relevant animal welfare standards
- rumen manipulation techniques relevant to the methodologies
- information about project implementation or changes in environmental conditions that are required to determine whether the project remains within the scope of the methodology
- carbon accounting in the land sector
  - Australia's national carbon accounting framework
  - need for consistency of abatement calculations under the CFI with methods in the National Greenhouse and Energy Reporting determination and the National Inventory Report
  - requirements for measuring emissions from land-based sources relevant to the methodologies

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• manage the project design</li> <li>• plan the implementation of a CFI livestock project</li> <li>• prepare a project plan</li> <li>• cost implementation of the project</li> <li>• identify resources for a program of works</li> </ul>
Context of and specific resources for assessment	<p>Assessment must be undertaken in the context of the Carbon Farming Initiative.</p> <p>Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of approved livestock methodologies as well as their ability to provide accurate and up-to-date information</p>

	to others in a professional manner.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	Assessment with other units relevant to the job role is recommended. The unit of competency can be assessed in the workplace or a simulated workplace environment.

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Seasonal factors and impacts includes:	material handling, rainfall requirements, machinery use, fire hazards, growing conditions and establishment period
Design brief includes:	a brief that outlines project objectives, outcomes, scope, constraints and assumptions, dependencies, design options and preferred option, business case, success indicators, project approach and governance arrangements (including compliance requirements with the standards of the applicable auditor)
Positive list includes:	a register, contained in the CFI regulations, of abatement activities, that are eligible to earn carbon credits under the CFI

## **Unit Sector(s)**

Carbon farming.



## AHCCFI507A Plan a Carbon Farming Initiative waste or manure management project

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Unit Descriptor

This unit covers the process of managing the design, planning and costing of a Carbon Farming Initiative (CFI) project using a methodology approved under the CFI for the management of livestock manure, or waste that was deposited to landfill prior to 1 July 2012, or waste that would have been deposited to landfill prior to 1 July 2012 but was instead diverted to an alternative waste treatment facility.

### Application of the Unit

The unit applies to those who wish to manage the implementation of or provide advice on implementing a CFI project for the avoidance of emissions from livestock urine or dung, or waste that was deposited to landfill prior to 1 July 2012, or waste that would have been deposited to landfill prior to 1 July 2012 but was instead diverted to an alternative waste treatment facility.

Note that the 'advice' referred to in this unit does not relate to financial advice which requires a financial services license. This unit does not address the skills or the generic knowledge requirements in "ASIC Regulatory Guide 146: Training of Financial Product Advisors".

Application of this unit must cover the skills and knowledge to plan for projects as relevant approved CFI methodologies for them become available.

### Licensing/Regulatory Information

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

### Pre-Requisites

Nil.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Manage the project design process	1.1 Areas of expertise and specialist services required to carry out the project are identified 1.2 A design brief is prepared 1.3 Project design and contract arrangements are agreed 1.4 Site elements and features that impact on project design and establishment are assessed 1.5 The impact of project location on the type of carbon credits generated, where relevant, is ascertained 1.6 The impact of differing crediting and reporting periods on project planning and implementation is assessed 1.7 A design is prepared that describes the detailed features, specifications and approach of the project 1.8 The design is checked for compliance with the relevant approved methodology and CFI requirements and agreed with the stakeholder
2. Carry out preliminary planning activities	2.1 The responsibilities of owning and managing a CFI project are identified 2.2 Project design and contract requirements are confirmed 2.3 The availability and quantity of materials and resources listed in the project specifications are verified 2.4 The availability of personnel with appropriate expertise to assist with or undertake project work is confirmed
3. Prepare a staged plan of work	3.1 Resources, tools, labour and equipment required for project implementation are identified 3.2 Project risks are assessed and controls are established 3.3 A project plan outlining allocation of resources, work tasks

- and timing is prepare
- 3.4 Interdependencies, seasonal factors and impacts are identified and incorporated in the staging strategy
- 4.1 Cost implementation works
- 4.1 Current prices for project resources, tools, labour and equipment required for project implementation are obtained
- 4.2 Unit and total cost for each resource item is calculated
- 4.3 Total project costs are accurately calculated and documented
- 4.4 Adjustments are made where required to reconcile resource costs with project budget
- 4.5 The costed plan is agreed with the project proponent
- 4.6 The costed plan is checked with the relevant auditor to ensure that the methods proposed in applying the methodology will meet audit requirements

## **Required Skills and Knowledge**

This section describes the skills and knowledge required for this unit.

## Required skills

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- communication skills to:
  - determine and confirm client requirements using questioning and active listening as required
  - liaise with others, share information, listen and understand
- literacy skills to:
  - read and interpret documentation from a variety of sources
  - analyse information to ensure currency, accuracy and appropriateness to client needs
  - complete documentation accurately
- research and analytical skills to access, interpret and manage complex information
- numeracy and IT skills to:
  - interpret financial information and calculate costs and benefits of the project
  - access and use appropriate software
  - use the internet to research information
- information management skills to capture and record key project information
- interpersonal skills to:
  - establish rapport with clients
  - liaise with other team members and specialists
- judgement skills to:
  - apply ethical principles to decision making in the advisory process
  - form suitable recommendations when advising
- self-management skills to comply with ethical, legal and procedural requirements
- organising and time-management skills to:
  - sequence tasks
  - meet timelines and deliver agreed outcomes
  - arrange meetings
- leadership skills to:
  - build an effective project team
  - lead the team in the implementation of the project
  - anticipate, plan and organise required materials and resources

## Required knowledge

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Knowledge of:

- *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations, particularly provisions relevant to project planning and implementation, and including relevant eligible activities on the positive list
- any regulatory guidance included on the Clean Energy Regulator website for the relevant methodologies
- science of methane formation from waste and manure
- means of reducing methane emissions from landfill, including gas capture and flaring,

gas destruction in internal combustion engines and gas boilers, the use of bio-covers and bio-filters and other means including an understanding of the nature and purpose of the required equipment and processes

- means of reducing methane emissions from livestock manure, including gas capture and flaring, gas destruction in internal combustion engines, the use of bio-digestors and other means including an understanding of the nature and purpose of the required equipment and processes
- details of relevant approved CFI landfill gas, waste diversion and livestock manure management methodologies including eligibility requirements, project area requirements, net abatement calculation requirements, monitoring, reporting and auditing requirements and further information sources
- current pricing and options for project resources, tools, equipment and contractors
- formats for organising and presenting financial, qualitative and quantitative information
- carbon accounting in the waste and land sectors, including
  - Australia's national carbon accounting framework
  - need for consistency of abatement calculations under the CFI with methods in the National Greenhouse and Energy Reporting determination and the National Inventory Report
  - requirements for measuring emissions from land-based sources relevant to the methodologies
- *For landfill gas methodologies*
  - guidelines for calculating regulatory baselines for legacy waste landfill methane projects
  - CFI landfill gas calculator
  - CFI landfill methane regulatory baseline calculator
  - solid waste calculator
  - National Greenhouse and Energy Reporting (Measurement) Determination
- *For livestock manure management methodologies*
  - PigBal version specified on the Clean Energy Regulator website
  - Dairy Greenhouse Gas Abatement Strategies Calculator, Advisor version 1.4, produced by the Tasmanian Institute of Agricultural Research
  - Effluent and Manure Management Database for the Australian Dairy Industry published by Dairy Australia in 2008
  - an understanding of the daily operation of piggeries, dairies and other livestock operations as necessary to understand the context and application of the relevant methodologies

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• manage the project design process</li> <li>• plan the implementation of a landfill gas, waste diversion or livestock manure management project</li> <li>• prepare a project plan</li> <li>• identify resources for a program of works</li> <li>• cost implementation of the project</li> </ul>
Context of and specific resources for assessment	<p>Assessment must be undertaken in the context of the Carbon Farming Initiative.</p> <p>Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of approved landfill gas, waste diversion and livestock manure management methodologies and the knowledge required to plan their implementation, as their ability to provide accurate and up-to-date information to others in a professional manner.</p>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	<p>Assessment with other units relevant to the job role is recommended.</p> <p>The unit of competency can be assessed in the workplace or a simulated workplace environment.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may

<p>be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Seasonal factors and impacts include:</p>	<ul style="list-style-type: none"> <li>• material handling</li> <li>• rainfall requirements</li> <li>• machinery use</li> <li>• fire hazards</li> <li>• growing conditions</li> <li>• establishment period</li> </ul>
<p>Design brief includes:</p>	<p>a brief that outlines project objectives, outcomes, scope, constraints and assumptions, dependencies, design options and preferred option, business case, success indicators, project approach and governance arrangements (including compliance requirements with the standards of the applicable auditor)</p>
<p>Positive list includes:</p>	<p>a register, contained in the CFI regulations, of abatement activities, that are eligible to earn carbon credits under the CFI</p>

## Unit Sector(s)

Carbon farming.

## AHCCFI508A Plan a Carbon Farming Initiative project to sequester carbon in soil or biochar

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Unit Descriptor

This unit covers the process of managing the design, planning and costing of a Carbon Farming Initiative (CFI) project using a methodology approved under the CFI for the sequestration of carbon in soil or biochar.

### Application of the Unit

The unit applies to those who wish to manage the implementation of or provide advice on implementing a CFI soil carbon or biochar project.

Note that the 'advice' referred to in this unit does not relate to financial advice which requires an Australian financial services license. This unit does not address the skills or the generic knowledge requirements in ASIC Regulatory Guide 146: Training of Financial Product Advisors".

Application of this unit must cover the skills and knowledge to plan for projects as relevant approved CFI methodologies for them become available.

### Licensing/Regulatory Information

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

### Pre-Requisites

Nil.

### Employability Skills Information

This unit contains employability skills.



## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Manage the project design	<ul style="list-style-type: none"><li>1.1 Areas of expertise and specialist services required to carry out the project are identified</li><li>1.2 A design brief is prepared</li><li>1.3 Project design and contract arrangements are agreed</li><li>1.4 Site elements and features that impact on project design and establishment are assessed</li><li>1.5 The site is stratified as per the methodology requirements, if relevant</li><li>1.6 The impact of project location on the type of carbon credits generated, where relevant, is ascertained</li><li>1.7 The impact of differing crediting and reporting periods on project planning and implementation is assessed</li><li>1.8 A design is prepared that describes the detailed features, specifications and approach of the project</li><li>1.9 The design is checked for compliance with the relevant approved methodology and CFI requirements and agreed with the stakeholder</li></ul>
2. Carry out preliminary planning activities	<ul style="list-style-type: none"><li>2.1 The responsibilities of owning and managing a CFI project are identified</li><li>2.2 Project design and contract requirements are confirmed</li><li>2.3 A site visit to verify biophysical and environmental considerations is conducted</li><li>2.4 The availability, quantity and costs of materials and resources listed in the project specifications developed during project design are verified</li></ul>
3. Prepare a project plan	<ul style="list-style-type: none"><li>3.1 Resources, tools, labour and equipment required for project implementation are identified</li><li>3.2 Project risks are assessed and controls are established</li><li>3.3 A project plan outlining allocation of resources, work tasks</li></ul>

- and timing is prepared
- 3.4 Interdependencies, seasonal factors and impacts are identified and incorporated in the staging strategy
4. Cost implementation works
- 4.1 Current prices for project resources, tools, labour and equipment required for project implementation are obtained
  - 4.2 Unit and total cost for each resource item is calculated
  - 4.3 Total project costs are accurately calculated and documented
  - 4.4 Adjustments are made where required to reconcile resource costs with project budget
  - 4.5 The costed plan is agreed with the project proponent
  - 4.6 The costed plan is checked with the relevant auditor to ensure that the methods proposed in applying the methodology will meet audit requirements

## **Required Skills and Knowledge**

This section describes the skills and knowledge required for this unit.

## Required skills

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- communication skills to:
  - determine and confirm client requirements using questioning and active listening as required
  - negotiate financial service transactions with clients
  - liaise with others, share information, listen and understand
- literacy skills to:
  - read and interpret documentation from a variety of sources
  - analyse information to ensure currency, accuracy and appropriateness to client needs
  - complete documentation accurately
- research and analytical skills to access, interpret and manage complex information
- numeracy and IT skills to:
  - interpret financial information and calculate client costs
  - access and use appropriate software
  - use the internet to research information
- information management skills to capture and record key project information
- interpersonal skills to:
  - establish rapport with clients
  - liaise with other team members and specialists
  - establish networks with relevant technical experts
- judgement skills to:
  - apply ethical principles to decision making in the advisory process
  - form suitable recommendations when advising
- self-management skills to comply with ethical, legal and procedural requirements
- organising and time-management skills to:
  - sequence tasks
  - meet timelines and deliver agreed outcomes
  - arrange meetings
- leadership skills to:
  - build an effective project team
  - lead the team in the implementation of the project
  - anticipate, plan and organise required materials and resources

## Required knowledge

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Knowledge of:

- *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations, particularly provisions relating to the permanence of sequestration activities, including carbon maintenance obligation, and including relevant eligible activities on the positive list and provisions relevant to project planning and implementation
- any regulatory guidance included on the Clean Energy Regulator website for the relevant

methodologies

- details of approved CFI soil carbon and biochar methodologies including eligibility requirements, project area requirements, net abatement calculation requirements, monitoring, reporting and auditing requirements and further information sources
- science of sequestering and maintaining and measuring carbon in soil
- current pricing and options for project resources, tools, equipment and contractors
- formats for organising and presenting financial, qualitative and quantitative information
- overview of farm management practices that can enhance and maintain carbon sequestration in the soil
- overview of means of manufacturing biochar and the properties of various feedstocks
- information about project implementation or changes in environmental conditions that are required to determine whether the project remains within the scope of the methodology
- CFI guidelines for sampling and measuring soil carbon
- an understanding of geographic information systems (GIS)
- carbon accounting in the land sector, including:
  - Australia's national carbon accounting framework
  - need for consistency of abatement calculations under the CFI with methods in the National Greenhouse and Energy Reporting determination and the National Inventory Report
  - requirements for measuring emissions from land-based sources relevant to the methodologies

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: <ul style="list-style-type: none"> <li>• manage the project design</li> <li>• plan the implementation of a soil carbon or biochar project</li> <li>• prepare a project plan</li> <li>• identify resources for a program of works</li> <li>• cost implementation of the project</li> </ul>
Context of and specific resources for assessment	Assessment must be undertaken in the context of the Carbon Farming Initiative.  Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of

	approved cropping or soil methodologies as well as their ability to provide accurate and up-to-date information to others in a professional manner.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	Assessment with other units relevant to the job role is recommended. The unit of competency can be assessed in the workplace or a simulated workplace environment.

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Seasonal factors and impacts includes:	<ul style="list-style-type: none"> <li>• material handling</li> <li>• rainfall requirements</li> <li>• machinery use</li> <li>• fire hazards</li> <li>• growing conditions</li> <li>• establishment period</li> </ul>
Design brief includes:	a brief that outlines project objectives, outcomes, scope, constraints and assumptions, dependencies, design options and preferred option, business case, success indicators, project approach and governance arrangements (including compliance requirements with the standards of the applicable auditor)
Positive list includes:	a register, contained in the CFI regulations, of

	abatement activities, that are eligible to earn carbon credits under the CFI
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## Unit Sector(s)

Carbon farming.

## AHCCFI509A Plan a Carbon Farming Initiative savannah burning, feral animal or rangelands project

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Unit Descriptor

This unit covers the process of managing the design planning and costing of a Carbon Farming Initiative (CFI) project using a methodology approved under the CFI for avoiding emissions from savannah burning or feral animals or a project for avoiding emissions or sequestering carbon in the rangelands.

### Application of the Unit

The unit applies to those who wish to manage the implementation of or provide advice on implementing a CFI savannah burning, feral animal or rangelands project.

Application of this unit must cover the skills and knowledge to plan for savannah burning and feral animal and rangelands projects as approved CFI methodologies for them become available.

Note that the 'advice' referred to in this unit does not relate to financial advice which requires an Australian financial services license. This unit does not address the skills or the generic knowledge requirements in "ASIC Regulatory Guide 146: Training of Financial Product Advisors".

### Licensing/Regulatory Information

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

### Pre-Requisites

Nil

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Manage the project design process	<p>1.1 Areas of expertise and specialist services required to carry out the project are identified</p> <p>1.2 A design brief is prepared</p> <p>1.3 Project design and contract arrangements are agreed</p> <p>1.4 Site elements and features that impact on project design and establishment are assessed</p> <p>1.5 The impact of project location on the type of carbon credits generated, where relevant, is ascertained</p> <p>1.6 The impact of differing crediting and reporting periods on project planning and implementation is assessed</p> <p>1.7 A design is prepared that describes the detailed features, specifications and approach of the project</p> <p>1.8 The design is checked for compliance with the relevant approved methodology and CFI requirements and agreed with the stakeholder</p>
2. Carry out preliminary planning activities	<p>2.1 The responsibilities of owning and managing a CFI project are identified</p> <p>2.2 Project design and contract requirements are confirmed</p> <p>2.3 The availability and quantity of materials and resources listed in the project specifications are verified</p> <p>2.4 The availability of personnel with appropriate expertise to assist with or undertake project work is confirmed</p>
3. Prepare a project plan	<p>3.1 Resources, tools, labour and equipment required for project implementation are identified</p> <p>3.2 Project risks are assessed and controls are established</p> <p>3.3 A project plan outlining allocation of resources, work tasks</p>



- and timing is prepared
- 3.4 Interdependencies, seasonal factors and impacts are identified and incorporated in the staging strategy
4. Cost implementation works
- 4.1 Current prices for project resources, tools, labour and equipment required for project implementation are obtained
  - 4.2 Unit and total cost for each resource item is calculated
  - 4.3 Total project costs are accurately calculated and documented
  - 4.4 Adjustments are made where required to reconcile costs with project budget
  - 4.5 The costed plan is agreed with the project proponent
  - 4.6 The costed plan is checked with the relevant auditor to ensure that the methods proposed in applying the methodology will meet audit requirements

## **Required Skills and Knowledge**

This section describes the skills and knowledge required for this unit.

## Required skills

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- communication skills to:
  - determine and confirm client requirements using questioning and active listening as required
  - negotiate financial service transactions with clients
  - liaise with others, share information, listen and understand
- literacy skills to:
  - read and interpret documentation from a variety of sources
  - analyse information to ensure currency, accuracy and appropriateness to client needs
  - complete documentation accurately
- research and analytical skills to access, interpret and manage complex information
- numeracy and IT skills to:
  - interpret financial information and calculate client costs
  - use the internet to research information
  - use a geographic information system to interpret fire mapping products
  - use a spreadsheet to calculate annual emissions from fire on a project
  - drive an automated savannah burning methodology tool
- information management skills to capture and record key project information
- interpersonal skills to:
  - establish rapport with clients
  - liaise with other team members and specialists
  - establish networks with relevant technical experts
- judgement skills to:
  - apply ethical principles to decision making in the advisory process
  - form suitable recommendations when advising
- self-management skills to comply with ethical, legal and procedural requirements
- organising and time-management skills to:
  - sequence tasks
  - meet timelines and deliver agreed outcomes
  - arrange meetings
- leadership skills to:
  - build an effective project team
  - lead the team in the implementation of the project
  - anticipate, plan and organise required materials and resources

## Required knowledge

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Knowledge of:

- *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations, particularly provisions relevant to project planning and implementation, and including relevant

eligible activities on the positive list

- any regulatory guidance included on the Clean Energy Regulator website for the relevant methodologies
- details of relevant approved CFI savanna burning, feral animal and rangelands methodologies including eligibility requirements, project area requirements, net abatement calculation requirements, monitoring, reporting and auditing requirements and further information sources
- dealing with multiple land interest holders (e.g. Indigenous groups, pastoralists and the Crown)
- carbon rights protocols for exclusive and non exclusive native title holders
- consent rights for native title, Crown land and mining leases
- funding arrangements for assisting Indigenous communities in establishing or participating in carbon farming projects
- sources of culturally relevant materials and verbal information
- history, cultural protocols and perspectives of indigenous stakeholders in the area
- current relationships between culturally diverse groups in the area
- current pricing and options for project resources, tools, equipment and contractors
- formats for organising and presenting financial, qualitative and quantitative information
- public liability and legal responsibilities
- personal and professional liability
- duty of care
- managing environmental risk
- workplace health and safety
- carbon accounting in the land sector, including:
  - Australia's national carbon accounting framework
  - need for consistency of abatement calculations under the CFI with methods in the National Greenhouse and Energy Reporting determination and the National Inventory Report
  - requirements for measuring emissions from land-based sources relevant to the methodologies
- *For savannah burning methodologies*
  - detailed understanding about fire behaviour in the landscapes covered by the savanna burning methodology, including how to obtain and understand the fire history of the site, the effects of burning the site at various times of the year, the effects of burning the site's various vegetation communities, the effects of burning the site at different times of the day
  - how to plan and implement a large scale program of strategic fire management
  - Geographic Information System operation, including how to operate the North Australian Fire Information website ([www.firenorth.org.au](http://www.firenorth.org.au))
  - and experience in fire prevention, precautions, control and management in rural situations as applied in district Rural Fire services
  - community building and coordination in the management of implementation of fire burning projects affecting nearby towns, part time farmers, conservationists and local authorities

- remote sensing
- mapping requirements including vegetation maps, monthly fire maps and seasonal fire maps
- vegetation classes, characteristic species and substrates
- geographic information systems (GIS)
- automated savannah burning methodology tool (once it has been developed in mid 2013)
- *For feral animal methodologies*
  - aerial survey and data recording
  - geographic information systems (GIS)
  - relevant animal welfare standards
  - feral animal population dynamics and ecology in the project area
  - relevant licences, permits and legislation regarding feral animal control
  - population dynamics and ecology for the relevant feral animals in the project area
- *For rangelands methodologies*, geographic information systems (GIS)

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• manage the project design process</li> <li>• plan the implementation of a savannah burning, feral animal or rangelands project</li> <li>• prepare a project plan</li> <li>• identify resources for a program of works</li> <li>• cost implementation of the project</li> </ul>
Context of and specific resources for assessment	<p>Assessment must be undertaken in the context of the Carbon Farming Initiative.</p> <p>Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of approved savannah burning, feral animal and rangelands methodologies and the knowledge required to plan their implementation, as well as their ability to provide accurate and up-to-date information to others in a professional manner.</p>

Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	<p>Assessment with other units relevant to the job role is recommended.</p> <p>The unit of competency can be assessed in the workplace or a simulated workplace environment.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Seasonal factors and impacts include:	<ul style="list-style-type: none"> <li>• material handling</li> <li>• rainfall requirements</li> <li>• machinery use</li> <li>• fire hazards</li> <li>• growing conditions</li> <li>• establishment period</li> </ul>
Design brief includes:	<p>a brief that outlines project objectives, outcomes, scope, constraints and assumptions, dependencies, design options and preferred option, business case, success indicators, project approach and governance arrangements (including compliance requirements with the standards of the applicable auditor)</p>
Positive list includes:	<p>a register, contained in the CFI regulations, of abatement activities, that are eligible to earn carbon credits under the CFI</p>

## Unit Sector(s)

Carbon farming.

# AHCCFI510A Plan a Carbon Farming Initiative vegetation project

## Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

## Unit Descriptor

This unit covers the process of managing the design, planning and costing of a project using an approved Carbon Farming Initiative (CFI) vegetation methodology such as the permanent environmental planting of native species.

## Application of the Unit

The unit applies to those who wish to manage the implementation of or provide advice on implementing a vegetation methodology approved for the CFI.

Note that the 'advice' referred to in this unit does not relate to financial advice which requires an Australian financial services license. This unit does not address the skills or the generic knowledge requirements in "ASIC Regulatory Guide 146: Training of Financial Product Advisors".

Application of this unit must cover the skills and knowledge to plan for projects as relevant approved CFI methodologies for them become available.

## Licensing/Regulatory Information

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

## Pre-Requisites

Nil.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Manage the project design process	1.1 Areas of expertise and specialist services required to carry out the project are identified 1.2 A design brief is prepared 1.3 Project design and contract arrangements are agreed 1.4 Site elements and features that impact on project design and establishment are assessed 1.5 The site is stratified as per the methodology requirements 1.6 The impact of project location on the type of carbon credits generated, where relevant, is ascertained 1.7 The impact of differing crediting and reporting periods on project planning and implementation is assessed 1.8 A design is prepared that describes the detailed features, specifications and approach of the project 1.9 The design is checked for compliance with the relevant approved methodology and CFI requirements and agreed with the stakeholder
2. Carry out preliminary planning activities	2.1 The responsibilities of owning and managing a CFI project are identified 2.2 Project design and contract requirements are confirmed 2.3 The availability, quantity and costs of materials and resources listed in the project specifications developed during project design are verified
3. Prepare a staged plan of work	3.1 Resources, tools, labour and equipment required for project implementation are identified 3.2 Project risks are assessed and controls are established 3.3 A project plan outlining allocation of resources, work tasks and timing is prepared 3.4 Interdependencies, seasonal factors and impacts are



- identified and incorporated in the staging strategy
4. Cost implementation works
    - 4.1 Current prices for project resources, tools, labour and equipment required for project implementation are obtained
    - 4.2 Unit and total cost for each resource item is calculated
    - 4.3 Total project costs are accurately calculated and documented
    - 4.4 Adjustments are made where required to reconcile resource costs with project budget
    - 4.5 The costed plan is agreed with the project proponent
    - 4.6 The costed plan is checked with the relevant auditor to ensure that the methods proposed in applying the methodology will meet audit requirements

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

## Required skills

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- communication skills to:
  - determine and confirm client requirements using questioning and active listening as required
  - liaise with others, share information, listen and understand
- literacy skills to:
  - read and interpret documentation from a variety of sources
  - analyse information to ensure currency, accuracy and appropriateness to client needs
  - complete documentation accurately
- research and analytical skills to access, interpret and manage complex information
- numeracy and IT skills to:
  - interpret financial information and calculate client costs
  - access and use appropriate software
  - use the internet to research information
- information management skills to capture and record key project information
- interpersonal skills to:
  - establish rapport with clients
  - liaise with other team members and specialists
  - establish networks with relevant technical experts
- judgement skills to:
  - apply ethical principles to decision making in the advisory process
  - form suitable recommendations when advising
- self-management skills to comply with ethical, legal and procedural requirements
- organising and time-management skills to:
  - sequence tasks
  - meet timelines and deliver agreed outcomes
  - arrange meetings
- leadership skills to:
  - build an effective project team
  - lead the team in the implementation of the project
  - anticipate, plan and organise required materials and resources

## Required knowledge

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Knowledge of:

- *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations, particularly provisions relating to the definition and eligibility of crediting periods for vegetation based activities and permanence requirements for sequestration activities, and including relevant eligible activities on the positive list and provisions relevant to project planning and implementation
- any regulatory guidance included on the Clean Energy Regulator website for the relevant

methodologies

- approved vegetation based methodologies under the CFI including eligibility requirements, project area requirements, net abatement calculation requirements, monitoring, reporting and auditing requirements and further information sources
- the science of sequestering and maintaining carbon in vegetation
- current pricing and options for project resources, tools, equipment and contractors
- formats for organising and presenting financial, qualitative and quantitative information
- overview of forestry and farm management practices that can enhance and maintain carbon sequestration in vegetation
- geographic information systems (GIS)
- remote sensing
- CFI Mapping Tool and CFI Rainfall Map
- Reforestation Modelling Tool and FULLCAM
- guidelines for the development of field-based reforestation methodologies: Part 1: Methodologies that use single tree allometrics and sample-based estimates of dependent variables
- carbon accounting in the land sector, including:
  - Australia's national carbon accounting framework
  - need for consistency of abatement calculations under the CFI with methods in the National Greenhouse and Energy Reporting determination and the National Inventory Report
  - requirements for measuring emissions from land-based sources relevant to the methodologies

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• manage the project design process</li> <li>• plan the implementation of a vegetation project</li> <li>• prepare a project plan</li> <li>• identify resources for a program of works</li> <li>• cost the implementation of the project</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Assessment must be undertaken in the context of the Carbon Farming Initiative.</p> <p>Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of</p>

	approved vegetation methodologies as well as their ability to provide accurate and up-to-date information to others in a professional manner.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	<p>Assessment with other units relevant to the job role is recommended.</p> <p>The unit of competency can be assessed in the workplace or a simulated workplace environment.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Seasonal factors and impacts include:	<ul style="list-style-type: none"> <li>• material handling</li> <li>• rainfall requirements</li> <li>• machinery use</li> <li>• fire hazards</li> <li>• growing conditions</li> <li>• establishment period</li> </ul>
Design brief includes:	a brief that outlines project objectives, outcomes, scope, constraints and assumptions, dependencies, design options and preferred option, business case, success indicators, project approach and governance arrangements (including compliance requirements with the standards of the applicable auditor)

Positive list includes:	a register, contained in the CFI regulations, of abatement activities, that are eligible to earn carbon credits under the CFI
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## Unit Sector(s)

Carbon farming.

## AHCCFI511A Plan a Carbon Farming Initiative project to avoid emissions from soil or crops

### Modification History

Release	TP Version	Comments
1	AHC10v6	Initial release

### Unit Descriptor

This unit covers the process of managing the design, planning and costing of a Carbon Farming Initiative (CFI) project using a methodology approved under the CFI to avoid greenhouse gas emissions from soil, the burning of crop residues or rice fields or rice plants.

### Application of the Unit

The unit applies to those who wish to manage the implementation of or provide advice on implementing a CFI project to avoid emissions of methane or nitrous oxide from soil, burning crop residues or rice fields or rice plants.

Note that the 'advice' referred to in this unit does not relate to financial advice which requires an Australian financial services license. This unit does not address the skills or the generic knowledge requirements in "ASIC Regulatory Guide 146: Training of Financial Product Advisors".

Application of this unit must cover the skills and knowledge to plan for projects to avoid emissions from soil or crops as approved CFI methodologies for them become available.

### Licensing/Regulatory Information

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

### Pre-Requisites

Nil.

## Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

### Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Manage the project design	1.1 Areas of expertise and specialist services required to carry out the project are identified 1.2 A design brief is prepared 1.3 Project design and contract arrangements are agreed 1.4 Site elements and features that impact on project design and establishment are assessed 1.5 The impact of project location on the type of carbon credits generated, where relevant, is ascertained 1.6 The impact of differing crediting and reporting periods on project planning and implementation is assessed 1.7 A design is prepared that describes the detailed features, specifications and approach of the project 1.8 The design is checked for compliance with the relevant approved methodology and CFI requirements and agreed with the stakeholder
2. Carry out preliminary planning activities	2.1 The responsibilities of owning and managing a CFI project are identified 2.2 Project design and contract requirements are confirmed 2.3 The availability and quantity of materials and resources listed in the project specifications are verified 2.4 The availability of personnel with appropriate expertise to assist with or undertake project work is confirmed
3. Prepare a project plan	3.1 Resources, tools, labour and equipment required for project implementation are identified 3.2 Project risks are assessed and controls are established 3.3 A project plan outlining allocation of resources, work tasks

- and timing is prepared
- 3.4 Seasonal factors, impacts and interdependencies are identified and incorporated in the staging strategy
4. Cost implementation works
- 4.1 Current prices for project resources, tools, labour and equipment required for project implementation are obtained
  - 4.2 Unit and total cost for each resource item is calculated
  - 4.3 Total project costs are accurately calculated and documented
  - 4.4 Adjustments are made where required to reconcile resource costs with project budget
  - 4.5 The costed plan is agreed with the project proponent
  - 4.6 The costed plan is checked with the relevant auditor to ensure that the methods proposed in applying the methodology will meet audit requirements

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.



## Required skills

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- communication skills to:
  - determine and confirm client requirements using questioning and active listening as required
  - negotiate financial service transactions with clients
  - liaise with others, share information, listen and understand
- literacy skills to:
  - read and interpret documentation from a variety of sources
  - analyse information to ensure currency, accuracy and appropriateness to client needs
  - complete documentation accurately
- research and analytical skills to access, interpret and manage complex information
- numeracy and IT skills to:
  - interpret financial information and calculate client costs
  - access and use appropriate software
  - use internet to research information
- interpersonal skills to:
  - establish rapport with clients
  - liaise with other team members and specialists
  - establish networks with relevant technical experts
- judgement skills to:
  - apply ethical principles to decision making in the advisory process
  - form suitable recommendations when advising
- self-management skills to comply with ethical, legal and procedural requirements
- organising and time-management skills to:
  - sequence tasks
  - meet timelines
  - arrange meetings
- leadership skills to:
  - build an effective project team
  - lead the team in the implementation of the project
  - anticipate, plan and organise required materials and resources

## Required knowledge

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Knowledge of:

- *Carbon Credits (Carbon Farming Initiative) Act 2011* and regulations, particularly provisions relevant to project planning and implementation, and including relevant eligible activities on the positive list
- any regulatory guidance included on the Clean Energy Regulator website for the relevant methodologies
- details of approved CFI methodologies to avoid emissions from soil, burning crop

residues and rice crops including eligibility requirements, project area requirements, net abatement calculation requirements, monitoring, reporting and auditing requirements and further information sources

- current pricing and options for project resources, tools, equipment and contractors
- formats for organising and presenting financial, qualitative and quantitative information
- information about project implementation or changes in environmental conditions that are required to determine whether the project remains within the scope of the methodology
- carbon accounting in the land sector, including:
  - Australia's national carbon accounting framework
  - need for consistency of abatement calculations under the CFI with methods in the National Greenhouse and Energy Reporting determination and the National Inventory Report
  - requirements for measuring emissions from land-based sources relevant to the methodologies
- *For methodologies to reduce emissions from soil*
  - best management practices and any relevant regulatory requirements for reducing emissions from nitrogen based fertiliser use
  - the science of releasing greenhouse gas emissions from the soil
- *For methodologies to reduce emissions from burning crop residues*
  - the soil processes affecting methane and nitrous oxide evolution in the particular crop system (different in aerobic [e.g. sugar cane] versus partly anaerobic or facultative systems [e.g. rice])
  - the reasons for burning, its timing and factors affecting intensity
  - and experience in fire prevention, precautions, control and management in rural situations as applied in district Rural Fire services
  - community building and coordination in the management of implementation of fire burning projects affecting nearby towns, part time farmers, conservationists and local authorities
- *For methodologies to reduce emissions from burning rice fields and rice plants:* best management practices for reducing methane (and nitrous oxide) in rice production

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate	Evidence of the ability to: <ul style="list-style-type: none"> <li>• manage the project design</li> </ul>

competency in this unit	<ul style="list-style-type: none"> <li>• plan the implementation of a project to avoid emissions from soil, burning crop residues or rice crops</li> <li>• prepare a project plan</li> <li>• identify resources for a program of works</li> <li>• cost implementation of the project</li> </ul>
Context of and specific resources for assessment	<p>Assessment must be undertaken in the context of the Carbon Farming Initiative.</p> <p>Assessment resources must be developed to determine the candidate's depth and breadth of knowledge of approved methodologies to avoid emissions from soil, burning crop residues or rice crops as well as their ability to provide accurate and up-to-date information to others in a professional manner.</p>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observing processes and procedures in workplaces</li> <li>• oral or written questioning on required knowledge and skills</li> <li>• evaluating workplace documents and samples of work</li> <li>• simulated projects, scenarios or case studies</li> <li>• obtaining and validating third party references and reports</li> </ul>
Guidance information for assessment	<p>Assessment with other units relevant to the job role is recommended.</p> <p>The unit of competency can be assessed in the workplace or a simulated workplace environment.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Seasonal factors and impacts includes:	<ul style="list-style-type: none"> <li>• material handling,</li> <li>• rainfall requirements</li> <li>• machinery use</li> </ul>
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	<ul style="list-style-type: none"><li>• fire hazards</li><li>• growing conditions</li><li>• establishment period</li></ul>
Design brief includes:	a brief that outlines project objectives, outcomes, scope, constraints and assumptions, dependencies, design options and preferred option, business case, success indicators, project approach and governance arrangements (including compliance requirements with the standards of the applicable auditor)
Positive list includes:	a register, contained in the CFI regulations, of abatement activities, that are eligible to earn carbon credits under the CFI

## Unit Sector(s)

Carbon farming.

## AHCCHM101A Follow basic chemical safety rules

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers following basic chemical safety rules and defines the standard required to: interpret chemical safety rules; follow safety instructions including handling and storage; use personal protective equipment and communicate information about spillage or accidents.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the observance of basic chemical safety rules. including those about labels, transport, handling, storage and personal protective equipment.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Follow workplace requirements and instructions concerning chemicals	1.1.Roles and responsibilities of people in the workplace are identified. 1.2.Safety procedures involved in chemical handling and use are recognised and followed as required. 1.3.Occupational Health and Safety (OHS) hazards are identified and reported to the supervisor. 1.4.Organisational procedures are followed with regard to chemicals.
2. Recognise risks associated with chemicals	2.1.Functions of chemicals in the workplace are recognised. 2.2.Chemical labels and symbols are recognised and hazards identified. 2.3.Chemical storage locations are identified. 2.4.Instructions for transport, handling and storage of chemicals are recognised and observed. 2.5.Instructions for use, maintenance and storage of personal protective equipment and application equipment are identified and observed.
3. Follow chemical handling and storage rules	3.1.Chemical handling and storage instructions on labels are followed. 3.2.Safety rules are followed when working in areas where chemicals are stored. 3.3.Appropriate personal protection equipment is obtained and used when working in areas where chemicals are stored. 3.4.Procedures are followed in the event of an accident or spillage.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret labels and instructions
- follow workplace instructions and directions from the chemical label or Material Safety Data Sheets (MSDSs)
- communicate information about spillages, accidents or deficiencies in procedures and practice
- use appropriate Personal Protective Equipment (PPE)
- recognise caution or hazard signs and symbols
- interpret tasks or information from labels, manuals or written instructions
- record information accurately or verbally report information
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- basic occupational health&safety rules required to work near and around chemicals
- level of hazard and the Poisons Schedule in the relevant State or Territory
- chemicals being used for the control of pests and weeds
- personal protection equipment and when and how it should be used, stored and maintained
- correct wearing/fit of personal protective equipment
- environmental impacts of chemical use
- OHS, environmental and pesticides legislation and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret chemical safety rules</li> <li>• follow safety instructions including handling and storage</li> <li>• use personal protective equipment</li> <li>• communicate information about spillage or accidents.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Safety rules may include:	<ul style="list-style-type: none"> <li>• those about labels</li> <li>• transport</li> <li>• handling</li> <li>• storage</li> <li>• personal protective equipment.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Chemicals
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCCHM201A Apply chemicals under supervision

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of applying chemicals under supervision using handheld or small powered equipment, and defines the standard required to: apply chemicals using handheld or small powered equipment; check, prepare, use and maintain application equipment and personal protective equipment; measure, mix, transport, handle store and dispose of chemicals and comply with Occupational Health and Safety (OHS), chemical label and Material Safety Data Sheets (MSDSs) requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under supervision with reference to the product label, legislation and enterprise procedures. This unit may be deemed to have a time limit when used as part of an accreditation or licence process.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Check application and personal protective equipment	<p>1.1. Carry out pre-operational checks of application equipment in accordance with manufacturer's specification and OHS requirements.</p> <p>1.2. Prepare application equipment for use in accordance with manufacturer's specification and directions.</p> <p>1.3. Identify and replace any damaged or worn components.</p> <p>1.4. Check personal protective equipment in accordance with manufacturer's specification and OHS requirements.</p>
2. Prepare application equipment	<p>2.1. Apply label information regarding precautions for the chemical mix/substance being used.</p> <p>2.2. Select and use appropriate personal protective and mixing equipment in accordance with MSDSs and chemical label.</p> <p>2.3. Measure, mix and load chemical mix or substances in accordance with directions on chemical label.</p> <p>2.4. Follow legislative and regulatory requirements regarding chemical use including OHS.</p> <p>2.5. Confirm instructions from chemical MSDSs in the event of a spill.</p> <p>2.6. Check that output of application equipment is correct and in accordance with application/spray plan.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Apply chemicals	3.1. Assess and record meteorological conditions and forecasts prior to and during application. 3.2. Select and use appropriate personal protective equipment in accordance with MSDSs and chemical label. 3.3. Apply chemical in accordance with the application/spray plan and/or instructions. 3.4. Assess and minimise risks to others, product integrity and the environment prior to and during application.
4. Finalise work	4.1. Clean and store Personal Protective Equipment (PPE) and application equipment in accordance with manufacturer's specification and OHS requirements. 4.2. Dispose of excess chemicals and use triple rinse drums in accordance with label and MSDSs requirements. 4.3. Complete incident reports as required in accordance with legislative and/or regulatory requirements. 4.4. Complete application records. 4.5. Store unused chemical/products in accordance with label requirements and MSDSs. 4.6. Adhere to all re-entry and withholding periods.
5. Transport and handle chemical	5.1. Confirm precautions for the transport and handling of chemicals. 5.2. Transport and handle chemicals in accordance with legislative and/or regulatory requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- conduct pre-operational checks of application equipment
- use and maintain personal protective equipment
- measure, mix and load chemical mixes

**REQUIRED SKILLS AND KNOWLEDGE**

- use hand held and small powered application equipment relevant to the industry sector using safe and environmentally responsible work practices
- interpret labels, record relevant information and measure application amounts
- follow chemical label requirements and application/spray plan
- record activities and maintain records
- transport and handling techniques
- respond to emergencies and apply first aid in the event of pesticide poisoning
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- applied principles of Integrated Pest/Resistance Management
- structure of chemical label and MSDS
- types, applications, storage and fitting of personal protective equipment
- legislation and regulations including OHS and licensing requirements in relation to chemical use
- features and functions of a range of application equipment relevant to the industry sector
- risk factors including human and animal health, spillage and environmental
- principles of transport, handling and storage for chemicals
- requirements for disposal of excess chemicals, clearing spillages and equipment clean up
- transport and handling requirements
- environmental effects of selected chemicals and how to minimise damaging effects of chemicals
- different broad chemical types, eg, insecticides, herbicides and fungicides and their mode of action symbols on the label
- paths of entry of poisons into the body and methods of limiting exposure
- methods of minimising risk during application
- Regulations and Codes of Practices with regard to hazardous substances of the use of chemicals
- OHS concerning personal safety and safety of others in the workplace
- alternatives to chemicals for pest management
- possible effects on health of bystanders/public in addition to applicators
- weather conditions and means of assessing them in line with risks, and recognising when they become unsuitable for application to continue.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• apply chemicals using handheld or small powered equipment</li> <li>• check, prepare, use and maintain application equipment and personal protective equipment</li> <li>• measure, mix, transport, handle store and dispose of chemicals</li> <li>• comply with OHS, chemical label and MSDSs requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Chemicals may include:	<ul style="list-style-type: none"> <li>• the application of liquid chemical mixes</li> <li>• granular products</li> <li>• and/or biological agents used in the control of pest, weeds and diseases including animal health products.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Chemicals
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCCHM301A Conduct fumigation in enclosed spaces

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of fumigation of grain, seed, crops and plants in enclosed spaces and defines the standard required to: assess the need for fumigation; select appropriate fumigant and application method; prepare and monitor storage facility and equipment; apply fumigant; restore facility and clean equipment; record work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to the control of insects and other pests by means of fumigation of grain and seed in storage and crops and plants grown in protected environments. These storage areas and protected environments may be deemed to be confined spaces "in situ" or be deemed to be confined spaces because of the impact of the fumigation activities.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess the need for fumigation.	1.1. Ascertain the threshold level of infestation against quality requirements and industry practice. 1.2. Determine the need for fumigation as an option within an Integrated Pest Management (IPM) and IRM strategy. 1.3. Determine the appropriate fumigation method with regard to pest type, facility and storage/growing conditions. 1.4. Undertake a cost-benefit analysis of fumigation.
2. Determine type and method of fumigation	2.1. Select method of fumigant application to suit type of pests, facility and grain/plant type in accordance with manufacturer's specifications, environmental, legislative, Occupational Health and Safety (OHS) requirements and industry practice. 2.2. Determine type of fumigant and application rate in accordance with manufacturer's specifications, standards and environmental, legislative, OHS and industry practice. 2.3. Assess appropriateness of facility and conditions for selected fumigation method. 2.4. Identify and report any factors affecting the safe application of fumigants. 2.5. Determine facility capacity to ensure fumigation conditions are in accordance with manufacturer's

ELEMENT	PERFORMANCE CRITERIA
	specifications and environmental, legislative, OHS and industry practice.
3. Prepare storage facility for fumigation	<p>3.1. Assess hazards and control risks in relation to the use of fumigants in accordance with legislative, environmental, OHS requirements and industry practice.</p> <p>3.2. Establish security measures to control access during fumigation and prescribed re-entry periods in accordance with label directions.</p> <p>3.3. Erect signage and barriers to control risk of inadvertent entry to facility.</p> <p>3.4. Apply sealing methods as appropriate to contain fumigant in accordance with label and industry practice.</p> <p>3.5. Check seal, calculate volume of storage facility, and take appropriate measurement to ensure the required concentration of fumigant is retained in accordance with label directions.</p> <p>3.6. Set up emergency and confined spaces systems in accordance with legislative and OHS and requirements.</p>
4. Prepare application equipment and fumigant(s)	<p>4.1. Select and use appropriate personal protective equipment in accordance with label and Material Safety Data Sheets (MSDSs) requirements.</p> <p>4.2. Select application equipment appropriate for the fumigation in accordance with label directions and industry practice.</p> <p>4.3. Check operational effectiveness of equipment in accordance with manufacturer's specifications and industry practice.</p> <p>4.4. Calibrate fumigation equipment to application rate in accordance with label directions.</p> <p>4.5. Prepare fumigant in accordance with label legislative and OHS requirements and industry practice.</p>
5. Conduct fumigation	<p>5.1. Apply fumigation using appropriate equipment, fumigation methods and sealing methods in accordance with label and industry practice.</p> <p>5.2. Respond to emergency situations using emergency response procedures in accordance with legislative and OHS requirements and industry practice.</p>
6. Monitor fumigation	6.1. Monitor fumigation site during exposure time and

ELEMENT	PERFORMANCE CRITERIA
	<p>ventilation to prevent unauthorised access in accordance with legislative and OHS requirements and industry practice.</p> <p>6.2. Maintain integrity of seals throughout the active fumigation period in accordance with label, legislative and OHS requirements and industry practice.</p>
7. Ventilate storage facility	<p>7.1. Establish ventilation and re-entry times and control risks to public health and safety in accordance with label, legislative, OHS requirements and industry practice.</p> <p>7.2. Ventilate facility to remove fumigant in a safe and controlled manner in accordance with label, legislative, OHS and industry practice.</p> <p>7.3. Test for evidence of residual gas using appropriate equipment.</p> <p>7.4. Notify appropriate person(s) of any further risk control measures required in accordance with label, legislative, OHS and industry practice.</p>
8. Restore storage facility	<p>8.1. Collect and remove all equipment, fumigants and waste in accordance with label, legislative, OHS and industry practice.</p> <p>8.2. Remove signage and barriers when facility is available for re-use in accordance with legislative and industry practice.</p> <p>8.3. Restore storage facility in accordance with legislative and industry practice.</p>
9. Clean, safety-check and store equipment and fumigants	<p>9.1. Clean, decontaminate, check and store equipment and Personal Protective Equipment (PPE) in accordance with manufacturer's specifications, OHS and industry practice.</p> <p>9.2. Transport and store fumigants in accordance with label, OHS and industry practice.</p> <p>9.3. Dispose of all waste in accordance with label, legislative, OHS environmental and industry practice.</p>
10. Record fumigation details	<p>10.1. Record details of fumigant applications in accordance with legislative and quality assurance requirements and industry practice.</p> <p>10.2. Record and report gas escapes, safety incidents or poisoning to the appropriate person or authority in accordance with legislative</p>

ELEMENT	PERFORMANCE CRITERIA
	requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare fumigants
- conduct pre-operational checks, clean up and storage of fumigation equipment and PPE
- prepare and seal facility
- set up and calibrate fumigation equipment
- apply fumigants
- check for residual fumigant gas
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- primary and secondary pests relevant to grain, seed, crops or plants to be treated
- threshold pest levels and cost benefit options
- fumigant free options for pest control including Integrated Pest/Resistance Management principles
- fumigant label and MSDSs formats
- interpretation and application of fumigant label requirements
- factors and considerations in relation fumigation of relevant grain, seed, crops and plants
- techniques for sealing facility
- types and application of personal protective equipment
- legislation and regulations including OHS and licensing requirements in relation to fumigant use

**REQUIRED SKILLS AND KNOWLEDGE**

- confined space regulations including, signage, gas detection and entry procedures
- features, functions, calibration and set up of fumigation equipment
- risk factors including human and animal health, weather, leakage, spillage and environmental
- assessment of residual gas and safe re-entry periods
- consequence of fumigant residues and Maximum Residue Limits (MRLs)
- ventilation processes
- requirements for disposal of excess fumigants, clearing spillages and equipment clean up.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess the need for fumigation
- select appropriate fumigant and application method
- prepare and monitor storage facility and equipment
- apply fumigant
- restore facility and clean equipment
- record work activities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Operating procedures may include:	<ul style="list-style-type: none"> <li>Standard Operating Procedures (SOPs) used for fumigation in storage areas and in protected environments.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Chemicals
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCCHM302A Fumigate soil using chemicals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of fumigation of soil and/or media using chemicals and defines the standard required to: assess the need for fumigation; select appropriate fumigant and application method; prepare and clean equipment; apply fumigant; record work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the control of microbiological and other pests in soil or growing media by means of chemical fumigation. The standard involves applying well-developed skills and knowledge with some discretion and judgement and routine supervision. It requires taking responsibility for own work output.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess the need for fumigation	<p>1.1. Ascertain the threshold level of infestation against quality requirements and industry practice.</p> <p>1.2. Determine the need for fumigation as an option within an Integrated Pest Management (IPM) and Integrated Resource Management (IRM) strategy.</p> <p>1.3. Determine the appropriate fumigation method with regard to the target pest and soil conditions.</p> <p>1.4. Assess cost-benefit of fumigation.</p>
2. Determine type and method of fumigation	<p>2.1. Select method of fumigant application to suit type of pests and soil/media type in accordance with manufacturer's specifications, environmental, legislative, Occupational Health and Safety (OHS) requirements and industry practice.</p> <p>2.2. Determine type of fumigant and application rate in accordance with manufacturer's specifications, standards and environmental, legislative, OHS and industry practice.</p> <p>2.3. Assess appropriateness of site and soil conditions for selected fumigation method.</p> <p>2.4. Identify and report any factors affecting the safe application of fumigants.</p> <p>2.5. Determine application rate to ensure fumigation conditions are in accordance with manufacturer's specifications and environmental, legislative, OHS and industry practice.</p>
3. Prepare site for fumigation	<p>3.1. Assess hazards and control risks in relation to the use of fumigants in accordance with legislative, environmental, OHS requirements and industry</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>practice.</p> <p>3.2. Establish site security measures to control access during fumigation and prescribed re-entry periods in accordance with label directions.</p> <p>3.3. Set up emergency system in accordance with legislative and OHS and requirements.</p> <p>3.4. Prepare soil, measure soil temperature and check soil moisture to ensure that the required concentration of fumigant is retained in the soil for the required period of time in accordance with label directions.</p>
4. Prepare application equipment and fumigant(s)	<p>4.1. Select and use appropriate personal protective equipment in accordance with label and Material Safety Data Sheets (MSDSs) requirements.</p> <p>4.2. Select application equipment appropriate for the fumigation in accordance with label directions and industry practice.</p> <p>4.3. Check operational effectiveness of fumigation machinery and equipment in accordance with manufacturer's specifications and industry practice.</p> <p>4.4. Calibrate fumigation equipment to application rate in accordance with label directions.</p> <p>4.5. Prepare fumigant in accordance with label legislative and OHS requirements and industry practice.</p>
5. Conduct fumigation	<p>5.1. Apply fumigant using appropriate equipment and fumigation methods in accordance with label and industry practice.</p> <p>5.2. Respond to emergency situations using emergency response procedures in accordance with legislative and OHS requirements and industry practice.</p> <p>5.3. Apply appropriate soil sealing methods to contain fumigant in accordance with label and organisational requirements.</p>
6. Monitor site	<p>6.1. Monitor fumigation site during exposure time to prevent unauthorised access in accordance with legislative and OHS requirements and industry practice.</p> <p>6.2. Aerate soils fully and accurately test for evidence of residual gas by conducting germination test or sowing indicator crop in accordance with label.</p> <p>6.3. Establish re-entry times and control risks to human</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and animal health in accordance with label, legislative, OHS requirements and industry practice.</p> <p>6.4. Notify appropriate person(s) of any further risk control measures required in accordance with label, legislative, OHS and industry practice.</p> <p>6.5. Ventilate fumigation enclosure to remove fumigant in safe and controlled manner in accordance with label, legislative, OHS and organisation requirements.</p>
7. Restore site	<p>7.1. Collect and remove all equipment, fumigants and waste in accordance with label, legislative, OHS and industry practice.</p> <p>7.2. Remove signage when site is available for re-use in accordance with legislative and industry practice.</p> <p>7.3. Restore site in accordance with legislative and industry practice.</p>
8. Clean, safety-check and store equipment and fumigants	<p>8.1. Clean, decontaminate, check and store equipment and Personal Protective Equipment (PPE) in accordance with manufacturers specifications, OHS and industry practice.</p> <p>8.2. Transport and store fumigants in accordance with label, OHS and industry practice.</p> <p>8.3. Dispose of all waste in accordance with label, legislative, OHS environmental and industry practice.</p>
9. Record fumigation details	<p>9.1. Record details of fumigant applications in accordance with legislative and quality assurance requirements and industry practice.</p> <p>9.2. Record and report safety incidents or poisoning to the appropriate person or authority in accordance with legislative requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

## REQUIRED SKILLS AND KNOWLEDGE

- identify hazards and implement safe operating procedures
- prepare fumigants
- conduct pre-operational checks, clean up and storage of fumigation equipment and PPE
- prepare site
- set up and calibrate fumigation equipment
- apply fumigants
- aerate soils and check for residual fumigant gas
- ventilate fumigation enclosure
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- primary and secondary soil/media pests
- threshold pest levels and cost benefit
- fumigant free options for pest control including Integrated Pest/Resistance Management principles
- fumigant label and MSDSs formats
- interpretation and application of fumigant label requirements
- soil/media type, moisture and temperature factors in relation to fumigation
- types and application of personal protective equipment
- legislation and regulations including OHS and licensing requirements in relation to fumigant use
- features, functions, calibration and set up of fumigation equipment
- risk factors including human and animal health, weather, leakage, spillage and environmental
- requirements for disposal of excess fumigants, clearing spillages and equipment clean up.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess the need for fumigation</li> <li>• select appropriate fumigant and application method</li> <li>• prepare and clean equipment</li> <li>• apply fumigant</li> <li>• record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Fumigation may include:	<ul style="list-style-type: none"> <li>• fumigation of soils to control primary and secondary pests of plants.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Chemicals
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCCHM303A Prepare and apply chemicals

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of preparing and applying chemicals and defines the standard required to: assess the need for chemical use: comply with safety, chemical label and MSDS requirements; prepare an application/spray plan; prepare and apply chemicals; calibrate application equipment and maintain chemical records.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit covers the preparation and application of liquid chemical mixes and/or granular products for the control of weeds, pests and diseases across a range of industry sectors.</p> <p>This unit may be deemed to have a time limit when used as part of an accreditation or licence process.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine the need for chemical use	1.1.Nature and level of the pest, weed infestation or disease is identified. 1.2.Need for control is assessed. 1.3.The requirement for chemical use as an option within an integrated pest management strategy is assessed. 1.4.Hazard and risk analysis of different chemical options is undertaken. 1.5.Requirement for chemical application is identified and confirmed.
2. Prepare application/spray plan	2.1.Mixing rates for chemical is defined and calculated. 2.2.Application equipment type and set up requirements are determined for intended application. 2.3.The quantity of mix required is determined. 2.4.Meteorological conditions and forecasts prior to and during application are accessed. 2.5.An application/spray plan is completed. 2.6.Notify neighbours as required in accordance with industry practice or regulatory requirements

ELEMENT	PERFORMANCE CRITERIA
3. Prepare chemical mixes	<p>3.1. Requirements from chemical labels and Material Safety Data Sheets (MSDSs) are interpreted and applied.</p> <p>3.2. Appropriate first aid supplies are at hand.</p> <p>3.3. Appropriate personal protective and mixing equipment is selected and used in accordance with MSDSs and chemical label.</p> <p>3.4. A suitable location for mixing and loading is selected.</p> <p>3.5. Chemicals are prepared in accordance with registered use.</p> <p>3.6. MSDSs are followed in the event of a spill.</p>
4. Calibrate application equipment	<p>4.1. Pre-operational checks of application equipment are carried out.</p> <p>4.2. Equipment is calibrated in accordance with manufacturer specifications and application/spray plan.</p> <p>4.3. Calibration is checked for conformity to the requirements of the application/spray plan.</p> <p>4.4. Chemical is loaded wearing appropriate Personal Protective Equipment (PPE) and controlling risks to human health and the environment.</p>
5. Apply chemicals	<p>5.1. Appropriate personnel protective equipment is selected and used in accordance with MSDSs and chemical label.</p> <p>5.2. Chemical is applied in accordance with the application/spray plan and/or instructions and legislative and/or regulatory requirements.</p> <p>5.3. Risks to others, product integrity and the environment are assessed and minimised.</p>
6. Clean up equipment and complete records	<p>6.1. Excess chemical is disposed of in accordance with label and MSDSs requirements.</p> <p>6.2. Application equipment is cleaned and decontaminated.</p> <p>6.3. Requirements for the disposal of unused chemical, containers spilled materials are determined and implemented</p> <p>6.4. PPE and mixing equipment is cleaned and stored.</p> <p>6.5. Incidents are reported as required in accordance with legislative and/or regulatory requirements.</p> <p>6.6. All records, e.g. calibration, application, DG/hazard</p>



ELEMENT	PERFORMANCE CRITERIA
	substances, risk assessments, are completed in accordance with legislative, industry and enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement risk control procedures
- identify appropriate treatment for pest, disease or weed
- mix and load chemicals
- conduct pre-operational checks of application equipment
- calibrate handheld and/or powered application equipment relevant to the industry sector
- interpret and apply chemical label requirements in the preparation of an application/spray plan
- apply chemicals
- use and maintain PPE
- dispose of surplus chemical and containers
- record activities and maintain records
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- options for pest control based on Integrated Pest/Resistance Management principles
- plant, pest, weed and/or diseases relative to industry sector
- chemical label and MSDSs formats
- meteorological and other conditions and impacts on safe and effective chemical

**REQUIRED SKILLS AND KNOWLEDGE**

- application
- types and application of personal protective equipment
  - features, functions and calibration techniques for a range of hand held and/or powered application equipment relevant to the industry sector
  - risk factors including human and animal health, weather, spray drift, spillage and environmental
  - spray nozzle identification, selection, operation and use
  - chemical mix including mixing order, adjuvants, water quality, efficacy etc
  - application techniques for a range of equipment types
  - requirements for disposal of excess chemicals, clearing spillages and equipment clean up
  - legislation including Occupational Health and Safety (OHS) and environment, and licensing requirements, in relation to chemical use.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess the need for chemical use
- comply with safety, chemical label and MSDSs requirements
- prepare an application/spray plan
- prepare and apply chemicals
- calibrate application equipment
- maintain chemical records

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

	enterprise circumstances.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Chemical types may include:

- all types of chemical mixes used in the control of pests, weeds and diseases including animal health products.

This unit does not cover:

- operation of specialised equipment and machinery transport
- handling and storage of chemicals set up of advanced operation
- specialised on-board control equipment.

**Unit Sector(s)**

<b>Unit sector</b>	Chemicals
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCCHM304A Transport, handle and store chemicals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of transporting, handling and storing chemicals safely and identifies the standard required to: correctly maintain and use personal protective equipment (PPE) according to label; follow emergency procedures for chemical spillage; follow legislative requirements for the safe transport of chemicals; and maintain storage area and chemical manifest.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the safe transport, handling and storage of liquid and dry chemical formulations across a range of industry sectors. The work is likely to be carried out unsupervised. Responsibility for and limited organisation of the work of others may be involved. This unit may be deemed to have a time limit when used as part of an accreditation or licensing process.
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Transport and handle chemicals and biological agents	<p>1.1. Transport requirements are identified and followed from legislative and regulatory requirements, including Occupational Health and Safety (OHS).</p> <p>1.2. Risks involved in the transport and handling of chemical and biological agents are assessed and minimised.</p> <p>1.3. Containers are confirmed as being in a sound condition to transport.</p> <p>1.4. PPE is used as required according to manufacturer specifications and OHS requirements.</p> <p>1.5. Instructions from chemical material safety data sheets (MSDS) are followed in the event of a spill.</p> <p>1.6. Transport incidents are reported as required according to legislative and/or regulatory requirements.</p> <p>1.7. Appropriate first aid kit and spill kit are confirmed as being on hand for all stages of transport, handling and storage.</p>
2. Store chemicals in the workplace	<p>2.1. Appropriate storage methods are used according to chemical labels, MSDS, and/or legislative and regulatory requirements.</p> <p>2.2. Risks involved in storage of chemical and biological agents are assessed and minimised.</p> <p>2.3. Storage area is maintained according to legislative</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and regulatory requirements, including OHS and environmental protection.</p> <p>2.4. Products are retained in original containers with labels intact.</p> <p>2.5. Storage methods are utilised to prevent contact with people or animals, contamination of produce or the environment.</p> <p>2.6. Correct disposal procedures are applied for used chemical drums and storage containers.</p> <p>2.7. Unwanted and/or out-of-date chemicals are disposed of according to legislative and/or regulatory requirements and industry programs.</p>
3. Record storage details	<p>3.1. Chemical storage inventory and records are maintained according to legislative and regulatory requirements, including OHS.</p> <p>3.2. Storage incidents are reported as required according to legislative and/or regulatory requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- transport, handle and store chemicals safely
- follow chemical label and MSDS requirements for transport handling and storage
- maintain records
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

**REQUIRED SKILLS AND KNOWLEDGE**

- transport handling and storage requirements on chemical labels and MSDS
- types and application of PPE used in transport and handling
- legislation and regulations, including OHS and licensing requirements in relation to chemical storage and transport
- risk factors, including human, animal health and environmental associated with transport, handling and storage
- requirements for disposal of excess, unwanted and/or out-of-date chemicals
- requirements for disposal of used chemical containers and/or drums
- processes for clearing spillages and clean up.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- transporting, handling and storing chemicals safely
- identify the standard required to correctly maintain and use PPE according to label
- follow emergency procedures for chemical spillage
- follow legislative requirements for the safe transport of chemicals
- maintain storage area and chemical manifest.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Chemicals handling may include:	<ul style="list-style-type: none"> <li>requirements for the safe transport, handling and storage of chemicals and products used in the control of pest, weeds and diseases, including animal health products.</li> </ul>
This unit does not cover:	<ul style="list-style-type: none"> <li>operation of specialised chemical application equipment and machinery, application of chemicals. See separate units of competency under the appropriate category.</li> </ul>

## Unit Sector(s)

Unit sector	Chemicals
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCCHM305A Conduct manual fumigation of vertebrate and invertebrate pests

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of manual fumigation of vertebrate pests and invertebrate pests in stored grain, the apiary industry, agricultural lands and natural landscapes and defines the standard required to: assess the need for fumigation; select appropriate fumigant and application method; apply fumigant and monitor site; record work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to the control of vertebrate and invertebrate pests in grain storage, rabbit warrens and beehives by means of manual fumigation. It involves applying well-developed skills with some discretion and judgement under routine supervision. It requires taking responsibility for own work output. This unit may be deemed to have a time limit when used as part of an accreditation or licence process.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine type and method of fumigation	<p>1.1. Identify the nature and level of pest presence.</p> <p>1.2. Determine need for fumigant use within an integrated pest management strategy.</p> <p>1.3. Select method of fumigant application to suit type of pests and site in accordance with registered product labels, environmental, legislative, Occupational Health and Safety (OHS) requirements and industry practice.</p> <p>1.4. Determine type of fumigant and application rate in accordance with registered product labels and Material Safety Data Sheets (MSDSs) and environmental, legislative, OHS and industry practice.</p> <p>1.5. Identify and report any factors affecting the safe application of fumigants.</p> <p>1.6. Determine storage capacity to ensure fumigation conditions are in accordance with manufacturers' specifications and environmental, legislative, OHS and industry practice.</p> <p>1.7. Conduct and record OHS risk assessment for both fumigation and post fumigation re entry.</p>

ELEMENT	PERFORMANCE CRITERIA
2. Prepare to use fumigant according to label and MSDS	2.1. Select and check for use Personal Protective Equipment (PPE) according to label and MSDSs. 2.2. Define and calculate application/dosage rates. 2.3. Prepared fumigation site to control inadvertent entry or exposure. 2.4. Put in place emergency and confined spaces procedures.
3. Conduct fumigation	3.1. Assess weather conditions and forecasts prior to and during application. 3.2. Created airtight seal in fumigation area to ensure site health and safety, and maximum effectiveness of fumigation in accordance with label and industry practice. 3.3. Where required fumigation site is signposted and barricaded to prevent access. 3.4. Control site until area is suitable for re-use in accordance with label, legislation, standards and enterprise policy. 3.5. Apply fumigant safely and effectively according to label and industry practice. 3.6. Ensure First Aid equipment is available onsite.
4. Monitor fumigation	4.1. Monitored fumigation site to control access and maintain safe conditions during active period for time specified on registered label. 4.2. Monitor fumigation site for pest activity. 4.3. Assess fumigant escape for health and safety implications and take immediate action if required.
5. Ventilate fumigated area	5.1. Calculate time required for ventilation from directions on registered label. 5.2. Determine conditions are suitable for ventilation to minimise risk to health and safety. 5.3. Ventilation method followed is in accordance with registered label, MSDSs, Code of Practice (COP) and enterprise standards. 5.4. Ventilate site in controlled and safe manner.
6. Clean up following fumigation	6.1. Removed barriers, signs and locks and store for future use. 6.2. Clean, decontaminate, check and store equipment and PPE in accordance with manufacturer's specifications, OHS and industry practice. 6.3. Transport and store fumigants in accordance with

ELEMENT	PERFORMANCE CRITERIA
	<p>label, OHS and industry practice.</p> <p>6.4. Dispose of all waste in accordance with label, legislative, OHS environmental and industry practice.</p>
7. Record application details	<p>7.1. Record details of fumigant applications in accordance with legislative requirements, label directions, safe operating procedures (SOPs), and industry practice.</p> <p>7.2. Record details of fumigant used in the chemical inventory/register according to legislation.</p> <p>7.3. Maintain inventory of PPE.</p> <p>7.4. Follow procedures and requirements for reporting fumigation details to management/employer.</p> <p>7.5. Record and report safety incidents or poisoning to the appropriate person or authority in accordance with legislative requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret and apply chemical label requirements in the preparation of fumigants
- prepare fumigants
- storage and disposal of fumigants
- use of PPE
- prepare site including signage
- mentoring and ventilation of sites
- application of fumigants
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural,

**REQUIRED SKILLS AND KNOWLEDGE**

social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- primary vertebrate and invertebrate pests controlled by manual fumigation methods (rabbits, pests of beehives and stored grain) and their life cycles
- fumigant types
- threshold pest levels and cost benefit options
- fumigant label and MSDSs formats
- interpretation and application of fumigant label requirements
- site factors in relation to fumigation
- types and application of personal protective equipment
- legislation and regulations including OHS and licensing requirements in relation to fumigant use
- regulations including, signage and entry restrictions
- risk factors including human and animal health, weather, leakage, spillage and environmental
- requirements for disposal of excess fumigants, clearing spillages and equipment clean up.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess the need for fumigation
- select appropriate fumigant and application method
- apply fumigant and monitor site
- record work activities.

**Context of and specific resources for**

Competency requires the application of work practices

**EVIDENCE GUIDE****assessment**

under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Manual fumigation may include:

- vertebrate and invertebrate pests of stored grain
- rabbits
- pests of beehives.

The fumigants that apply include

- aluminium phosphide tablets and chloropicrin.

**Unit Sector(s)**

**Unit sector**

Chemicals

**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

**Competency field**





## AHCCHM401A Minimise risks in the use of chemicals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers minimising risks in the use of chemicals and defines the standard required to: implement, monitor and evaluate a chemical risk control strategy; identify potential hazards and assess risks; develop risk control procedures; and monitor and evaluate the risk control strategy.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role include the assessment and mitigation of risks associated with the use of chemicals across a range of industry sectors. This unit may be deemed to have a time limit when used as part of an accreditation or licence process.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify hazards and risks	<p>1.1.Guidelines, legislation, regulations and industry requirements relating to chemical use are identified and sourced.</p> <p>1.2.Hazards involved in chemical handling and application are identified.</p>
2. Assess risks and develop control procedures	<p>2.1.Risks associated with chemicals used are assessed.</p> <p>2.2.Risk control measures and emergency action plans are developed.</p> <p>2.3.Control procedures are developed for transport, handling, storage, application, decontamination and disposal.</p> <p>2.4.A continuous improvement strategy is developed to minimise risk.</p>
3. Implement and monitor adherence to chemical risk procedures	<p>3.1.Appropriate personal protective equipment (PPE) is provided for people in the workplace using chemicals.</p> <p>3.2.Select application equipment is selected according to procedures.</p> <p>3.3.Restrictions on chemical use, application, decontamination and disposal are followed according to procedures.</p> <p>3.4.Risk control procedures are followed in the workplace.</p>
4. Evaluate risk control measures and maintain record	<p>4.1.Procedures for evaluating the effectiveness of risk control measures are developed.</p> <p>4.2.Shortfalls identified during evaluation are addressed and rectified.</p>

ELEMENT	PERFORMANCE CRITERIA
	4.3.Risk assessment records are maintained according to industry, label, legislative and regulatory requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop procedures
- evaluate implementation
- identify hazards, assess risks, and implement and monitor risk control procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- sources of information relating to chemical use, including:
  - guidelines
  - legislation and regulations
  - industry requirements
- hazard identification and risk assessment strategies
- risk factors, including human and animal health, product integrity, weather, spray drift, spillage and environmental
- principles of transport, handling and storage for chemicals
- requirements for disposal of excess chemicals, clearing spillages and equipment clean up
- chemical application equipment capabilities and limitations.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• implement, monitor and evaluate a chemical risk control strategy</li> <li>• identify potential hazards and assess risks</li> <li>• develop risk control procedures</li> <li>• monitor and evaluate the risk control strategy.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Agricultural chemicals include:	<ul style="list-style-type: none"> <li>• insecticides</li> <li>• fungicides</li> <li>• herbicides</li> <li>• bactericides</li> <li>• algaecides</li> <li>• biologicals</li> <li>• nematocides</li> <li>• rodenticides</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• antimicrobial agents</li> <li>• anthelmintics</li> <li>• fumigants</li> <li>• hormone growth promotants</li> <li>• a range of veterinary chemicals used to treat animals for disease.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Chemicals
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCCHM402A Plan and implement a chemical use program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the planning and implementation of a chemical use program and defines the standard required to: plan and implement a program for chemical use; supervise others in chemical use; apply and monitor risk control procedures; select and manage chemical application equipment and processes.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies those whose job role includes the development and implementation a chemical use program for pesticides use. This unit may be deemed to have a time limit when used as part of an accreditation or licence process.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop and document an application/spray plan	1.1. Assess risks associated with proposed control strategy. 1.2. Select preferred control procedures. 1.3. Document preferred control procedures as application/spray plan.
2. Identify requirements for chemical use	2.1. Identify and interpret guidelines, legislation and regulations and industry requirements relating to chemical use. 2.2. Assess the need for chemical use as an option within an integrated pest management and/or animal health strategy. 2.3. Ensure that personnel are adequately trained in chemical use.
3. Ensure that risk control measures are followed	3.1. Provide appropriate Personal Protective Equipment for people in the workplace using chemicals. 3.2. Monitor the implementation of safe practice in the workplace including preparation and application of chemicals. 3.3. Monitor implementation of procedures for transport, handling, storage, decontamination and disposal. 3.4. Monitor implementation of procedures to mitigate residues in produce and the environment.
4. Plan and implement a maintenance program for chemical use equipment	4.1. Develop and implement a maintenance strategy for application equipment and personal protective equipment. 4.2. Monitor implementation of maintenance procedures.

ELEMENT	PERFORMANCE CRITERIA
	4.3.Ensure that faulty or damaged equipment is repaired or replaced.
5. Ensure the correct selection and application of chemicals	5.1.Ensure that the correct chemicals and equipment is selected in accordance with the application/spray plan. 5.2.Ensure that pre-operational checks of application equipment are carried out. 5.3.Check to ensure that calibration conforms to the requirement of the application/spray plan. 5.4.Ensure that meteorological conditions are monitored and assessed during application where relevant. 5.5.Monitor the application procedures in the event of a chemical spill.
6. Ensure work activities are finalised in accordance with procedure	6.1.Ensure that excess chemical are disposed of in accordance with label and Material Safety Data Sheet requirements. 6.2.Ensure incident reports are completed as required in accordance with legislative and/or regulatory requirements. 6.3.Ensure all required records are completed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop strategies to monitor the implementation of procedures
- evaluate conformance with procedures
- identify hazards and oversee the safety of the working environment
- develop and document an application/spray plan
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex



**REQUIRED SKILLS AND KNOWLEDGE**

workplace measures and data

- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- sources of information relating to chemical use including:
  - guidelines
  - legislation and regulations
  - industry requirements
  - hazard identification and risk assessment strategies
  - methodologies for the development of procedures
  - risk factors including human and animal health, weather, spray drift, spillage, residue, product integrity and environmental
  - transport, handling and storage for chemicals
  - requirements for disposal of excess chemicals, clearing spillages and equipment clean up
  - OHS, environmental and pesticides legislation, codes of practice and enterprise procedures.
  - chemical application equipment capabilities and limitations.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- plan and implement a program for chemical use
- supervise others in chemical use
- apply and monitor risk control procedures
- select and manage chemical application equipment

<b>EVIDENCE GUIDE</b>	
	and processes.
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Agricultural chemicals include:	<ul style="list-style-type: none"> <li>• insecticides</li> <li>• fungicides</li> <li>• herbicides</li> <li>• bactericides</li> <li>• algaecides</li> <li>• biologicals</li> <li>• nematocides</li> <li>• rodenticides</li> <li>• antimicrobial agents</li> <li>• anthelmintics</li> <li>• fumigants</li> <li>• hormone growth promotants</li> <li>• a range of veterinary chemicals used to treat animals for disease.</li> </ul> <p>It does not cover the development of general chemical use procedures.</p>

### Unit Sector(s)

<b>Unit sector</b>	Chemicals
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCCHM403A Prepare safe operating procedures for calibration of equipment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers preparing safe operating procedures for calibration of equipment and defines the standard required to: compile information on the equipment, the rate of application required, and the expertise of the operator; develop operating procedures to ensure accurate calibration; carry out an Occupational Health and Safety (OHS) risk assessment of the calibration task and incorporate risk controls into the safe operating procedures; review the safe operating procedures in case of accident or incident, and at regular intervals.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes preparing enterprise procedures for the calibration of equipment used in the application of weed control chemicals and bioagents.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify needs	<p>1.1. Equipment requiring calibration procedures is identified correctly in line with manufacturers' instructions, enterprise practice and regulatory requirements as appropriate.</p> <p>1.2. Skill levels of operators relating to calibration are assessed in consultation with operators and supervisors where appropriate.</p>
2. Compile relevant information	2.1. Information required for procedures is acquired from appropriate sources.
3. Prepare procedure	<p>3.1. Information in procedures complies with relevant regulatory requirements, manufacturers' instructions and industry practice as applicable.</p> <p>3.2. Procedures are in a form clearly understandable to the intended users.</p> <p>3.3. OHS issues relevant to the activities in the procedures are made clear to the users.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify needs for calibration
- analyse tasks involved in calibration
- prepare procedures for calibration clearly and accurately in a manner suited to the users
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant OHS, pesticides and environmental legislation, codes of practice and enterprise procedures
- chemical handling and application
- OHS issues involved in calibration
- mechanical and electronic controls on application equipment.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• compile information on the equipment, the rate of application required, and the expertise of the operator</li> <li>• develop operating procedures to ensure accurate calibration</li> <li>• carry out an OHS risk assessment of the calibration task and incorporate risk controls into the safe operating procedures</li> <li>• review the safe operating procedures in case of accident or incident, and at regular intervals.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Equipment may include:	<ul style="list-style-type: none"> <li>• the range of equipment used in the application of weed control chemicals and bioagents.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Chemicals
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCCHM501A Develop and manage a chemical use strategy

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the development and management of a chemical use strategy and defines the standard required to: implement procedures to assess the risk of chemical transport, storage, handling, application and disposal; develop an induction program that covers the enterprise Occupational Health and Safety (OHS) system and roles and responsibilities of all workers within that system; base application techniques on spray drift management principles, accurate placement of chemical and the correct use of Personal Protective Equipment (PPE); make application to authorities in the case of off label use; meet all withholding periods and requirements to limit access to sprayed areas; meet chemical storage systems industry and legislative requirements; document chemical emergency procedures and all requirements for chemical signage and review chemical procedures based on enterprise records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies those who manage the use and application of chemicals in commercial settings.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify and evaluate need for chemical use	<p>1.1. Integrated Pest Management (IPM) and Integrated Resistance Management (IRM) strategies are interpreted and the organisational chemical requirements are identified.</p> <p>1.2. External requirements for chemical use are identified and relevant information obtained and interpreted.</p> <p>1.3. Requirements for chemical use are documented.</p> <p>1.4. Chemicals available to meet requirements are identified and information concerning their application is reviewed.</p>
2. Develop a chemical use risk management strategy	<p>2.1. Hazards in the transportation, storage and handling of chemicals are identified and assessed.</p> <p>2.2. Risk factors associated with the use of chemicals are identified and documented.</p> <p>2.3. Risk control measures are identified and developed in accordance with regulatory requirements.</p> <p>2.4. A risk management strategy for chemical use is</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>developed in accordance with legislation and IPM, IRM, and Integrated Animal Health Management principles.</p> <p>2.5. Appropriate insurance policies covering intended chemical use are researched and documented according to enterprise guidelines.</p>
<p>3. Develop and implement procedures for chemical management and use</p>	<p>3.1. Procedures for management and use of chemicals are developed in accordance with directions and standards.</p> <p>3.2. Required precautions and risk control measures are documented.</p> <p>3.3. Procedures for communicating and negotiating with the community are developed.</p> <p>3.4. Information on procedures and precautions in the management and use of chemicals is distributed to relevant staff.</p>
<p>4. Identify training and supervision needs and solutions for chemical use in the workplace</p>	<p>4.1. An appropriate strategy is developed for the training, assessment and supervision of staff involved in chemical use including correct use/fit of personal protective equipment.</p> <p>4.2. Suitable internal on-the-job training and monitoring of performance in the implementation of the chemical use strategy is organised and provided.</p> <p>4.3. Appropriate external training and assessment in the management and use of chemicals is organised.</p>
<p>5. Monitor and evaluate the implementation of a chemical use strategy</p>	<p>5.1. The implementation of the established chemical use strategy is monitored in terms of regulatory requirements and established criteria.</p> <p>5.2. The effectiveness of the established chemical use strategy is evaluated.</p> <p>5.3. Appropriate action is initiated where there are identified problems or where required procedures/precautions are not being correctly followed.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- accurately read and interpret labels on chemicals and Materials Safety Data Sheets (MSDSs)
- determine the level of hazard and risk associated with chemical use in terms of human health, environment, fauna, flora and produce
- apply risk management techniques
- develop and evaluate management plans and organisational procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- hazards to human health, agricultural produce, and all aspects of the environment and non-target species of flora and fauna associated with the transport, storage, handling, application and disposal of chemicals
- factors that contribute to spray drift, measures to assess the potential for spray drift and prevent or control its occurrence, and the elements of a spray drift management strategy
- routes of entry of chemicals into the body and the implications of this on chemical use management strategies
- safety procedures including the maintenance, use, fit and decontamination of personal protective clothing and equipment
- influence of meteorological factors (temperature, humidity, rain) on quality of chemical application, drift potential, effectiveness and efficacy of use
- precautions and risk control measures that may be used to minimise risks and hazards associated with the use of chemicals
- principles of IPM/IRM/IAM and their benefits in terms of chemical use risk management
- emergency procedures for safety incidents involving chemicals
- requirements and options for the keeping of records on chemical use and equipment maintenance and repair.
- principles of residue effects and their management including persistence in soil and water, accumulation in agricultural produce, rate of breakdown of residues in produce and in the environment, withholding periods, and ways in which residues

**REQUIRED SKILLS AND KNOWLEDGE**

can occur

- movement of and persistence and degradation of different types of chemicals in various areas of the environment such as soil, air and water
- industry waste agreements, for example drum MUSTER, and Chem Collect
- OHS legislative requirements and Codes of Practice
- appropriate insurances covering chemical use, transportation and storage
- correct wearing/fit of personal protective equipment
- use of chemicals as part of a comprehensive Quality Assurance (QA) system, Industry QA programs and performance standards.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- legislation, Codes of practice and industry requirements covering OHS, hazardous substances, environment and food safety/market access requirements related to the use of chemicals use have been incorporated into enterprise procedures
- the role of chemical labels and MSDSs has been conveyed to staff and the information on them used in determining chemical transport, storage, handling, application, and disposal procedures and practices in the workplace. MSDSs are held for all agricultural chemicals transported, stored or used in the workplace and relevant staff have been given access
- procedures have been put in place to assess the risk of chemical transport, storage, handling, application and disposal to human health, environment, fauna and flora, and market acceptability of produce.

**EVIDENCE GUIDE**

- label and MSDSs for each chemical have been developed and distributed to all affected staff a communication strategy has been put in place to remind relevant staff of their responsibilities in chemical use, to inform all staff exposed to agricultural chemicals of the need to minimise exposure and how to act in a chemical emergency, to inform neighbours when chemical spraying is planned to take place, and to make agencies aware when a chemical spill has occurred.
- an induction program has been developed that covers the enterprise OHS system and roles and responsibilities of all workers within that system
- the roles and responsibilities of all staff handling or applying farm chemicals has been documented and training needs and completions have been recorded for each staff member
- health monitoring of staff exposed to chemicals has been carried out according to regulatory requirements
- the need for chemical application and selection of chemicals for a purpose is in line with the enterprises documented IPM and IRM strategies
- application techniques selected are based on spray drift management principles, accurate placement of chemical, and the correct use of PPE
- application to authorities has been made in the case of off label use and all conditions and requirements on permits have been implemented
- chemical application is carried out by trained staff as required by legislation
- all withholding periods and requirements to limit access to sprayed areas have been met and can be supported by the organisations recording system
- chemical storage systems meet industry and legislative requirements and access to storage areas is covered by enterprise procedures
- chemical emergency procedures have been documented, displayed and conveyed to staff
- all requirements for chemical signage have been met for the transport and storage of chemicals and for areas affected by chemical application
- chemical persistence in vegetation, soil and water has been accounted for in managing environmental risk
- recording procedures have been developed and

<b>EVIDENCE GUIDE</b>	
	<p>maintained covering all aspects of the transport, storage, handling, application and disposal of chemicals in the workplace</p> <ul style="list-style-type: none"> <li>• reviews of chemical procedures based on enterprise records have been conducted periodically and, where issues have emerged, necessary changes made and communicated to staff.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances. Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Chemicals may include:	<ul style="list-style-type: none"> <li>• insecticides</li> <li>• fungicides</li> <li>• herbicides</li> <li>• bactericides</li> <li>• algaecides</li> <li>• biologicals</li> <li>• nematocides</li> <li>• rodenticides</li> <li>• fumigants</li> <li>• antimicrobial agents</li> <li>• anthelmintics</li> <li>• hormone growth promotants</li> <li>• the range of veterinary chemicals used to treat animals for disease.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Chemicals
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCCOM201A Assess and receive raw materials for composting

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of receiving raw material for processing at a compost facility, including measuring quantity for billing and assessing material quality for acceptability against specified enterprise requirements and defines the standard required to: inspect and assess raw materials for contamination and acceptability against established criteria; measure and assess quantity of raw material; record raw material quantity and calculate fee; maintain appropriate documentation; provide clear directions to drivers entering site.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to an employee of an enterprise engaged in commercial-scale composting operations. Tasks are likely to be performed by a yard hand or general hand under supervision of an operations team leader or site foreman. Work is likely to be performed as a part of a team.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Organise for work	<p>1.1. Specifications for raw materials for composting operation, acceptance criteria and receipt procedures are confirmed according to supervisor instructions and enterprise procedures.</p> <p>1.2. Hand tools appropriate to job requirements are selected and checked for serviceability according to manufacturer specifications and enterprise procedures.</p> <p>1.3. Existing and potential hazards to health and safety are identified, assessed and reported according to Occupational Health and Safety (OHS) and enterprise procedures.</p> <p>1.4. Suitable Personal Protective Equipment (PPE) is selected, used, maintained and stored according to OHS procedures.</p>
2. Receive raw materials	<p>2.1. Raw materials are accurately identified and assessed against specified acceptance criteria.</p> <p>2.2. Unacceptable (non-conforming) materials are rejected according to enterprise procedures.</p> <p>2.3. Non-conformances are documented and reported</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to enterprise procedures.</p> <p>2.4. Acceptable raw materials are measured, and quantity is recorded according to enterprise procedures.</p> <p>2.5. Fee is calculated based on raw material type and quantity, and charged to customer according to enterprise procedures.</p> <p>2.6. Correct fee payment is received and recorded, and receipt is provided according to enterprise procedures.</p>
3. Unload raw materials	<p>3.1. Drivers are given clear directions for unloading safely at a specific location.</p> <p>3.2. Unloading assistance is provided as required.</p> <p>3.3. Raw materials are inspected and assessed against specified acceptance criteria according to enterprise procedures.</p> <p>3.4. Unacceptable (non-conforming) materials are rejected according to enterprise procedures.</p> <p>3.5. Non-conformances are documented and reported according to enterprise procedures.</p> <p>3.6. Designated unloading areas are clearly identified and monitored to ensure compliance with unloading instructions, containment and segregation of materials, and availability of storage capacity.</p>
4. Remove contaminants and stockpile acceptable raw material	<p>4.1. Physical contaminants are removed from raw materials according to enterprise procedures.</p> <p>4.2. Raw materials are segregated, stockpiled and contained in appropriate areas or otherwise managed according to enterprise procedures.</p> <p>4.3. Raw material stockpiles are monitored to ensure adequate available storage capacity and containment, and non-conformances are reported to supervisor.</p> <p>4.4. Raw material stockpiles are clearly labelled according to job and enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- basic mathematics for volume estimation and calculation of quantities and fees
- literacy levels sufficient to:
  - read and follow enterprise policies and procedures
  - read site operating guidelines to confirm acceptance criteria
- operating a weighbridge
- oral communication skills to:
  - give directions to drivers
  - confirm instructions from supervisor
- performing basic administration procedures such as producing a receipt and operating a cash register
- OHS and environmental legislative and enterprise requirements
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- characteristics of a range of raw materials
- enterprise policies and procedures, including OHS procedures
- safety risks to self and product posed by contaminants in raw materials and products
- standard risk control measures used in the industry to minimise risk associated with handling raw materials and products.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>inspect and assess raw materials for contamination and acceptability against established criteria</li> <li>measure and assess quantity of raw material</li> <li>record raw material quantity and calculate fee</li> <li>maintain appropriate documentation</li> <li>provide clear directions to drivers entering site.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Composting may include:	<ul style="list-style-type: none"> <li>aerobic composting</li> <li>vermiculture technologies.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Composting
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCCOM202A Recognise and respond to fire emergencies on a composting site

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preventing, recognising and providing first response to fire in material or compost piles and defines the standard required to: recognise and report fire risks and incidents; follow emergency procedures, including procedure for contacting fire brigade; read and interpret site operations plan or map, including safety and fire signs; operate pumps and set up water delivery system.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the application of knowledge and skills to a limited range of defined tasks and responsibility. Tasks are likely to be performed by a yard hand or general hand under supervision of an operations team leader or site foreman and fire brigade personnel. The outcomes do not substitute for the attendance of fire brigade personnel in the event of a fire emergency.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Recognise a fire risk and undertake preventative actions	<p>1.1.Procedures for first response to fire are obtained from supervisor and clarified if required.</p> <p>1.2.Location of basic firefighting equipment on site is identified and checks made to ensure all equipment is available and ready for use.</p> <p>1.3.Conditions that can lead to fire and signs of fire are recognised and reported to supervisor.</p> <p>1.4.Enterprise procedures for emergencies are observed.</p> <p>1.5.Temperature and moisture management procedures are implemented according to enterprise requirements.</p>
2. Recognise and initiate response to fire	<p>2.1.Nature and extent of fire are identified.</p> <p>2.2.Fire details are reported and alarm is raised according to enterprise procedures.</p> <p>2.3.Preparations for water availability for fire brigade attendance are implemented as directed by supervisor and according to enterprise procedures.</p> <p>2.4.Occupational Health and Safety (OHS) hazards associated with fire emergency are identified and appropriate action is taken to minimise risks to self,</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>others and property.</p> <p>2.5.Immediate area of the emergency is secured as directed by supervisor and in line with enterprise procedures to ensure no further loss occurs.</p> <p>2.6.Where safe to do so, machinery and equipment are removed from area.</p> <p>2.7.Firefighting equipment is selected and set up in line with enterprise procedures, as directed by fire brigade personnel and supervisor.</p>
3. Attack fire under direction of fire brigade	<p>3.1.Appropriate firefighting and containment media are applied to attack and control fire, as directed and in a safe and coordinated manner.</p> <p>3.2.Firefighting methods and tactics are employed as directed.</p> <p>3.3.Potential for change in fire behaviour is reported to fire brigade and supervisor and acted upon under supervision to ensure safety of personnel and protection of property.</p> <p>3.4.Clear line of retreat is identified and maintained at all times.</p> <p>3.5.Conditions at fire are observed and their effects on fire development are reported according to company guidelines.</p> <p>3.6.Significant changes to status of fire are immediately reported to supervisor and fire brigade.</p>
4. Carry out post-fire activities	<p>4.1.Smouldering fire residuals are identified and controlled as required according to enterprise procedures and fire brigade directions.</p> <p>4.2.Break-up of windrows, buildings or structures is carried out as directed by supervisor and enterprise procedures.</p> <p>4.3.Enterprise procedures for removal of spent fuel or burnt compost and debris are followed.</p> <p>4.4.Activities to complement post-fire operations and prevent further damage are carried out as directed and according to enterprise procedures.</p> <p>4.5.Site and equipment are cleared and cleaned to enterprise and manufacturer guidelines.</p> <p>4.6.Assistance is given to fire brigade to complete and record appropriate incident information.</p> <p>4.7.Effectiveness of tactics employed is reported to supervisor.</p>

ELEMENT	PERFORMANCE CRITERIA
	4.8. As part of one's participation in an incident debrief, feedback on performance is sought and any required improvements are noted for future action.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- following emergency procedures, including procedure for contacting fire brigade
- following verbal instructions from fire brigade and supervisor
- observing signs of fire
- operating pumps
- reading and interpreting site operations plan or map
- reading written instructions sufficient to select and use correct firefighting media such as fire extinguishers
- recognising and reporting fire risks and incidents
- setting up water delivery system
- understanding and following safety and fire signs
- using communications equipment
- using Personal Protective Equipment (PPE) correctly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- characteristics and operation of joints, hoses, valves and sprinkler components
- enterprise operating procedures, including OHS and emergency management plan
- fire behaviour, extinguishing media and operating firefighting equipment
- fire control tactics and techniques, fire hazards and safety techniques
- operation of pumps
- pile size, moisture and porosity as causes of combustion
- procedures for safe use of equipment, such as power and hand tools
- standard risk control measures used in the industry to minimise risk associated with fire response.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise and report fire risks and incidents</li> <li>• follow emergency procedures, including procedure for contacting fire brigade</li> <li>• read and interpret site operations plan or map, including safety and fire signs</li> <li>• operate pumps and set up water delivery system.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Composting may include	<ul style="list-style-type: none"> <li>• aerobic composting</li> <li>• vermiculture enterprises.</li> </ul>
Essential emergency procedures may include:	<ul style="list-style-type: none"> <li>• fire drills</li> <li>• identification of hazards</li> <li>• reporting of fires</li> <li>• risk assessment and control strategies</li> <li>• evacuation procedures</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• use of first response firefighting equipment.</li> </ul>
Additional procedures that may be covered include	<ul style="list-style-type: none"> <li>• clearing composting areas of loose material</li> <li>• housekeeping practices to control risk of fire</li> <li>• knowledge of enterprise emergency management plan and ones role in it</li> <li>• maintaining distances between compost and material piles</li> <li>• monitoring temperatures</li> <li>• planned maintenance</li> <li>• cleaning of machinery and vehicles.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Composting
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCCOM203A Recognise raw materials, production processes and products on a composting site

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of recognising raw materials and products and defines the standard required to: identify, confirm, locate, handle and maintain raw materials, products and physical contaminants on site; maintain site arrangement and segregation of materials and products to avoid contamination; recognise and locate key process control stages of production cycle and associated machinery on site; maintain site and machinery security requirements; read and follow batch numbers and codes and site operating plan; implement site machinery and traffic management plans.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the employee of an enterprise engaged in commercial-scale composting operations. Tasks are likely to be performed by a yard hand or general hand under supervision of an operations team leader or site foreman. Work is likely to be performed as a part of a team.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Recognise, handle and locate raw materials on site	1.1.Raw materials are identified for potential purpose. 1.2.Characteristics of raw materials, including handling risks and potential or common contaminants are compared to site operating guidelines. 1.3.Potential hazards in handling raw materials are identified and reported to supervisor. 1.4.Initial handling requirements, stockpiling location and arrangement on site are confirmed from site operating guidelines. 1.5.Visible or physical contaminants present in raw materials are identified and recorded. 1.6.Physical contaminant handling, stockpiling location and arrangement on site are confirmed from site operating guidelines.
2. Recognise and locate key processes and technologies	2.1.Composting technologies and methods, key process control steps and technologies are identified and locations on site are confirmed from site map. 2.2.Windrows or vessels are identified by reference to

ELEMENT	PERFORMANCE CRITERIA
	<p>batch or code numbers.</p> <p>2.3.Machinery, plant and equipment and their functional uses are confirmed from site operating guidelines.</p>
<p>3. Recognise, handle and locate compost and other products on site</p>	<p>3.1.Compost and other products are identified for their intended use.</p> <p>3.2.Characteristics of products, including handling risks and potential or common contaminants are compared to site operating guidelines.</p> <p>3.3.Potential hazards in handling products are identified and reported to supervisor.</p> <p>3.4.Handling requirements, stockpiling location and arrangement on site are confirmed from site operating guidelines.</p> <p>3.5.Potential for contamination of products is identified and action is taken according to enterprise procedures.</p> <p>3.6.Batching sheets or other product formulas are matched to end product.</p> <p>3.7.Visible or physical contaminants present in products are identified and reported to supervisor.</p> <p>3.8.Physical contaminant handling, stockpiling location and arrangement on site are identified.</p>
<p>4. Identify and carry out site maintenance requirement</p>	<p>4.1.Site maintenance requirements are identified and carried out according to enterprise procedures.</p> <p>4.2.Traffic access routes and site traffic/pedestrian safety rules are identified from site operating plan and maintained according to enterprise and Occupational Health and Safety (OHS) procedures.</p> <p>4.3.Vehicle access routes on site are maintained according to enterprise procedures.</p> <p>4.4.Machinery and site security requirements are identified and maintained according to enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- applying communication skills including active listening, questioning and asking for clarification from supervisor
- applying literacy and numeracy skills sufficient to read and follow enterprise policies and procedures
- identifying and handling physical contaminants
- identifying and handling raw materials and products
- recognising and complying with site traffic and security requirements
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- characteristics of a range of raw materials
- key process control stages critical to consistent quality in compost production
- overview of systems and technologies used in compost production, particularly as relevant to workplace
- range and characteristics of products
- company policies and procedures, including OHS requirements
- safety risks associated with movement of vehicles and machinery on site
- safety risks to self and product posed by contaminants in raw materials and products
- standard operating procedures to minimise risk associated with handling raw materials and products.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.



<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify, confirm, locate, handle and maintain raw materials, products and physical contaminants on site</li> <li>• maintain site arrangement and segregation of materials and products to avoid contamination</li> <li>• recognise and locate key process control stages of production cycle and associated machinery on site</li> <li>• maintain site and machinery security requirements</li> <li>• read and follow batch numbers and codes, and site operating plan</li> <li>• implement site machinery and traffic management plans.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Composting may include:	<ul style="list-style-type: none"> <li>• aerobic and anaerobic composting</li> <li>• vermiculture technologies.</li> </ul>
Composting technologies and methods may include:	<ul style="list-style-type: none"> <li>• aerated static pile</li> <li>• agitated bay</li> <li>• in-vessel composting technologies</li> <li>• rotating drum</li> <li>• turned pile</li> <li>• vermiculture beds</li> <li>• windrow.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Composting
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCCOM301A Operate compost processing plant, machinery and equipment

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating compost processing plant, machinery and equipment to prepare raw materials in order to produce compost products and defines the standard required to: select and use various features and controls of a range of plant, machinery and equipment; implement work and equipment maintenance plans; determine appropriate operating methods; monitor input materials and report non-conformances; monitor outputs and report out-of-specification product; perform shutdown procedures; maintain records.
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## Application of the Unit

<b>Application of the unit</b>	This unit requires some discretion, judgement and limited supervision. This work is likely to be performed as a part of a team.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Organise plant, machinery and equipment operations	<p>1.1. Job sheet or work order is reviewed to clearly identify operating requirements.</p> <p>1.2. Equipment, materials and personnel requirements for safe, effective and efficient operation are identified and organised.</p> <p>1.3. Suitable Personal Protective Equipment (PPE) and clothing are selected, used, maintained and stored according to Occupational Health and Safety (OHS) requirements.</p>
2. Prepare plant, machinery and equipment for use	<p>2.1. Service log is checked to ensure service requirements have been</p> <p>2.2. Communication equipment, safety devices, lighting and alarm systems are checked for correct operation according to manufacturer specifications and enterprise and statutory requirements.</p> <p>2.3. Routine pre-operational checks are carried out to enterprise requirements and manufacturer specifications.</p> <p>2.4. Operational systems are checked and calibrated for correct operation according to enterprise requirements and manufacturer specifications.</p> <p>2.5. Faulty plant, machinery or equipment is identified, safety tagged and reported promptly according to enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.6.OHS hazards associated with plant, machinery and equipment operation are identified, and risk is assessed and handled according to enterprise requirements.</p> <p>2.7.Environmental implications associated with operations are identified, assessed and reported according to enterprise requirements.</p>
3. Start and operate plant, machinery and equipment	<p>3.1.Operational area is checked and personnel in that area are informed of initiation of operation.</p> <p>3.2.Plant, machinery and equipment are started up using correct sequence and according to manufacturer specifications and enterprise requirements.</p> <p>3.3.Plant, machinery and equipment are operated in a safe and controlled manner according to manufacturer specifications and monitored for performance and efficiency.</p> <p>3.4.Input materials are monitored and non-conformances clearly identified and handled according to enterprise requirements.</p> <p>3.5.Processing outputs are monitored and adjustments to plant operation are made to meet job specifications.</p> <p>3.6.Out-of-specification product or process outcomes are identified, rectified and reported to maintain the process within specification.</p>
4. Shut down plant, machinery and equipment	<p>4.1.Plant, machinery and equipment shut-down procedures are carried out to manufacturer specifications and enterprise requirements.</p> <p>4.2.Routine maintenance of plant, machinery and equipment is carried out to remove debris and contaminants and to ensure safe and efficient operation.</p> <p>4.3.Plant, machinery and equipment are cleaned, secured and stored according to manufacturer specifications and enterprise requirements.</p> <p>4.4.Unsafe plant, machinery or equipment is tagged or locked.</p>
5. Maintain records	<p>5.1.Plant, machinery and equipment operational records are maintained accurately and promptly according to enterprise requirements.</p> <p>5.2.Required maintenance, damage, malfunctions or irregular performance, and unsafe plant, machinery or equipment are recorded and/or reported according</p>

ELEMENT	PERFORMANCE CRITERIA
	to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- basic computer and software skills
- demonstrating safe and environmentally responsible workplace practices
- identifying and handling raw materials and contaminants
- operating plant, machinery and equipment according to manufacturer specifications and OHS standards
- using emergency and personal protective equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- enterprise guidelines associated with operation of plant, machinery and equipment
- environmental licenses, impacts and procedures identification of contaminants
- lock-out and tag-out procedures for plant, machinery and equipment
- manufacturer specifications for servicing of plant, machinery and equipment
- operating principles and operating methods for plant, machinery and equipment
- potential risks and hazards associated with operation of plant, machinery and equipment
- principles of weight distribution with regard to load-shifting and machinery movement
- procedures for cleaning, securing and storing machinery, equipment and materials
- product types and characteristics
- raw material types and characteristics
- relevant legislation, regulations and codes of practice with regard to operator

**REQUIRED SKILLS AND KNOWLEDGE**

licensing, roads and traffic requirements

- relevant legislation, regulations and codes of practice with regard to workplace OHS and the use and control of hazardous substances, such as fuel and recipe inputs
- OHS legislation, codes of practice and specific hazards such as hazardous substances and exposure to organic micro particles.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select and use various features and controls of a range of plant, machinery and equipment
- implement work and equipment maintenance plans
- determine appropriate operating methods
- monitor input materials and report non-conformances
- monitor outputs and report out-of-specification product
- perform shutdown procedures and maintain records.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of machinery and equipment may include:	<ul style="list-style-type: none"> <li>• machinery and equipment used to prepare raw materials in order to produce compost products.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	Composting
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## AHCCOM302A Dispatch materials and composted product

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process organising and dispatching bagged and bulk compost products from the site and defines the standard required to: organise a loading site; correctly interpret dispatch orders; organise and coordinate loading; measure product quantity for dispatch; load correct product for dispatch.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to an employee of an enterprise engaged in commercial-scale composting operations. It requires taking responsibility for work output with checking related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Organise for loading and dispatch of product	<p>1.1. Dispatch order is obtained and reviewed for completeness.</p> <p>1.2. Product dispatch requirements are checked with product and transport availability.</p> <p>1.3. Request is made to designated personnel for specified quantity of specified product to be prepared and/or delivered to dispatch area.</p> <p>1.4. Product dispatch is scheduled and confirmed with contractor or driver to ensure maximisation of load.</p> <p>1.5. enterprise Occupational Health and Safety (OHS) and site policies and procedures.</p> <p>1.6. Appropriate machinery, equipment and labour required for dispatch activity are identified and organised according to enterprise procedures.</p> <p>1.7. Hazards are identified and controlled according to job requirements and enterprise procedures.</p> <p>1.8. Emergency and Personal Protective Equipment (PPE) is selected and fitted according to job requirements, manufacturer specifications, OHS procedures and enterprise requirements.</p>
2. Coordinate loading of product	<p>2.1. Loading site is organised to ensure safe and efficient loading of product.</p> <p>2.2. Products to be loaded and specific loading requirements are clearly communicated to drivers.</p> <p>2.3. Signalling and instructions are provided to drivers to ensure safe and efficient loading.</p> <p>2.4. Loading site is monitored to ensure compliance with</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>loading instructions, containment of product within designated loading area, and availability of space for loading.</p> <p>2.5.Product is accurately measured and loaded into dispatch vehicle according to enterprise procedures.</p> <p>2.6.Product is recorded as loaded for dispatch according to enterprise requirements.</p> <p>2.7.Load is checked to ensure that it is adequately covered, contained and/or secured according to enterprise and regulatory requirements.</p> <p>2.8.Load is weighed to ensure dispatch order is met.</p> <p>2.9.Driver is provided with load documentation and delivery note according to enterprise requirements.</p>
3. Clean up loading area	<p>3.1.Loader and vehicle hygiene are maintained between loads.</p> <p>3.2.Area and equipment are monitored for cleaning and clearing to ensure safe and effective operation according to enterprise requirements.</p>
4. Document product dispatch	<p>4.1.Dispatch information is recorded accurately and promptly, and provided to sales office according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- demonstrating safe and efficient work practices
- operating load-shifting equipment
- organising a site
- using a computer to obtain and record dispatch information
- using PPE
- using signalling and communication techniques and equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as

**REQUIRED SKILLS AND KNOWLEDGE**

specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- bulk density and moisture effects on weight and volume
- communication techniques and equipment
- customer service
- measurements, including weights, volumes and bucket volumes
- OHS requirements
- provisions of the Trade Practices Act in regard to weights and measurements of bulk product
- relevant regulations governing site operation
- types and performance characteristics of vehicles and loading equipment used in a composting enterprise.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- organise a loading site
- correctly interpret dispatch orders
- organise and coordinate loading
- measure product quantity for dispatch
- load correct product for dispatch.

**Context of and specific resources for**

Competency requires the application of work practices

**EVIDENCE GUIDE****assessment**

under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Product types may include:

- composts
- mulches
- natural and blended soils for landscaping
- potting mixes
- soft fall or loose fill playground surfacing
- soil conditioners
- special purpose soils
- various recycled organic products for a range of specialised applications.

Machinery and equipment used in product dispatch may include:

- calculator
- communications equipment
- hoppers and conveyors
- load-shifting machinery
- recording equipment
- storage containers such as bins and skips
- weighbridge.

Potential hazards may include:

- biological hazards
- dust
- electricity and overhead powerlines
- ergonomic hazards associated with posture and vibration
- exposure to loud noise and fumes
- extreme weather conditions
- hazardous substances such as:
  - fertiliser
  - fuel
  - oil
- machinery, including hydraulics

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"><li>• mechanical malfunctions and exposed moving parts</li><li>• oil and grease spills.</li></ul>

### Unit Sector(s)

<b>Unit sector</b>	Composting
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCCOM303A Operate a compost bagging process

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of setting up, operating, adjusting and shutting down a compost bagging process and defines the standard required to: select and use various features and controls of a range of bagging plant; monitor compost inputs; monitor compost production against compost specifications; carry out routine maintenance on plant and equipment; monitor the temperature of bagged compost.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working as an employee of an enterprise engaged in commercial-scale composting operations. Work is likely to be performed as a part of a team. This unit must be read in conjunction with the National Guidelines for Occupational Health and Safety Competency Standards for Operation of Load-Shifting Equipment and Other Types of Specified Equipment [NOHSC: 7019 (1992)]. Where work requires the use of load-shifting equipment, appropriate training/certification must be provided according to state and territory safety and licensing requirements.
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Organise for bagging operations	<p>1.1. Job sheet or work order is reviewed to clearly identify product bagging requirements.</p> <p>1.2. Product for bagging is confirmed and available to meet job requirements.</p> <p>1.3. Equipment, materials and personnel requirements for safe, effective and efficient bagging operations are identified and organised.</p> <p>1.4. Suitable personal protective clothing and equipment are selected, used, maintained and stored according to Occupational Health and Safety (OHS) procedures.</p>
2. Prepare bagging plant for use	<p>2.1. Machine components and related attachments are fitted and adjusted to meet safety requirements.</p> <p>2.2. Materials for bag are fitted and adjusted to ensure efficient operation, according to manufacturer specifications.</p> <p>2.3. Safety devices and alarm systems are checked for correct operation according to manufacturer specifications, enterprise procedures and relevant</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>statutory requirements.</p> <p>2.4. Routine pre-operational checks are carried out to meet enterprise procedures and manufacturer specifications.</p> <p>2.5. Operational systems are checked, cleaned and calibrated, and batch number and operating parameters are entered as required to meet production requirements.</p> <p>2.6. Faulty plant or machinery is identified, safety tagged and reported promptly to supervisor according to enterprise procedures.</p> <p>2.7. OHS hazards are identified, reported to supervisor and managed according to enterprise procedures.</p> <p>2.8. Environmental implications associated with machinery operation are identified and reported to supervisor.</p> <p>2.9. Product to be bagged is obtained and positioned as required to meet production requirements.</p>
<p>3. Start and operate bagging plant</p>	<p>3.1. Operational area is checked, and personnel in operational area are informed of initiation of plant operation.</p> <p>3.2. Risks to self, others and the environment are recognised and minimised according to enterprise and OHS procedures.</p> <p>3.3. Product for bagging is loaded into the bagging plant hopper in required quantities.</p> <p>3.4. Bagging plant is started up using correct sequence according to manufacturer specifications and enterprise procedures.</p> <p>3.5. Bagging plant is operated in a safe and controlled manner, and monitored for performance and efficiency.</p> <p>3.6. Input materials are monitored, and non-conformances clearly identified and handled according to enterprise procedures and manufacturer specifications.</p> <p>3.7. Processing outputs are monitored and adjustments to plant operation are made to meet job specifications.</p> <p>3.8. Out-of-specification product or process outcomes are identified and reported to supervisor and appropriate action is taken as directed.</p> <p>3.9. Bagged product is labelled, palletised or stacked and wrapped according to enterprise procedures and</p>

ELEMENT	PERFORMANCE CRITERIA
	customer requirements.
4. Shut down bagging plant	<p>4.1. Bagging plant and machinery shut-down procedures are carried out to manufacturer specifications and enterprise procedures.</p> <p>4.2. Routine maintenance of bagging plant and machinery is carried out to remove debris and contaminants and ensure safe and efficient operation.</p> <p>4.3. Bagging plant and equipment is cleaned, secured and stored according to manufacturer specifications and enterprise procedures.</p> <p>4.4. Unsafe plant or equipment is reported to supervisor and tagged or locked out.</p>
5. Maintain records	<p>5.1. Bagging plant operational records are maintained accurately and promptly according to enterprise procedures.</p> <p>5.2. Any required maintenance, damage, malfunctions and irregular performance of machinery is recorded and addressed according to enterprise procedures.</p>
6. Check product to confirm readiness for distribution	<p>6.1. Product is transported to and positioned in holding area with labels and bar codes clearly visible.</p> <p>6.2. Supervisor or product dispatcher is informed of product readiness for dispatch according to enterprise procedures.</p> <p>6.3. Product awaiting distribution is checked for temperature rise during storage and any out-of-range readings are reported to supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and Implementing safe operating procedures
- calibrating bagging components
- correctly using emergency and personal protective equipment
- demonstrating batch/product changeovers that maintain product quality and hygiene

## REQUIRED SKILLS AND KNOWLEDGE

- demonstrating safe and environmentally responsible workplace practices
- maintaining work area to meet housekeeping standards
- operating machinery and equipment to industry standards
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- basic principles of the bagging process
- characteristics of product that is fit for bagging
- product quality and hygiene
- purpose of packaging, coding requirements and related legal requirements, including product weight
- basic operating principles of the equipment which may include:
- operational understanding of main equipment components, status and purpose of guards, equipment operating capacities and applications
- purpose and location of sensors and related feedback instrumentation
- knowledge of services required and action to take if services are not available
- methods used to monitor the process
- inspection or test points (control points) in the process and related procedures and recording requirements
- equipment cleaning requirements
- flow of this process and effect on downstream processes
- packaging quality and seal integrity
- effect of variation in inputs which may include ingredient quality and condition, packaging components and consumables, and/or services on process performance
- OHS hazards and controls
- emergency and routine shutdowns and procedures to follow in the event of a power outage
- product and batch changeover procedures
- lock-out and tag-out procedures and responsibilities
- environmental legislative and enterprise requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select and use various features and controls of a range of bagging plant</li> <li>• monitor compost inputs</li> <li>• monitor compost production against compost specifications</li> <li>• carry out routine maintenance on plant and equipment</li> <li>• monitor the temperature of bagged compost.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types and processes may include:	<ul style="list-style-type: none"> <li>• the full range of commercial compost types and compost bagging processes.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Composting
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCCOM401A Develop a composting recipe

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a composting recipe and defines the standard required to: calculate a compost recipe that is consistent with the technology and method available from combinations of raw materials; produce a compost recipe that will achieve defined product specifications; document compost production plan consistent with plant capabilities and site constraints.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to production managers who calculate composting recipes from documented formulas to prepare and mix raw materials of known characteristics in specified proportions for composting.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify and characterise raw materials	<p>1.1.Raw materials are visually identified and categorised against established enterprise criteria.</p> <p>1.2.Raw material characteristics are entered into enterprise compost recipe calculator to achieve a balanced recipe.</p> <p>1.3.Where raw material identity or characteristics are uncertain or, designated personnel are requested to take representative samples of material for laboratory analysis.</p> <p>1.4.Receivable and handling requirements for raw materials are determined.</p>
2. Establish production objectives	<p>2.1.Identified market requirements and priorities are translated into product specifications using product performance data and enterprise records.</p> <p>2.2.Raw material combinations that can potentially meet market requirements are identified.</p>
3. Calculate compost recipe	<p>3.1.Raw material characteristics are recorded in enterprise compost recipe.</p> <p>3.2.Raw material proportions or ratios suitable for composting by the enterprise by a particular technology and method are specified by weight in resulting compost recipe.</p> <p>3.3.Pre-processing requirements of raw materials, feasible volumes of compost upon formation, and compost production plan are determined.</p> <p>3.4.Composting batch management procedures are reviewed and any required variations to standard management procedures are defined and documented</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>as a new procedure.</p> <p>3.5.Compost production schedule is estimated and documented.</p> <p>3.6.Compatibility of resulting compost recipe and production schedule is confirmed against documented customer requirements and priorities.</p> <p>3.7.Density of pre-processed raw materials is quantified, and weight-based recipe is translated into volume-based recipe for production.</p> <p>3.8.Volumetric compost recipe and production procedures are recorded as operational batch or bucket recipe and procedure.</p>
4. Validate compost recipe	<p>4.1.Raw materials are pre-prepared and mixed according to new compost recipe to form feedstock for composting.</p> <p>4.2.Composting batch is managed according to revised enterprise procedure.</p> <p>4.3.Composting process is monitored for efficiency in relation to estimated production schedule and enterprise requirements.</p> <p>4.4.Environmental and Occupational Health and Safety (OHS) aspects and impacts are monitored for compliance with enterprise plan and regulatory requirements.</p> <p>4.5.Faults, variations or problems observed at any stage of process are identified and remedial action is carried out to maintain effective compost production.</p> <p>4.6.Sampling and testing of material during composting is conducted to determine completion of production process.</p> <p>4.7.End product quality is evaluated against established product specifications.</p> <p>4.8.Compost recipe, production schedule and procedures are revised to improve process efficiency and reliability, and product compliance with defined specifications.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- documenting procedures
- interpreting and applying written procedures and formulas
- reading and interpreting laboratory results
- reading and interpreting sampling and testing data
- using a computer
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- control of hazards in handling raw materials and composting materials
- processing duration required for various raw materials
- range of commercial compost-based products
- raw materials and their characteristics
- relationship between key compost recipe variables and compost production
- systems, technologies and methods in compost production.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• calculate a compost recipe that is consistent with the technology and method available from combinations of raw materials</li> <li>• produce a compost recipe that will achieve defined product specifications</li> <li>• document compost production plan consistent with plant capabilities and site constraints.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Composting recipes may include:	<ul style="list-style-type: none"> <li>• those recipes from documented formulas to prepare and mix raw materials of known characteristics in specified proportions for composting.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Composting
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCCOM402A Plan and schedule compost production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning and scheduling of compost production and defines the standard required to: identify and interpret relevant information and conditions that could influence compost production; produce and document a compost production schedule; document a compost production plan consistent with enterprise capabilities and constraints; develop and document contingency plans for compost production.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to product managers at a commercial-scale composting facility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish production requirements	<p>1.1.Raw material supply contracts and receival data, sales and market trend information, and corporate marketing plan and strategy are reviewed to quantify production requirements.</p> <p>1.2.Conditions that may affect production requirements are identified in consultation with executive management and designated sales and marketing personnel.</p> <p>1.3.Production requirements across product portfolio to meet customer requirements and site and equipment capacity are estimated in consultation with executive management and designated sales and marketing personnel.</p> <p>1.4.Environmental and Occupational Health and Safety (OHS) impacts are monitored for compliance with enterprise plan and licence conditions.</p> <p>1.5.Production plan is documented and submitted for executive management approval.</p> <p>1.6.Facilities, personnel, machinery and equipment required for compost production are confirmed as being available.</p> <p>1.7.Contingency plan to address potential oversupply or undersupply of raw material or product is developed and documented.</p>
2. Schedule production to meet requirement	<p>2.1.Batch types and volumes of compost-based products to be produced are calculated.</p> <p>2.2.Laboratory and field test data of compost materials during and post-production is obtained.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Production schedule is monitored and adjusted according to field and laboratory test results.</p> <p>2.4. Product is made available to customer in required quantities, to required quality and at required time.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analysing and interpreting supply contract documents, production data, weighbridge/receival data, field and laboratory results
- identifying and diagnosing problems with production
- using a computer
- visually recognising problematic mixtures of raw materials for composting
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- control of hazards in handling raw materials and product
- processing duration required for various raw materials
- raw materials and their characteristics
- relationship between key compost recipe variables and compost production
- systems, technologies and methods in compost production.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify and interpret relevant information and conditions that could influence compost production</li> <li>• produce and document a compost production schedule</li> <li>• document a compost production plan consistent with enterprise capabilities and constraints</li> <li>• develop and document contingency plans for compost production.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Technologies may include:	<ul style="list-style-type: none"> <li>• both aerobic composting and vermiculture technologies.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Composting
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCCOM501A Identify and secure raw materials supply for compost production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers identifying and securing raw materials supply for compost production and defines the standard required to: develop criteria and identify raw material requirements from corporate documents; review processes, plant and site capabilities against requirements for processing raw materials; assess characteristics of different raw materials as relevant to manufacture of particular products according to compliance requirements; define raw material specifications and acceptance criteria; draft a supply contract.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to commercial composting facility managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine characteristics of raw materials required	<p>1.1.Relevant corporate documents are reviewed to identify commercial objectives, product range and specifications, compliance requirements and enterprise constraints.</p> <p>1.2.Current raw material supplies are reviewed for suitability for production of defined compost products.</p> <p>1.3.Compost recipe calculations are conducted as a gap analysis to identify complementary raw material characteristics and quantities required to manufacture defined products.</p> <p>1.4.Characteristics and quantities of additional complementary raw materials required are specified and documented.</p> <p>1.5.Complementary or substitute raw material types that are consistent with requirements are identified through review of relevant literature and enterprise information/records.</p>
2. Identify and prioritise raw materials required for production	<p>2.1.Raw material options are identified and assessed in order to determine relative priority according to product range and specifications.</p> <p>2.2.Representative samples of prioritised raw materials are gained from potential sources of supply, and characteristics/risks are evaluated and confirmed.</p> <p>2.3.Where required, revisions to raw materials and product specifications are submitted to executive</p>

ELEMENT	PERFORMANCE CRITERIA
	management for incorporation into corporate business plan, marketing plan and marketing strategy.
3. Secure access to raw materials	3.1.Executive management approval is gained for securing preferred raw materials. 3.2.Specifications for raw material characteristics and acceptability criteria for receipt are documented for incorporation into supply contract. 3.3.Preferred suppliers of raw materials are determined. 3.4.Supply contracts are negotiated and secured on suitable trading terms according to enterprise practice.
4. Prepare for receipt and processing of raw materials	4.1.Receipt, containment, handling and management requirements are documented and incorporated into enterprise procedures and training. 4.2.Availability of site infrastructure, plant and equipment requirements is confirmed.
5. Maintain supply of raw material	5.1.Effective communication is maintained with raw material suppliers to support reliable and secure supply of raw materials of consistent and required quality.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assessing and characterising raw materials
- negotiating prices and supply of materials
- using a compost recipe calculator
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures

**REQUIRED SKILLS AND KNOWLEDGE**

- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- basic technical and industry literacy to source and interpret test data
- capabilities and limitations of site and plant
- environmental and site licenses and associated risks and restrictions
- potential risks and hazards related to various raw materials
- raw material assessment and characterisation
- raw materials used in compost production
- regulations and standards governing raw materials
- standard forms of supply contracts.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- develop criteria and identify raw material requirements from corporate documents
- review processes, plant and site capabilities against requirements for processing raw materials
- assess characteristics of different raw materials as relevant to manufacture of particular products according to compliance requirements
- define raw material specifications and acceptance criteria
- draft a supply contract.

**Context of and specific resources for**

Competency requires the application of work practices

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Raw material make include:	<ul style="list-style-type: none"> <li>• commercial organic waste</li> <li>• timber product waste</li> <li>• metropolitan green waste.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Composting
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCDER401A Handle, store and grade deer velvet

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the handling, storage and grading of deer velvet and defines the standard required to: handle and store velvet carefully according to food safety legislation; accurately grade velvet using industry grading specifications; sell velvet and review the grading and marketing of the product.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to activities performed by velvet producers or their staff in accordance with the requirements of the National Velvet Accreditation Scheme (NVAS).</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Handle and store velvet	<p>1.1. Equipment required for handling, storing and grading velvet is checked to ensure that it is available, serviceable and functioning correctly.</p> <p>1.2. Harvested velvet is handled according to food safety and NVAS requirements.</p> <p>1.3. Individual pieces of velvet are cleaned, weighed and stored according to industry quality assurance and NVAS criteria.</p>
2. Grade and sell velvet	<p>2.1. Factors affecting grade of velvet are identified and applied in grading process.</p> <p>2.2. Industry-accepted grading specifications are used.</p> <p>2.3. Frozen velvet is transported according to industry quality assurance procedures and sold through national pool or to private clients.</p> <p>2.4. Sales and personal grading assessments are reviewed and compared with grades and feedback provided by professional graders.</p>

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• accurately assessing velvet style and quality</li> <li>• establishing and maintaining consistent methods of grading</li> <li>• laying out a grading area for efficient operation</li> <li>• recording grading results</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• food safety requirements</li> <li>• grading specifications</li> <li>• requirements for handling and storing velvet to maximise quality.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• handle and store velvet carefully according to food safety legislation</li> <li>• accurately grade velvet using industry grading specifications</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>sell velvet and review the grading and marketing of the product.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Grading specifications may include:	<ul style="list-style-type: none"> <li>those detailed in Australian Deer Industry Velvet Antler and Venison Co-products Language and Specifications Guide (grading chart) developed by the Rural Industries Research and Development Corporation.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Deer
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCDER501A Comply with deer industry national velvet accreditation requirements

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers complying with deer industry national velvet accreditation requirements and defines the standards required to: apply the National Velvet Accreditation Scheme (NVAS) to own enterprise; establish and maintain a bona fide client-veterinarian relationship; apply relevant state and territory legislation and industry codes of practice as they relate to own enterprise; demonstrate knowledge of legal aspects of possession and use of approved drugs; establish systems to satisfy the Deer Industry Association of Australia (DIAA) Quality Assurance (QA) program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies deer farm managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Demonstrate knowledge of deer velvet industry requirements	1.1.Relevant legislation and codes of practice are identified and applied to deer farm activities and in particular to deer velveting. 1.2.Industry accreditation and quality assurance schemes are identified and implemented according to industry requirements. 1.3.Relationships with external parties are established and maintained. 1.4.A bona fide legal relationship with a registered veterinarian is established and maintained. 1.5.Record keeping system is established and maintained according to industry and legislative requirements.
2. Apply knowledge of industry-accredited deer velveting process	2.1.Animals are handled according to Occupational Health and Safety (OHS) and animal welfare requirements. 2.2.Restraint facilities and equipment suitable for handling animals for velvet harvesting are selected and used. 2.3.Stag/buck management process is established and followed before and after velveting. 2.4.Deer antler growth rates and optimum time for cutting are determined. 2.5.Relevant drugs and equipment used in velveting are identified and dosage rates are calculated.

ELEMENT	PERFORMANCE CRITERIA
	2.6.Human emergency response procedures are established according to legislative and organisational requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- Comply with deer industry national velvet accreditation requirements applies to the outcomes of drug administration
- complying with the NVAS and quality assurance program of the DIAA
- dealing with aggressive or difficult animals
- during velveting, recognising signs of stress and pain and their effect and taking appropriate action
- implementing emergency response procedures such as Cardiopulmonary Resuscitation (CPR)
- using handling and restraint facilities and equipment
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- animal welfare issues and legislation relating to velvet antler harvesting
- basic and applied principles of anatomy, physiology, pain control and pharmacology relevant to velvet harvesting
- DIAA's NVAS and quality assurance program
- definitions and requirements with respect to veterinary supervision and legal responsibilities of deer producers and veterinarians
- drug withholding periods and tissue residues
- management of deer before and after velveting

**REQUIRED SKILLS AND KNOWLEDGE**

- nature of a bona fide legal relationship
- principles and process of velveting, including potential complications
- relevant action of drugs used for velveting on body function, and detrimental results of drug administration
- relevant legislation relating to restricted drugs
- OHS legislation, codes of practice and enterprise requirements.

**Evidence Guide**

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- apply the NVAS to own enterprise
- establish and maintain a bona fide client-veterinarian relationship
- apply relevant state and territory legislation and industry codes of practice as they relate to own enterprise
- demonstrate knowledge of legal aspects of possession and use of approved drugs
- establish systems to satisfy the DIAA's quality assurance program.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances. The candidate must also have access to the following resources:

- supervision by a registered veterinarian
- relevant legislation and industry codes of practice

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• organisational policies and procedures</li> <li>• facilities, materials and equipment for velvetting normally available on a deer farm, including:                             <ul style="list-style-type: none"> <li>• access to deer</li> <li>• drug charts</li> <li>• drugs and equipment for velvetting</li> <li>• biohazard sharps container</li> <li>• record keeping system</li> <li>• freezer and storage facilities for harvested velvet</li> <li>• velvet grading chart</li> <li>• grading equipment and NVAS tags.</li> </ul> </li> </ul>

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• all breeds of deer covered by the NVAS and quality assurance program of the DIAA.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Deer
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### Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCDER502A Harvest deer velvet

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved in the harvest of deer velvet and specifies the outcomes required to: harvest deer velvet and defines the standard required to velvet unassisted a minimum of three deer under supervision of a registered veterinarian; administer drugs to deer under supervision of a registered veterinarian; manage deer effectively before and after velveting; develop and maintain effective working relationships with a range of organisations operating in the deer industry.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies those persons who harvest deer velvet.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for velveting	<p>1.1. Facilities, materials and equipment to be used in velveting are checked to ensure that they are available, serviceable, set up and functioning correctly and will contribute to a safe, hygienic and stress free environment for animals and operators.</p> <p>1.2. Veterinary supervision is arranged and appropriate drugs, equipment, emergency equipment and Personal Protective Equipment (PPE) are made ready for use.</p> <p>1.3. Animals selected for velveting are drafted and restrained according to animal welfare and occupational health and safety requirements.</p>
2. Harvest velvet	<p>2.1. Volume of analgesic or anaesthetic drug is determined for each animal and administered under supervision of attending veterinarian.</p> <p>2.2. Antler is surgically removed under supervision of attending veterinarian and following National Velvet Accreditation Scheme (NVAS) requirements, using hygienic techniques and applying appropriate standards.</p> <p>2.3. Human and animal emergency procedures are ready for implementation if required.</p> <p>2.4. Work is conducted according to Occupational Health and Safety (OHS) procedures.</p> <p>2.5. Information is collected during harvesting process for annual return/audit.</p> <p>2.6. Velvet is tagged for identification and cross-referenced to the animal velveted to allow for</p>

ELEMENT	PERFORMANCE CRITERIA
	full trace back.
3. Complete harvesting process	3.1. Animal is released into recovery area and monitored closely for adverse reactions, and appropriate action is taken as required. 3.2. Velveting area and equipment are cleaned and waste is disposed of according to organisational and OHS procedures. 3.3. Hazardous substances and used equipment are disposed of according to legislative requirements and codes of practice. 3.4. Equipment is stored, drug usage is recorded and remaining drugs are placed in a secure locked facility. 3.5. In the event of an animal's post-velveting death, industry procedures are followed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- administering analgesics and anaesthetics under veterinary supervision
- complying with the NVAS and quality assurance program of the Deer Industry Association of Australia (DIAA)
- dealing with aggressive or difficult animals
- developing and maintaining a bona fide veterinarian-client working relationship
- handling and restraining animals
- implementing emergency response procedures such as cardiopulmonary resuscitation (CPR)
- performing unassisted deer velveting under veterinary supervision
- recognising stress and pain in deer and their effect during velveting
- setting up and maintaining a clean work environment
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>clarification, negotiating solutions and responding to a range of views</p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• animal welfare legislation and issues</li> <li>• definitions of, and requirements with respect to, veterinary supervision and legal responsibilities of deer producers and veterinarians</li> <li>• drug legislation relating to deer velvet harvesting</li> <li>• food safety requirements relating to drug residues and withholding periods, and the hygienic handling of velvet</li> <li>• management of deer before and after velveting</li> <li>• surgical velveting procedures</li> <li>• NVAS and quality assurance program of the DIAA.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances. Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p> <ul style="list-style-type: none"> <li>• velvet unassisted a minimum of three deer under supervision of a registered veterinarian</li> <li>• administer drugs to deer under supervision of a registered veterinarian</li> <li>• manage deer effectively before and after velveting</li> <li>• develop and maintain effective working relationships with a range of organisations operating in the deer</li> </ul>

<b>EVIDENCE GUIDE</b>	
	industry.
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances. The candidate must also have access to the following resources:</p> <ul style="list-style-type: none"> <li>• supervision by a registered veterinarian</li> <li>• relevant legislation and industry codes of practice</li> <li>• organisational policies and procedures</li> <li>• facilities, materials and equipment for velveting normally available on a deer farm including access to: <ul style="list-style-type: none"> <li>• deer</li> <li>• drug charts</li> <li>• drugs and equipment for velveting</li> <li>• biohazard sharps container</li> <li>• record keeping system</li> <li>• freezer and storage facilities for harvested velvet</li> <li>• velvet grading chart</li> <li>• grading equipment and NVAS tags.</li> </ul> </li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• all breeds of deer covered by the NVAS and quality assurance program of the DIAA.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Deer
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCDES501A Design sustainable landscapes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of designing sustainable landscapes and defines the standard required to: assess a land area for sustainable land use and threats to sustainability; protect water resources, riparian zones and vegetation in a development area; prepare a detailed plan or design, specifications and where appropriate a proposal or quotation for sustainable land improvement; design for the health and sustainability of soils and plants; outline an integrated approach to land and water management; conduct a sustainability audit.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the design for improvement of long-term ecological sustainability of landscapes, land under production, land areas in business use, natural resource areas and recreational amenity spaces essential for long-term economic and cultural viability.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess requirements for sustainable land use	1.1. Client is consulted to establish a brief for the design. 1.2. Legislative and regulatory requirements are researched, identified and documented in the improvement plan. 1.3. Specific requirements for sustainability are identified from the brief, business plan and management plan or policy documentation. 1.4. The land area is assessed for biophysical factors, biodiversity, historical and cultural attributes, services, site modifications and threats to sustainability. 1.5. Environmental implications of the planned works are identified and, if necessary, reported to relevant personnel for further research and recommendations.
2. Prepare an integrated design to improve land use	2.1. Concept plan for improvement is developed that reflects client preferences and requirements and takes into account heritage issues, site factors and any identified environmental requirements and presented to the client/land owner for discussion and approval. 2.2. Other professionals are consulted to assist in research and planning of works in areas of technical expertise, energy efficiency and use, current technologies and legislative and enterprise requirements.



ELEMENT	PERFORMANCE CRITERIA
	<p>2.3.Design considerations for products, materials and finishes are efficient, low risk and cyclic and are confirmed available from local sources.</p> <p>2.4.Resources, products, equipment and machinery required for the works are evaluated for their impact on the sustainable use of the site.</p> <p>2.5.Plants and soils are selected for their integrated roles for the designed outcomes in the specific site conditions, system of irrigation and environmental parameters.</p> <p>2.6.Environmental conditions are reviewed for a functional analysis of the site and the planned design.</p> <p>2.7.Detailed plan or design, specifications and quotation are prepared and are presented to the client/land owner for acceptance.</p>
3. Plan the implementation into the design	<p>3.1.Staged implementation and development are outlined with appropriate access for future works.</p> <p>3.2.Timelines for development are incorporated taking into account the needs of the implementation plan and principles of sustainability.</p> <p>3.3.Schedules for planting and post-planting care are determined in accordance with the requirements of the plant species and cultivars, site conditions, and any other planning requirements.</p> <p>3.4.Protection of water resources, riparian zones, specified trees and existing vegetation are integrated into the design plan.</p> <p>3.5.Chemical, non-chemical, amelioration application and waste disposal procedures and processes are reviewed to select designs of minimal environmental consequence and minimise potential contamination of soils and ground water.</p> <p>3.6.Implementation outline is reviewed for integration of approach to land and water management.</p>
4. Audit the implementation for sustainability of use	<p>4.1.All work materials, waste and debris from site works have low risk and energy efficient disposal methods.</p> <p>4.2.Soil and ground water quality are sampled and tested and recommendations implemented.</p> <p>4.3.Soil conservation measures and erosion sediment controls are confirmed.</p> <p>4.4.Protection measures for specified trees, protected fauna and areas and objects of cultural significance</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>are verified.</p> <p>4.5. Biodiversity, heritage and cultural attributes, soil and water quality are maintained or improved.</p> <p>4.6. Client is informed and provided with a report according to the brief or contractual requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- implement sustainable practices
- identify and select an extensive range of plants, shrubs and trees
- identify and select an extensive range of soils and growing media
- select plants and soils for their integrated functional roles
- research, interpret and apply appropriate legislation and regulations
- use a range of graphic techniques for illustrating landscape design components
- perform a land area assessment
- conduct soil and water quality tests
- design plans for sustainable improvement
- interpret specifications and plans
- assess landscape sites
- identify hazards and assess risk
- conduct a sustainability audit
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- specific requirements for sustainability

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• sustainable land and water use principles and practices applicable in the region</li> <li>• types, properties and characteristics of a wide range of soils and growing media</li> <li>• identification and selection of an extensive range of soils, growing media, plants, shrubs and trees</li> <li>• ethnobotany, plant physiology, taxonomy and nomenclature</li> <li>• surface hydrology</li> <li>• assessment techniques</li> <li>• irrigation practices</li> <li>• environmental controls and codes of practice applicable to the business and to the improvement works</li> <li>• relevant legislation and regulations relating to soil and water degradation issues and construction</li> <li>• specific legislation and regulations for landscape design and development</li> <li>• relevant Occupational Health and Safety (OHS) legislation and regulations.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess a land area for sustainable land use and threats to sustainability</li> <li>• protect water resources, riparian zones and vegetation in a development area</li> <li>• prepare a detailed plan or design, specifications and where appropriate a proposal or quotation for sustainable land improvement</li> <li>• design for the health and sustainability of soils and plants</li> <li>• outline an integrated approach to land and water</li> </ul>

<b>EVIDENCE GUIDE</b>	
	management <ul style="list-style-type: none"> <li>• conduct a sustainability audit.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Conservation measures to improve sustainability may include:	<ul style="list-style-type: none"> <li>• the range of biophysical features and environmental factors relating to a particular site or land area and covers:                             <ul style="list-style-type: none"> <li>• landscape installations</li> <li>• revegetation</li> <li>• land rehabilitation</li> <li>• land development</li> <li>• erosion sediment controls</li> <li>• contouring</li> <li>• stabilisation</li> <li>• water retention</li> <li>• drainage</li> <li>• water flow</li> <li>• preparation of grassed waterways</li> </ul> </li> <li>• matching irrigation inputs with soil water holding capacity</li> <li>• raising soil organic matter levels and absorption of atmospheric carbon.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Design
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCDES502A Prepare a landscape project design

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing a landscape design for a large project and defines the standard required to: consult with client/s to develop a landscape design brief; apply landscape design criteria and principles to produce a scaled and annotated designs including details of hard landscaping construction features; specify plants and other hard landscaping requirements including demolition and removal of existing features, installation of new works, irrigation and hard landscaping components; prepare a concept design and specifications; document a final design plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to landscape designers involved in the process of preparation of a landscape design for a large project on residential, commercial or public open spaces.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop a design brief	1.1. Client is consulted to establish the purpose and requirements of design. 1.2. Relevant architectural designs, styles and details are interpreted and incorporated. 1.3. Design brief is developed and agreed with the client. 1.4. Cost structures and timelines are negotiated with the client.
2. Assess the project site	2.1. Site where the landscape project is to be located is inspected. 2.2. Physical elements and features of the site are recorded on a base plan. 2.3. Assessment of soil, topography, aspect, existing vegetation and climatic factors is analysed and recorded on a base plan. 2.4. Functional analysis of the site is completed and recorded on the base plan. 2.5. Other relevant information is assessed and recorded on a base plan. 2.6. Legal requirements and constraints on development are assessed.
3. Prepare a concept design	3.1. Concept design is prepared to illustrate location and layout of proposed landscape project works according to the design brief.

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2.Consultation with the client is undertaken to establish agreement on options and approaches for development.</p> <p>3.3.Planting schedules are compiled for incorporation into the design plan.</p> <p>3.4.Construction techniques are researched and prepared according to the design brief.</p> <p>3.5.Consistent graphic styles are used to present the concept design.</p>
4. Produce a final design	<p>4.1.Specifications and notes are included on the design to assist in interpretation.</p> <p>4.2.Appropriate construction and engineering principles are applied to landscape design according to industry standards.</p> <p>4.3.Detailed design plan is finalised and documented according to the design brief, concept design and client consultations.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- design scale concept and/or construction plans including sections and elevations
- use a range of graphic techniques for illustrating landscape design components
- research, interpret and apply appropriate legislation and regulations
- identify and select an extensive range of plants, shrubs and trees
- design plans detailing construction techniques
- identify dimensions and qualities of materials
- interpret architectural designs and details
- specify landscape materials and finishes
- determine survey levels and site grading
- implement professional practices
- design sustainable landscapes
- prepare bills of quantities
- assess landscape sites
- operate Computer-Aided Design (CAD) software



## REQUIRED SKILLS AND KNOWLEDGE

- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- landscape design principles
- landscape design process
- construction and engineering principles
- principles of surveying
- plant identification, selection and culture
- ethno botany and botanical geography, plant physiology, taxonomy and nomenclature
- identification and treatment of soils
- drafting techniques
- environmental implications of landscape project works
- federal, state and territory legislation
- local government regulations and processes
- Occupational Health and Safety (OHS) risk in office and outdoor environments
- cost estimating.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• consult with client/s to develop a landscape design brief</li> <li>• apply landscape design criteria and principles to produce a scaled and annotated designs including details of hard landscaping construction features</li> <li>• specify plants and other hard landscaping requirements including demolition and removal of existing features, installation of new works, irrigation and hard landscaping components</li> <li>• prepare a concept design and specifications</li> <li>• document a final design plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Landscape designs may include:	<ul style="list-style-type: none"> <li>• a wide range of contexts and styles of presentation</li> <li>• design elements</li> <li>• styles and design plans</li> <li>• models.</li> </ul>
Graphics may include:	<ul style="list-style-type: none"> <li>• a wide range of manual and electronic drafting techniques and CAD.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Design
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCDES503A Assess landscape sites

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers assessing landscape sites and defines the standard required to: verify existing site details; compile information into a site inventory; carry out a site assessment; record assessment data and develop recommendations to rectify identified problems; document assessment data and recommendations in a site plan or assessment report; maintain assessment data records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to landscape managers, landscape designers, consulting arborists.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collect and collate initial information	<p>1.1. Client-stakeholder is consulted and objectives are confirmed.</p> <p>1.2. Site plans and maps are sourced and verified.</p> <p>1.3. Required resources are identified and acquired.</p> <p>1.4. Base plan is prepared of the site and relevant surrounds.</p> <p>1.5. Location, ownership and site boundaries are verified.</p> <p>1.6. Current land use and environmental threats and problems are identified and recorded.</p> <p>1.7. Covenants that could affect the project, design or report are identified and recorded.</p> <p>1.8. Climate and weather conditions are ascertained from historical data.</p>
2. Undertake initial site visit	<p>2.1. Site entry conditions are met and approval obtained if required.</p> <p>2.2. Site hazards are identified and risk assessed for current visit.</p> <p>2.3. Site orientation is undertaken.</p> <p>2.4. Existing on-site and adjacent site features that may impact upon the project, plan or report objectives are identified and recorded.</p> <p>2.5. Site dimensions, levels and gradients are identified, and measured and recorded, or confirmed.</p>
3. Compile a site inventory	<p>3.1. Soil and growing media types, properties and relevant physical characteristics are identified and recorded on site inventory.</p> <p>3.2. The species, health, age and location of vegetation</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>are recorded</p> <p>3.3. Structural elements are located and existing services and facilities confirmed.</p> <p>3.4. The presence, location and/or extent of other relevant site constraints are recorded.</p> <p>3.5. Areas of homogeneous soils and growing media are sampled for testing by others for analysis of soil content and contamination on request by the client or as required in the brief provided.</p>
<p>4. Determine the impact of development for trees on site</p>	<p>4.1. Consulting arborist report is obtained to assess trees on site.</p> <p>4.2. Tree protection zones are determined and recorded.</p> <p>4.3. Impact of proposed development on each tree is documented.</p> <p>4.4. Trees exempt from approval requirements are identified.</p> <p>4.5. Trees impacted by development are identified and located on the site plan according to regulations applying in the local jurisdiction.</p> <p>4.6. Trees identified by the consultant arborist report as requiring pruning or removal are included in a development application.</p>
<p>5. Document a site assessment report</p>	<p>5.1. Site information is documented into a site assessment report or site plan.</p> <p>5.2. Assessment report incorporates all relevant data from the site assessment in line with client needs and the requirements of relevant legislation and regulations.</p> <p>5.3. Soil and growing media tests results are interpreted and analysed for further testing requirements.</p> <p>5.4. Specific recommendations of remedial action for site problems are provided and recorded.</p> <p>5.5. Recommendations for appropriate risk controls of site hazards are formulated and documented.</p> <p>5.6. Survey and assessment data are stored and maintained as part of professional practice.</p> <p>5.7. Client-stakeholder is informed and advised of the content and implications of the report and a copy is presented.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- consult with and advise clients
- interpret and produce plans
- identify vegetation and soils
- sampling soils and growing media
- analysing laboratory results
- obtain a consultant arborist report
- exhibit professional work practices
- assess risk
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- protocols of site access
- identification of a wide range of vegetation common within the region
- botanical and regionally accepted common names, age, health and conditions of vegetation
- soil and growing media types, structure, texture and pH
- soil chemical and physical properties
- basic soil field tests and soil sampling techniques
- techniques to ameliorate soil properties
- plant nutrition
- measurement and surveying techniques
- interpretation of results from assessment and testing
- current land use and environmental threats and problems to site
- occupational health and safety hazards associated with undertaking a site assessment
- local, state and federal laws and regulations.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• verify existing site details</li> <li>• collect and collate information on site features</li> <li>• carry out a site assessment</li> <li>• record assessment data and develop recommendations to rectify identified problems</li> <li>• document assessment data and recommendations in a site plan or assessment report</li> <li>• maintain assessment data records.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Site assessment may include:	<ul style="list-style-type: none"> <li>• all vegetation forms.</li> </ul>
Site assessment reports may include:	<ul style="list-style-type: none"> <li>• reports and plans such as landscape and project designs</li> <li>• flora and fauna assessments</li> <li>• site audits</li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• development applications</li> <li>• vegetation assessment and management reports</li> <li>• biodiversity assessments</li> <li>• restoration projects</li> <li>• expert witness statements.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Design
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCDES504A Design for construction of landscape features

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of designing for the construction of landscape features and defines the standard required to: interpret detail architectural and landscape design drawings; construct a small scale model; specify dimensions, footings and qualities of materials; develop a concept design for the construction; draw plans to construction standards; and develop a final design and project report.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of designing for the construction of landscape features.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Interpret detail architectural and landscape design drawings	<p>1.1.Detail architectural and landscape design drawings are interpreted for construction features.</p> <p>1.2.Survey levels are defined and any site gradients recorded.</p> <p>1.3.A small scale model is constructed from detail drawings.</p> <p>1.4.Detail plans are drawn from pre-constructed landscape features, including cross-sections.</p> <p>1.5.Drainage plans for a green site and a developed site are drawn to construction standards.</p>
2. Design aspects of construction for landscape features in a range of materials	<p>2.1.A concept design is developed for the construction of the selected landscape feature.</p> <p>2.2.Aspects of construction for landscape features are illustrated.</p> <p>2.3.A range of materials used in the construction of landscape features are utilised into the design.</p> <p>2.4.Appropriate plants are selected for incorporation into the design.</p>
3. Specify dimensions, footings and qualities of materials	<p>3.1.The difference in quality of available materials is determined and quality criterion specified in the design.</p> <p>3.2.Dimensions, footings and qualities of materials selected are identified and specified.</p> <p>3.3.The consequences and costs involved in using poor quality materials are determined.</p> <p>3.4.The construction standards are specified in the design.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Develop the required project management skills	4.1. A site strategy is developed for the design project. 4.2. Timelines for the project are identified and documented. 4.3. Project costs are determined and recorded. 4.4. Contractors on site are consulted and issues resolved. 4.5. A final design and project report are developed and documented.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify and specify dimensions, footings and quantities of materials
- interpret detail architectural and landscape design drawings
- interpret surveying and drainage plans
- design components of construction
- identify and document project timelines
- calculate project costs
- liaise with contractors
- select appropriate materials and plants
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- construction standards
- site services
- principles of surveying
- selection of appropriate plants and materials

**REQUIRED SKILLS AND KNOWLEDGE**

- drainage issues
- available resources to resolve drainage problems
- paving process
- stone walling, including gabions
- materials available in the marketplace
- drainage issues and available resources to resolve drainage problems
- site services, for example, electrical and water provision
- essentials of retaining walls
- plant specifications.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- interpret detail architectural and landscape design drawings
- construct a small scale model
- specify dimensions, footings and qualities of materials
- develop a concept design for the construction
- draw plans to construction standards
- develop a final design and project report.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Landscape designs may include:	<ul style="list-style-type: none"> <li>• a wide range of contexts and styles of presentation</li> <li>• design elements</li> <li>• styles</li> <li>• design plans and models.</li> </ul>
Graphics may include:	<ul style="list-style-type: none"> <li>• a wide range of manual and electronic drafting techniques</li> <li>• computer-assisted drawings (CAD).</li> </ul>
Constructions may include:	<ul style="list-style-type: none"> <li>• all landscape construction works.</li> </ul>
Sites may include:	<ul style="list-style-type: none"> <li>• all areas of project works.</li> </ul>
Landscape features may include:	<ul style="list-style-type: none"> <li>• all constructions, installations and structures.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Design
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCDRG201A Maintain drainage systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of carrying out routine maintenance activities for drainage systems and defines the standard required to: carry out cleaning and maintenance of drainage systems; inspect and maintain simple drainage system components; monitor and control weeds and silt build up; inspect components for wear and record and report damage, blockages and leakages.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in all industry sectors maintaining drainage systems usually working under supervision in a support role as directed.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Inspect drainage systems	<p>1.1. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p> <p>1.2. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>1.3. Drainage system is visually inspected for blockages, leaks and operating faults.</p>
2. Maintain system components	<p>2.1. Components are inspected for wear or blockage.</p> <p>2.2. Mechanical equipment is serviced as directed.</p> <p>2.3. Simple components are replaced as directed.</p>
3. Remove silt and weed growth	<p>3.1. Silt is cleaned from channels, drains, sumps and crossings.</p> <p>3.2. Weed growth is removed as directed.</p> <p>3.3. Drainage system is flushed.</p> <p>3.4. Unobstructed water flow is observed through channels and from outlets.</p>
4. Record and report maintenance activities	<p>4.1. Blockage or leakage is recorded by type and location of the section of the system affected.</p> <p>4.2. Damaged or faulty equipment is recorded and reported.</p> <p>4.3. All routine maintenance activities are recorded and reported.</p> <p>4.4. Drainage system is checked regularly according to directions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards
- follow safe work practices relating to drainage system maintenance
- read and follow operational procedures for drainage system maintenance
- record and report maintenance observations and activities
- use hand or powered equipment
- use a range of weed control methods
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic types of drainage systems
- drainage system cleaning procedures
- OHS procedures relating to drainage system maintenance
- manual, mechanical and chemical weed control methods
- equipment used to clean and maintain drainage systems
- legislation regarding the use of chemicals near waterways
- disposal procedures for chemical containers and residues, oils/grease and used parts
- environmental impacts of drainage system maintenance.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• carry out cleaning and maintenance of drainage systems</li> <li>• inspect and maintain simple drainage system components</li> <li>• monitor and control weeds and silt build up</li> <li>• inspect components for wear</li> <li>• record and report damage, blockages and leakages.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Drainage systems may include:	<ul style="list-style-type: none"> <li>• drainage pipes and channels</li> <li>• surface drains, culverts, mole drains, sand slit, sub surface traps, reed beds</li> <li>• pumps for recycling</li> <li>• baffles.</li> </ul>
Operation systems may include:	<ul style="list-style-type: none"> <li>• manual operation with monitoring</li> <li>• fully automated with computer control and monitoring.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Drainage
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCDRG301A Install drainage systems

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing surface and/or subsurface drainage systems and defines the standard required to: interpret site specifications and drainage system plans; prepare for installation activities; set out, survey, test and excavate the installation site; measure materials; set out drainage system works; install and test the drainage system; level and align earthworks.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in land conservation and irrigation construction and is likely to be carried out under routine supervision within enterprise guidelines.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for drainage system installation activities	<p>1.1.The construction site for the drainage system and construction method is identified according to the site and drainage system plans and enterprise work procedures.</p> <p>1.2.Materials, tools, equipment and machinery are selected according to drainage system design requirements and enterprise work procedures.</p> <p>1.3.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer's specifications and enterprise work procedures.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls implemented.</p> <p>1.5.Suitable safety and Personal Protective Equipment (PPE) are selected, used and maintained.</p>
2. Co-ordinate installation work	<p>2.1.Enterprise work team, contractors and design consultants are identified and work tasks are co-ordinated in a sequential, timely and effective manner in consultation with the supervisor.</p> <p>2.2.Installation of the drainage system is undertaken according to OHS requirements and with due consideration of the environmental implications and relevant legislation and regulations.</p> <p>2.3.A clean and safe work area is maintained throughout and on completion of work.</p>
3. Prepare the site for installation of	<p>3.1.Symbols and terminology are interpreted to ensure the concept of the drainage system plan is clearly</p>

ELEMENT	PERFORMANCE CRITERIA
drainage system	<p>understood according to industry practice.</p> <p>3.2. Layout of services is identified, depths checked against the site or drainage system plan and discrepancies are reported to the supervisor and the relevant authority.</p> <p>3.3. Survey, measurement and marking out of the site and confirmation of soil characteristics relevant to the planned drainage system are completed according to plan specifications and enterprise work procedures.</p>
4. Undertake installation of drainage system	<p>4.1. Excavations are completed without damage to services, facilities, features and established plants according to plan specifications and enterprise work procedures.</p> <p>4.2. The drainage system is installed according to the drainage system plan and enterprise work procedures.</p> <p>4.3. The drainage system is tested for configuration, flow rates and capacity consistent with the drainage system plan and according to enterprise work procedures.</p> <p>4.4. The supervisor is consulted and remedial action is taken when the drainage system operation does not meet the plan specifications.</p>
5. Complete installation of drainage system	<p>5.1. Earthworks are finished off to the plan specifications and enterprise work procedures.</p> <p>5.2. The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p> <p>5.3. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p> <p>5.4. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit.

**Required skills**

- identify hazards and implement safe work procedures
- set out drainage system works
- level and align earthworks
- use equipment, tools and machinery
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- the purposes of drainage systems and the application of drainage system plans to the physical situation
- drain types, components and installation techniques
- environmental impacts of irrigation and drainage systems
- soil characteristics
- enterprise OHS procedures
- environmental impacts of installing drainage systems.

**Evidence Guide**

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

**Critical aspects for assessment and**

The evidence required to demonstrate competency in this



<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret site specifications and drainage system plans</li> <li>• prepare for installation activities</li> <li>• set out, survey, test and excavate the installation site</li> <li>• measure materials</li> <li>• set out drainage system works</li> <li>• install and test the drainage system</li> <li>• level and align earthworks.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Drainage systems may include:	<ul style="list-style-type: none"> <li>• surface drains</li> <li>• culverts</li> <li>• mole drains</li> <li>• sand slit</li> <li>• sub-surface traps</li> <li>• pit and trap systems</li> <li>• dune and swale systems</li> <li>• reed beds</li> <li>• water-recycling pumps and baffles.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Drainage
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCDRG302A Measure drainage system performance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of measuring the performance and efficiency of a drainage system and defines the standard required to: identify and correcting system problems; measure, record and report soil moisture, salinity and water table depth to determine system performance and efficiency; apply measuring and testing techniques; record and report system performance; use computers for recording and reporting drainage system data.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess drainage and collection systems	<p>1.1.A visual inspection is undertaken to determine damaged or broken components and results are recorded in accordance with Occupational Health and Safety (OHS) and enterprise policy and procedures.</p> <p>1.2.Areas being drained are inspected for signs of water pooling and problems are recorded in accordance with OHS and enterprise policy and procedures.</p> <p>1.3.Measurements are taken with appropriate equipment to determine drainage performance.</p> <p>1.4.Drainage/tail water quality is measured in accordance with OHS and enterprise policy and procedures.</p> <p>1.5.Water table depth is measured where required in accordance with OHS and enterprise policy and procedures.</p> <p>1.6.Soil salinity is measured where required in accordance with OHS and enterprise policy and procedures.</p> <p>1.7.Factors external to the system, which may cause interference, are identified and recorded in accordance with OHS and enterprise policy and procedures.</p>
2. Monitor supply of equipment and spare parts	<p>2.1.Supply and part usage are recorded in accordance with enterprise policy and procedures.</p> <p>2.2.Purchases of spare parts and materials are within budget constraints.</p> <p>2.3.Parts requirements outside of budget constraints are reported.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4.Purchases and orders are recorded in accordance with enterprise procedures and systems.
3. Record and report system performance status	3.1.Water quality is recorded in accordance with enterprise procedures. 3.2.Water table depth, soil moisture and salinity are recorded in accordance with enterprise procedures. 3.3.Strategies that minimise the negative environmental impacts and maximise the positive impacts of the drainage system, are documented.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- apply measuring and testing techniques
- identify adverse environmental impacts of drainage systems and appropriate remedial action
- use computers for recording and reporting drainage system data
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- OHS guidelines
- measuring and monitoring procedures for factors contributing to drainage system performance
- positive and negative environmental impacts of drainage systems

**REQUIRED SKILLS AND KNOWLEDGE**

- water table and salinity measures
- water quality monitoring methods and techniques
- soil moisture measurement procedures
- water authority standards and procedures
- enterprise policies and procedures
- environmental role of drainage systems.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify and correcting system problems
- measure, record and report soil moisture, salinity and water table depth to determine system performance and efficiency
- apply measuring and testing techniques
- record and report system performance
- use computers for recording and reporting drainage system data.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Drainage systems may include:	<ul style="list-style-type: none"> <li>• surface drains</li> <li>• culverts</li> <li>• mole drains</li> <li>• sand slit</li> <li>• sub-surface traps</li> <li>• pit and trap systems</li> <li>• dune and swale systems</li> <li>• reed beds</li> <li>• water-recycling pumps and baffles.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Drainage
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCDRG303A Troubleshoot drainage systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of troubleshooting blockages in drainage lines and defines the standard required to: plan and prepare for the work; inspect the site to determine access to drainage lines; isolate appliances/fixtures/fittings and related assemblies (where required); use manual and mechanical drain clearing equipment; test the system and clean up after locating and clearing any blockages.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan job	<p>1.1. Equipment is selected and checked for safe operation.</p> <p>1.2. Appropriate personal protective equipment and tools are selected and used according to Occupational Health and Safety (OHS) requirements.</p>
2. Inspect site	<p>2.1. Site is inspected to locate blocked section of drainage lines.</p> <p>2.2. Work requirements and responsibility for repair is determined and appropriate authorities/persons notified of the intention to commence work.</p>
3. Determine access to drainage lines	<p>3.1. Plan of plumbing system is determined and access points located.</p> <p>3.2. Digging is carried out without unnecessary damage to buildings, site, environment or existing fixtures/fittings.</p>
4. Carry out job	<p>4.1. Manual lifting and handling techniques are used according to OHS requirements.</p> <p>4.2. Hand tools and equipment are selected to perform work.</p> <p>4.3. Mechanical equipment is assembled and used according to manufacturer's instructions and OHS requirements.</p> <p>4.4. Access to drainage lines is obtained to allow blockage to be cleared.</p> <p>4.5. Blockage is cleared or blocked section is replaced according to enterprise, environmental and OHS procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
5. Check job	5.1. Drainage line is tested to confirm blockage is cleared from pipe system. 5.2. Drainage line is repaired/resealed to permit normal use. 5.3. Relevant persons/authorities are advised that repairs have been completed and the drainage line has been commissioned for use.
6. Clean up site, materials and equipment	6.1. Work area is cleaned and aligned, with debris/waste disposed of according to enterprise, environmental and OHS procedures. 6.2. Materials and equipment are maintained according to enterprise, environmental and OHS procedures, and returned to store.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- isolate appliances/fixtures/fittings and related assemblies (where required)
- repair or remove blockages
- use manual and mechanical drain clearing equipment
- level and align site
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types and operational parameters of drains

**REQUIRED SKILLS AND KNOWLEDGE**

- components used in drainage systems
- isolation processes and procedures
- levelling and alignment processes
- regulatory requirements, codes of practice and relevant enterprise service standards relating to blockage removal, disconnection and reconnection activities
- environmental impacts of drainage systems
- application of OHS procedures when locating and clearing line blockages, use of personal protective equipment and materials handling.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- plan and prepare for the work
- inspect the site to determine access to drainage lines
- isolate appliances/fixtures/fittings and related assemblies (where required)
- use manual and mechanical drain clearing equipment
- test the system and clean up after locating and clearing any blockages.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Drainage systems may include:	<ul style="list-style-type: none"> <li>• surface drains</li> <li>• culverts</li> <li>• mole drains</li> <li>• sand slit</li> <li>• sub-surface traps</li> <li>• pit and trap systems</li> <li>• dune and swale systems</li> <li>• reed beds</li> <li>• water-recycling pumps and baffles.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Drainage
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCDRG501A Design drainage systems

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of identifying design requirements, determining specifications for drainage systems, and designing drainage systems and defines the standard required to: develop specifications for water transfer, recharge, reuse and harvesting systems; assess the requirements for pumping capacity in a drainage system and power requirements; identify performance indicators for the drainage system; predict volumes and rates of surface run-off and system leakage; design a drainage system that factors in the characteristics of the irrigated landscape and soil.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to enterprise managers and technical design personnel who identify design requirements, determine specifications for drainage systems and design drainage systems.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine design requirements	<p>1.1. Water transfer, recharge, reuse and harvesting systems are designed to conserve natural resources.</p> <p>1.2. The process of collecting or storing water does not degrade the water quality for the enterprise or the environment.</p> <p>1.3. Construction specifications define the work required to make suitable water available to the enterprise in accordance with environmental and Occupational Health and Safety (OHS) requirements.</p> <p>1.4. Environmentally sensitive areas are identified and protected according to local, State and National legislation.</p> <p>1.5. Design calculations and decisions are documented to enterprise requirements.</p>
2. Define pumping and power systems	<p>2.1. Pumps are selected to move water efficiently when needed to water storage or treatment, at the flow and pressure required to design specifications.</p> <p>2.2. The pump motor combinations are efficient, and the pumps are reliable, functional, serviceable and flexible for the intended application.</p> <p>2.3. Energy requirements are determined, and layout of electricity lines are determined and checked with local authority.</p> <p>2.4. The relationship between capital and operational</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>costs are optimised including a comparison of energy sources.</p> <p>2.5.Structures, valves and accessories are selected and integrated into a functional system that can be monitored and maintained according to enterprise guidelines.</p> <p>2.6.Performance indicators, design calculations and decisions are documented according to enterprise guidelines.</p> <p>2.7.Construction specifications define work required to make suitable pumping and power system available to enterprise.</p> <p>2.8.Power supply design specification is checked with power authorities.</p>
<p>3. Design a drainage system</p>	<p>3.1.Regional geology and geography is investigated to predict drainage parameters.</p> <p>3.2.Site investigations to assess depth of clay, depth of ground water, soil and water salinity, and structural or chemical impediments are used to determine the most cost effective drainage system.</p> <p>3.3.Predictions of leaching fractions and salt movements are documented, and soil amelioration and drainage management plans are developed.</p> <p>3.4.The need for leachate interception and dewatering system is determined and if required, construction specification prepared for interception and collection, disposal, reuse or recycle.</p> <p>3.5.Drains and structures are capable of carrying the design water volumes and intensities according to enterprise standards.</p> <p>3.6.Damage from water logging is minimised according to enterprise standards.</p> <p>3.7.Hydrological calculations predict volumes and rates of surface run-off according to enterprise standards.</p>
<p>4. Determine capital expense budget</p>	<p>4.1.Design calculations and decisions are documented and relevant information is communicated clearly through plans, specifications and manuals.</p> <p>4.2.Design output is checked by a competent designer against enterprise objectives.</p> <p>4.3.Materials requirements are determined and documented from plans and specifications.</p> <p>4.4.Labour requirements are estimated based upon</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>documented work schedule with reasonable allowance for variances in work schedules.</p> <p>4.5. Costing attributed to each component is based upon quoted information from suppliers, or sound analysis of individual elements.</p>
5. Determine operating expense budget	5.1. Operating expense budget indicates all expenses applicable to the completed drainage system.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collect and analyse information
- identify adverse environmental impacts of drainage and appropriate remedial action
- identify design requirements
- complete hydrological calculations
- develop specifications
- develop budgets
- develop and implement relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- design processes
- developments in drainage technology
- leaching fractions and salt movements prediction
- monitoring systems



<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• waste management and environmental issues</li> <li>• purpose of leachate interception and dewatering systems</li> <li>• budgeting, contractual development and obligations</li> <li>• environmental impacts of drainage</li> <li>• cost/benefit analysis</li> <li>• enterprise policies and procedures</li> <li>• water transfer, recharge, reuse and harvesting systems.</li> <li>• OHS and environmental protection legislation.</li> </ul>
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## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop specifications for water transfer, recharge, reuse and harvesting systems</li> <li>• assess the requirements for pumping capacity in a drainage system and power requirements</li> <li>• identify performance indicators for the drainage system</li> <li>• predict volumes and rates of surface run-off and system leakage</li> <li>• design a drainage system that factors in the characteristics of the irrigated landscape and soil.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Irrigation system types may include:	<ul style="list-style-type: none"> <li>• flood</li> <li>• furrow</li> <li>• micro-sprinklers</li> <li>• pop-ups</li> <li>• impact sprinklers</li> <li>• low-level lines</li> <li>• overhead sprinklers</li> <li>• drippers</li> <li>• micro-jets.</li> </ul>
Irrigated systems may involve:	<ul style="list-style-type: none"> <li>• water harvesting</li> <li>• delivery</li> <li>• drainage collection</li> <li>• drainage storage and treatment as well as natural drainage and treatment systems involving the removal of pollutants through evaporation, and/or clearance by filtration through surface layers.</li> </ul>

## Unit Sector(s)

Unit sector	Drainage
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCDRY201A Milk livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of milking livestock and defines the standard required to: prepare dairy facilities and equipment to safe and hygienic standards; operate milking equipment in an effective and efficient manner; clean dairy facilities and equipment to industry standards; recognise and isolate unsuitable milk; identify sickness or abnormal behaviour in livestock.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the dairy industry in an operational role under routine supervision and within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for milking	<p>1.1. Dairy sheds, yards and equipment are prepared for milking operations according to supervisor's instructions and industry requirements.</p> <p>1.2. Teat sprays are prepared according to manufacturer's specifications and supervisor's instructions.</p> <p>1.3. Livestock are moved and yarded in readiness for milking operations.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p>
2. Carry out milking	<p>2.1. Livestock are moved into position and checked and prepared for milking according to industry and hygiene standards.</p> <p>2.2. Livestock unsuitable for milking are segregated and reported to the supervisor.</p> <p>2.3. Milking is conducted hygienically and is monitored to prevent over-milking.</p> <p>2.4. Unsuitable milk is identified and isolated from bulk supplies according to industry standards and the supervisor's direction.</p> <p>2.5. Livestock health problems such as mastitis are identified and reported to the supervisor for treatment.</p> <p>2.6. Livestock on heat are reported to the supervisor if required.</p> <p>2.7. Safe workplace practices are observed according to OHS and enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Complete milking operation	3.1.Livestock are safely moved and returned to paddocks without causing undue stress or injury to animal or handler. 3.2.Suitable detergents and cleaning supplies are selected according to the supervisor's instructions. 3.3.Basic cleaning procedures are carried out to maintain hygiene standards of dairy facilities according to OHS, industry and enterprise requirements. 3.4.Machinery and equipment malfunctions are identified and reported to the supervisor for repair or replacement.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify abnormal behaviour or health problems in livestock including mastitis
- calculate livestock numbers and measure milk production
- prepare cows for milking
- undertake milking procedures
- move livestock to pastures
- carry out cleaning and hygiene procedures for milking equipment
- identify machinery faults and malfunctions
- interpret and apply task instructions
- read and comprehend written information and instructions
- identify hazards and implement safe work procedures
- communicate with the supervisor and staff
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- functions, capacities and cleaning requirements of milking machinery and equipment
- livestock behavioural characteristics and handling techniques
- identification of animal health problems encountered during milking such as

**REQUIRED SKILLS AND KNOWLEDGE**

- mastitis
- lactation and milking routines
- udder development and secretion of milk
- milk quality attributes and quality assurance standards
- dairy hygiene requirements
- reporting requirements and procedures
- OHS legislative requirements
- environmental impacts and procedures for milking livestock.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare dairy facilities and equipment to safe and hygienic standards
- operate milking equipment in an effective and efficient manner
- clean dairy facilities and equipment to industry standards
- recognise and isolate unsuitable milk
- identify sickness or abnormal behaviour in livestock.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Milking may include:	<ul style="list-style-type: none"> <li>dairy cattle</li> <li>sheep or goats in the range of dairy types and configurations.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Dairy
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCDRY301A Coordinate milking operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of coordinating the milking operations of a dairy herd and defines the standard required to: schedule and carry out milking operations; recognise and rectify machinery malfunctions; conduct milk sampling; participate in livestock recording programs; implement drying off programs according to livestock health strategy; clean work areas and milking equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working in a technical role and requires the application of some judgment and discretion. It is likely to be carried out independently within own area of responsibility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine requirements	<p>1.1. Production requirements are identified and clarified according to enterprise objectives.</p> <p>1.2. Requirements for the maintenance of milk quality are identified and complied with according to industry standards.</p> <p>1.3. Resources and equipment requirements are determined and maintained according to enterprise budgetary constraints.</p>
2. Determine milking procedures	<p>2.1. Milking schedules and milking policy is determined according to enterprise requirements.</p> <p>2.2. Water supplies are checked for availability, and milking equipment is checked and adjusted, as required, to ensure correct operating order.</p> <p>2.3. Milking procedures are implemented under a range of conditions, with minimum stress to livestock and maximum yield within reasonable timeframes.</p> <p>2.4. Minor malfunctions of equipment or milking systems are rectified to manufacturer's specifications, and more complex repairs are reported for specialist attention.</p> <p>2.5. Occupational Health and Safety (OHS) hazards for milking are identified, risks assessed and risk controls are implemented.</p>
3. Implement livestock health treatment program	<p>3.1. Livestock health and condition is monitored according to health strategy and enterprise requirements.</p> <p>3.2. Livestock testing is carried out according to health strategy and remedial action is taken, as required,</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to veterinary guidelines and enterprise requirements.</p> <p>3.3.Livestock health treatments during drying off are carried out as directed with minimal stress and weight loss according to veterinary guidelines and enterprise requirements.</p> <p>3.4.Handling practices are implemented to prevent cross-infection during milking operations according to enterprise requirements.</p> <p>3.5.Milk samples are taken in accordance with industry standards and guidelines and labelled correctly.</p> <p>3.6.Livestock health records are accurately maintained according to industry standards and enterprise requirements.</p>
4. Coordinate and monitor milking operations	<p>4.1.Milking procedures are monitored for efficiency, effectiveness and compliance with enterprise requirements.</p> <p>4.2.Milk quality is monitored and maintained according to industry standards and enterprise requirements.</p> <p>4.3.Costs are monitored to ensure operations are completed and maintained within budget.</p> <p>4.4.Work areas and equipment are cleaned to industry standards and waste disposed of in an environmentally responsible manner.</p> <p>4.5.Relevant data is documented for analysis and effecting planning management.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- operate milking and refrigeration equipment
- maintain satisfactory milk quality
- analyse and interpret livestock testing data
- monitor livestock health and identify health problems
- identify hazards and implement safe operating procedures

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• determine machinery maintenance requirements</li> <li>• anticipate emergencies and remove hazards in the workplace</li> <li>• implement strict standards of hygiene</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• functions and controls of the components of milk harvesting, cooling and refrigeration, and ancillary equipment</li> <li>• mechanical operation of a milking plant and the steps necessary for operation</li> <li>• industry standards and relevant codes of practice with regard to milking operations</li> <li>• procedures for testing milk quality</li> <li>• causes of poor milk quality</li> <li>• type and control of health problems in dairy cattle including mastitis prevention</li> <li>• factors impacting on livestock stress and minimisation procedures</li> <li>• water quality and affecting factors</li> <li>• hygiene requirements and cleaning systems used for milking equipment</li> <li>• livestock behaviour and nutritional requirements</li> <li>• lactation in livestock and effect of body reserves, and dietary energy intake on lactation</li> <li>• milk quality tests</li> <li>• relevant OHS legislation, regulations and codes of practice.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• schedule and carry out milking operations</li> <li>• recognise and rectify machinery malfunctions</li> <li>• conduct milk sampling</li> <li>• participate in livestock recording programs</li> <li>• implement drying off programs according to livestock health strategy</li> <li>• clean work areas and milking equipment.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Milking operations may include:	<ul style="list-style-type: none"> <li>• co-ordination of milking cows, ewes or does including manual or automatic milking systems in herringbone, conventional or rotary dairies.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Dairy
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCDRY302A Operate a dairy recycling system

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating a dairy waste management system, maintaining the equipment used for dairy waste disposal from the dairy shed, and monitoring its efficiency, and defines the standard required to: implement and monitor dairy waste management plans; operate dairy waste management systems in accordance with Occupational Health and Safety (OHS) and environmental legislation; regulations and codes of practice; maintain and monitor gauges and instruments that control the dairy waste recycling system; carry out techniques for irrigation from dairy waste storages; check flow rates, pit levels and equipment regularly to maintain effective and efficient operation of the system.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on dairy farms and is likely to be carried out under limited supervision from others with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to work with dairy waste disposal equipment	<p>1.1. Work to be undertaken is interpreted from the work program where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the maintenance activities to ensure continued smooth operation of the production process.</p> <p>1.3. OHS hazards are identified, risks assessed and suitable controls implemented.</p> <p>1.4. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p> <p>1.5. Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.</p>
2. Maintain and operate a dairy waste storage and disposal system	<p>2.1. Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of PPE.</p> <p>2.2. Dairy waste removal and disposal equipment is correctly serviced and maintained.</p> <p>2.3. Dairy waste disposal systems are used according to</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>system design in compliance with approval granted by local government and the State environment protection authority.</p> <p>2.4. Recognised techniques for irrigation from dairy waste storages are carried out according to establishment practice.</p> <p>2.5. In-shed dairy waste pits are flushed and drained as required.</p>
3. Monitor dairy waste disposal system	<p>3.1. Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of personal protective equipment.</p> <p>3.2. Flow rates, pit levels and equipment are regularly checked to maintain effective operation of the system.</p> <p>3.3. Cleaning procedures and hygiene practices are carried out according to established practice.</p> <p>3.4. Monitoring reflects an understanding of environmental duty of care.</p>
4. Conduct hygiene and administration activities	<p>4.1. Equipment is cleaned in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>4.2. Attachments and other ancillary equipment are cleaned and stored in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>4.3. All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately.</p> <p>4.4. All required records and documentation are completed accurately and promptly in accordance with organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- operate dairy waste management systems in accordance with OHS and

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<p>environmental legislation, regulations and codes of practice</p> <ul style="list-style-type: none"> <li>• maintain and monitor gauges and instruments that control the dairy waste recycling system</li> <li>• implement dairy waste management plans</li> <li>• observe, identify and react appropriately to environmental implications and OHS hazards</li> <li>• apply safe work procedures</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• the purpose of dairy waste management systems</li> <li>• procedures for installing dairy waste management systems</li> <li>• components of dairy shed and yard waste</li> <li>• the nutrient and chemical status of the different types of waste</li> <li>• advantages and disadvantages of reusing treated and untreated waste</li> <li>• methods of reducing the amount of waste</li> <li>• methods of applying treated and untreated waste to the land</li> <li>• methods of treating and storing waste before applying to the land</li> <li>• relevant legislation and regulations relating to the use, treatment and storage of dairy waste</li> <li>• OHS obligations regarding the operation of dairy waste management systems.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	

<b>EVIDENCE GUIDE</b>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• implement and monitor dairy waste management plans</li> <li>• operate dairy waste management systems in accordance with OHS and environmental legislation, regulations and codes of practice</li> <li>• maintain and monitor gauges and instruments that control the dairy waste recycling system</li> <li>• carry out techniques for irrigation from dairy waste storages</li> <li>• check flow rates, pit levels and equipment regularly to maintain effective and efficient operation of the system.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Recycling may include:</p>	<ul style="list-style-type: none"> <li>• manure</li> <li>• urine</li> <li>• cow hair</li> <li>• mucus</li> <li>• milk</li> <li>• yard and plant washing water</li> <li>• storm water</li> <li>• detergent and chemical residues</li> <li>• soil</li> <li>• suspended solids</li> <li>• stones</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• string</li> <li>• hay</li> <li>• pasture.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Milk harvesting
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCDRY401A Manage milking shed routines

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing milking shed routines and defines the standard required to: oversee the routine maintenance and service of milking equipment and replacement of consumables; oversee the conduct of milking operations; identify possible causes of decline in milk quality including animal infection and teat damage; identify and rectify faults in milking equipment; clean and disinfect milk area and equipment after milking; maintain records of the milking operation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the dairy industry managing in-shed milking operations including the oversight of routine maintenance procedures and replacement of consumables.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Manage routine maintenance	<p>1.1.Maintenance schedules are planned in accordance with manufacturer's recommendations and industry minimum standards.</p> <p>1.2.The programmed replacement of consumables is implemented in line with recorded usage and replacement schedule.</p> <p>1.3.Worn or unsafe components are identified and replaced as required.</p> <p>1.4.Milking equipment maintenance problems are identified, and strategies for their rectification are implemented.</p> <p>1.5.Specialised services are engaged for non-routine service and repairs.</p>
2. Manage shed milking routines	<p>2.1.Milking shed routines and schedules are determined in line with available labour and resources.</p> <p>2.2.Staff responsibilities are allocated and communicated to maximise labour efficiency and ensure safe systems of work within the milking shed.</p> <p>2.3.Milk production recording procedures are established and implemented.</p> <p>2.4.Industry or supplier quality assurance practices and procedures are utilised in programmed shed routines.</p>
3. Manage procedures for handling cows unsuitable for	<p>3.1.Shed procedures for the identification of cow herd health problems are established in line with industry guidelines.</p>

ELEMENT	PERFORMANCE CRITERIA
milking	3.2.Milk from at risk cows is isolated to maintain overall milk quality. 3.3.Appropriate treatments are selected and implemented according to veterinary advice. 3.4.Strategies for the isolation or drying off of at risk or mastitis infected cows are determined in consultation with appropriate specialist advice.
4. Maintain milk quality practice	4.1.In shed hygiene routines are determined according to standards for industry best practice. 4.2.Hygiene procedures are implemented to minimise cross infection and teat or udder damage. 4.3.Milk quality is constantly monitored to comply with specified supplier standards. 4.4.Milk cooling equipment and storage is regularly monitored to maximise milk quality. 4.5.Environmental implications of milking operations are identified and actions are put in place to minimise adverse effects.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- effectively and efficiently oversee the conduct of milking operations
- work in co-operation with dairy factory personnel to implement milk quality procedures
- identify possible causes of declines in milk quality
- oversee the routine maintenance and service of milking equipment and replacement of consumables
- identify hazards and oversee the adoption of safe work practices
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• milking equipment types and their components</li> <li>• factors that affect milk quality</li> <li>• characteristics of effective and efficient milking operations</li> <li>• possible causes of deterioration in milk quality</li> <li>• components/specification of milk quality assurance programs</li> <li>• cow health problems that affect milk quality</li> <li>• cow udder health treatments</li> <li>• safe work systems in the dairy</li> <li>• on-farm milk cooling procedures and practice.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• oversee the routine maintenance and service of milking equipment and replacement of consumables.</li> <li>• oversee the conduct of milking operations</li> <li>• identify possible causes of decline in milk quality including animal infection and teat damage</li> <li>• identify faults in milking equipment and rectify</li> <li>• clean and disinfect milk area and equipment after milking</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>maintain records of the milking operation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Milking facilities may include:	<ul style="list-style-type: none"> <li>all sizes, designs and types of milking facilities for cows, ewes and does.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Dairy
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCEXP301A Handle and store explosives

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of safe handling, storage, loading and transporting of explosives in line with established industry and defines required to: establish monitoring and recor to legislative requirements; display placarding on vehicle transporting explosives; implement security procedures for all explosives on hand; develop procedures for dealing with an emergency with transported or stored explosives.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires the ability to work effectively within own area of responsibility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for the handling of explosives	<p>1.1. Legislative requirements for the handling, storage and transport of explosives are identified and actioned in line with specified quantities of explosives.</p> <p>1.2. Signage and placarding on vehicles or storage facilities for explosives are prepared and displayed as directed by legislative requirements.</p> <p>1.3. Monitoring and recording systems for authorisation to handle, store and transport explosives are established according to legislative requirements.</p>
2. Transport explosives	<p>2.1. Arrangements to maintain the integrity and security of transported explosives are established in line with enterprise requirements.</p> <p>2.2. Security procedures to ensure explosives arrive at the destination intact according to specified time and condition are instituted.</p> <p>2.3. Workplace strategies to carry out emergency procedures as required are implemented in compliance with legislative requirements.</p> <p>2.4. Explosives are loaded and transported in accordance with all prevailing legislation and individual enterprise requirements.</p>
3. Store explosives	<p>3.1. The requirements for the safe and secure storage of explosives are defined and actioned in accordance with legislative requirements.</p> <p>3.2. Requirements for personnel authorised to gain access are defined according to legislative requirements.</p> <p>3.3. Security is monitored and maintained in accordance</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>with legislative requirements and the enterprise.</p> <p>3.4. Recording systems for the handling and storage of explosives products are accurately implemented in line with legislative requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- identify and accurately state the requirements for the handling, storage and transport of explosive products
- correctly identify essential components of requirements for the loading and transport of explosives
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- local conditions and factors in the handling, transporting and storage of explosives
- actual performance of correct loading and transporting components of explosive products
- care and preventive measures required to eliminate risk of fire and deterioration of stored materials
- procedures for buying commercial explosives and blasting agents from licensed dealers and Government agencies
- Australian Explosives Code (issued by Commonwealth Dept. of Transport and Regional Services)
- identification of defective or damaged explosives
- environmental conditions required for safe storage.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish monitoring and recording systems for handling, storing and transporting explosives according to legislative requirements</li> <li>• display placarding on vehicles transporting explosives</li> <li>• implement security procedures for all explosives on hand</li> <li>• develop procedures for dealing with an emergency with transported or stored explosives.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Security procedures and systems may include:	<ul style="list-style-type: none"> <li>• the provisions of AS Explosives Code Storage and Transport; Australian Code for the transport of explosives by Road and Rail (ATE Code); and/or other State or Territory</li> </ul>

<b>RANGE STATEMENT</b>	
	legislation. The Australian Standards relevant to this standard include AS2187.1 - 1998, Part 1: Storage and land transport. AS2187.2 - 1993, Explosives - Storage, transport and use. AS2187.0 - 1998, Explosives Glossary of terms. AS1216 1995, Class labels for dangerous goods, and/or in any the relevant State and Territory legislation.

**Unit Sector(s)**

<b>Unit sector</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	Explosives
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## AHCEXP302A Identify and select explosive products

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of identifying and selecting explosive products and/or suitable mixtures that can be used for blasting for agricultural or land management purposes and defines the standard required to: establish the need to use explosives; identify the risks and environmental implications of using explosives; select explosives and initiator devices to match the application; site and identified hazards at the blasting site; utilise safety fuses as required; select appropriate fly-rock control devices.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out unsupervised. Responsibility for the safety of others is an important part of the application of this standard.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify explosives applications	<p>1.1.The job application requiring the use of explosives is identified in consultation with the field manager or supervisor.</p> <p>1.2.The site for blasting is accurately identified and the surrounding area checked to confirm that all aspects of safety have been considered and actioned.</p> <p>1.3.Potential side effects of the blast are identified in consideration of all site characteristics and are used in the planning of blasting operations.</p> <p>1.4.Environmental implications of the intended explosives usage are considered in the planning of blasting activities.</p> <p>1.5.Alternatives to the use of explosives are considered in the planning of the application and are utilised as appropriate.</p>
2. Select explosives components	<p>2.1.Explosives are selected to match the application, site and identified hazards at the blasting site.</p> <p>2.2.The quantity of explosive energy required is established in line with the site characteristics and the designated application.</p> <p>2.3.Initiator device selection reflects industry best practice and is matched to explosives selection.</p> <p>2.4.Safety fuses are utilised as required to suit the application.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- examine explosives and determine their classification
- select explosives for particular tasks
- estimate the likely effect of explosives on structures, personnel and livestock in the site vicinity
- select appropriate fly-rock control devices, e.g., blasting mats as required
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- identification of the components of various explosive products
- indications for the uses of various explosive products
- performance of various explosive products, the behaviour of the substrate material (e.g., sand, soil, rock, etc.) when subject to blasting
- jobs requiring the use of explosives (e.g., blowing stumps, rabbit warrens, excavating a dam site and excavation requirements, fence post holes, tree or vine holes, rock floaters, etc.)
- particular properties of explosives/blasting agents and their suitability for particular purposes
- Australian Standards - A218
- 7.1 1998: Storage and land transport
- Australian Standards - A2187.2 1993: Explosives - storage, transport and use
- Australian Standards - A2187.0 1998: Explosives - Glossary of terms
- other State and Territory legislation.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the need to use explosives</li> <li>• identify the risks and environmental implications of using explosives</li> <li>• select explosives and initiator devices to match the application, site and identified hazards at the blasting site</li> <li>• utilise safety fuses as required</li> <li>• select appropriate fly-rock control devices.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of explosive charges may include:	<ul style="list-style-type: none"> <li>• bulk charges that are commercially procured such as: <ul style="list-style-type: none"> <li>• explosives/blasting agents or ammonium nitrate/Fuel Oil (ANFO)</li> <li>• compounds mixed on site.</li> </ul> </li> <li>• explosive compounds such as: <ul style="list-style-type: none"> <li>• water gels</li> <li>• slurries</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• emulsions</li> <li>• ammonium nitrate explosives (ANFO)</li> <li>• black powder</li> <li>• special purpose explosives.</li> </ul>
Relevant legislation may include:	<ul style="list-style-type: none"> <li>• Australian Standards and legislation that relate to this standard are Australian Standards - A2187.1 1998: Storage and land transport. Australian Standards - A2187.2 1993: Explosives storage, transport and use. Australian Standards - A2187.0 1998: Explosives Glossary of terms, and other State and Territory legislation.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Explosives
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCEXP303A Prepare and use explosives

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers carrying out explosive procedures including preparation, mixing, detonation and clean up safely in the field and defines the standard required to: obtain the appropriate permits and licenses for blasting; inform neighbours and post notices for blasting; prepare the blast site to place the explosive; prepare explosives and the initiator device according to best safety practice and regulations; place and fire charges according to best safety practice and regulations; conduct post-firing procedures for misfires; site checks; the disposal of surplus, unserviceable and defective explosives; recording procedures.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>The preparation and use of explosives is likely to be under limited supervision with checking related to overall progress. Responsibility for the notification of others, and the duty of care for their safety, is also involved.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for blasting	1.1.Permits/ licences are obtained and approved warning signs installed and prominently displayed according to legislative requirements. 1.2.Property manager and relevant controlling authorities are notified of blasting plans and timing as required by legislation. 1.3.The area where the charges are to be used is cleared of stones and other potential missiles. 1.4.The blast site is cleared and made safe prior to charges being placed. 1.5.All explosive products are placed at the required safety distance from any identified hazards. 1.6.Appropriate holes are drilled/dug to place the charge(s) in line with blasting plans. 1.7.Drilling/digging equipment is removed to the prescribed safe distance in accordance with Australian Standards, Acts and Regulations. 1.8.Neighbours and members of the public likely to be concerned or disturbed by shock effects are advised of the blasting program.

ELEMENT	PERFORMANCE CRITERIA
2. Prepare explosives	<p>2.1. Quantities of explosives components required are calculated to match the application and prevailing conditions.</p> <p>2.2. Required explosives are assembled on site, or an explosives mix (of homogenous composition) is calculated precisely to ensure minimum residual mix to be destroyed, and is prepared in accordance with defined requirements.</p> <p>2.3. Required fusing and detonating components are assembled to match the established explosive requirements in preparation for blasting.</p>
3. Place charges	<p>3.1. Explosives elements are placed in holes or packed using safe working procedures and methods and in accordance with Australian Standards, Acts and Regulations.</p> <p>3.2. All holes are stemmed and tamped prior to the attachment of the firing system to maximise safety to all personnel and the efficiency of the blasting.</p> <p>3.3. Electrical firing circuits or fire fuses are checked for continuity and/or earthing as required.</p> <p>3.4. All extraneous materials are cleared from the site to safe distances in accordance with enterprise standards.</p> <p>3.5. Routine re-checks of the site and surrounds are performed to ensure that no non-essential personnel are endangered.</p> <p>3.6. Blasting mats or other control devices are placed as appropriate according to the blasting plan.</p> <p>3.7. Blast area is guarded according to legislative requirements and enterprise practices.</p>
4. Fire charges	<p>4.1. Prescribed warning notification procedures are carried out in accordance with enterprise and industry standards.</p> <p>4.2. The blasting site is re-checked to ensure correct placement of explosives and ensure that all safety procedures have been implemented according to supervisor or shot firer's instructions.</p> <p>4.3. Warning signals including audible and visual signals are issued to ensure that the site is clear.</p> <p>4.4. Firing procedures are initiated through manual or electric firing systems.</p>
5. Conduct post-firing	<p>5.1. Charges are counted as they fire or are inspected</p>

ELEMENT	PERFORMANCE CRITERIA
procedures	<p>safely post blasting to ensure that misfires are readily identified prior to all clear signals being given.</p> <p>5.2. Misfire procedures are implemented after prescribed timing and/or practice drills conducted using water jets or additional charges in accordance with Australian Standards, Acts and Regulations.</p> <p>5.3. Site checks are carried out to ensure that the site is safe and the all-clear signal is given in line with industry practice and legislative requirements.</p> <p>5.4. Surplus, unserviceable and defective explosives and detonators are destroyed or discarded or stored in line with prescribed procedures and in consideration of the environmental impact.</p> <p>5.5. Accurate records are completed and kept in line with enterprise and legislative requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use explosives safely and effectively according to enterprise requirements
- dispose of surplus, defective or unwanted detonators or explosives safely
- correctly and uniformly mix explosives components
- apply the regulations relating to explosives use according to enterprise requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- fire precautions and prevention procedures



<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• appropriate explosives mixing procedures</li> <li>• the calculation of explosives quantities</li> <li>• explosives preparation, placement, firing and post firing procedures</li> <li>• the regulations relating to explosives use in the enterprise</li> <li>• relevant standards issued by Standards Association of Australia</li> <li>• related environmental issues and risks to livestock (including poisoning).</li> </ul>
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## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• obtain the appropriate permits and licenses for blasting</li> <li>• inform neighbours and post notices for blasting</li> <li>• prepare the blast site to place the explosive</li> <li>• prepare explosives and the initiator device according to best safety practice and regulations</li> <li>• place and fire charges according to best safety practice and regulations</li> <li>• conduct post-firing procedures for misfires, site checks, the disposal of surplus, unserviceable and defective explosives, and recording procedures.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Requirements and scope may include:

- the Australian Standard relating to preparing and using explosives (AS 2187, Part 2 1993) which includes:
  - operations prior to charging
  - charging
  - preparation for firing
  - firing
  - misfires
  - preparation of primers.

## Unit Sector(s)

<b>Unit sector</b>	Explosives
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCFAU201A Recognise fauna

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of recognising fauna that are commonly encountered when undertaking agricultural, horticultural and land management activities and defines the standard required to: move through a nominated natural area in a manner suitable for fauna observation; select sites and situations where fauna are likely to be present; observe and record the details of fauna and survey a natural area causing minimal disruption to the environment and fauna that inhabit it.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervised workers in land management projects who operate under routine supervision with intermittent checking by supervisors.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for fauna recognition	<p>1.1. Range of fauna requiring recognition is identified according to supervisors/customers needs.</p> <p>1.2. Resources and equipment for use in recognition activity are located and identified.</p> <p>1.3. Available processes for fauna recognition are identified, selected and prepared for use.</p>
2. Recognise specified fauna	<p>2.1. Specified fauna are recognised and named according to their identifiable characteristics.</p> <p>2.2. Brief descriptions of fauna habits, characteristics and significant features are recorded.</p> <p>2.3. The advice of supervisors is sought when necessary and where appropriate in the identification activity.</p>
3. Complete identification of fauna	<p>3.1. Information about identified fauna is documented according to enterprise requirements and added to the reference collection.</p> <p>3.2. Field notes are updated as new fauna are recognised.</p> <p>3.3. Rare, uncommon or notifiable pest fauna are reported to supervisor according to enterprise guidelines.</p> <p>3.4. Handling, transporting and housing of fauna comply with fauna ethics guidelines, fauna welfare regulations and statutory requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- recognise fauna specific to the enterprise and describe their features and main occurrence within the enterprise
- use simple fauna identification keys
- communicate with customers and clients, interpret questions effectively, and provide limited advice and information about the fauna specific to the enterprise
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- fauna identification techniques and nomenclature
- fauna behaviour
- fauna habitats
- fauna tracks and traces
- techniques for observing, collecting/catching and reporting fauna
- enterprise procedures for obtaining and supplying advice and information about fauna
- enterprise expectations about the range and number of fauna to be recognised
- fauna welfare, Occupational Health and Safety (OHS) and environmental management requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

Competence in recognising fauna requires evidence that a person can identify and utilise available resources and

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>equipment to identify fauna accurately. The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• move through a nominated natural area in a manner suitable for fauna observation</li> <li>• select sites and situations where fauna are likely to be present</li> <li>• observe and record the details of fauna</li> <li>• survey a natural area causing minimal disruption to the environment and fauna that inhabit it.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Fauna will comprise those encountered within the industry workplace and may include:	<ul style="list-style-type: none"> <li>• native or introduced species and can include: <ul style="list-style-type: none"> <li>• mammals</li> <li>• birds</li> <li>• reptiles</li> <li>• amphibians</li> <li>• fish</li> <li>• arthropods</li> <li>• micro fauna.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Fauna
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCFAU301A Respond to wildlife emergencies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of evaluating and coordinating a response to natural resource emergencies involving fauna and defines the standard required to: implement and coordinate an emergency response; care for affected animals; determine management options including return to wild or temporary captive management; remove animal carcasses; complete debrief and prepare reports.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working within own area of responsibility in a response to a wildlife emergency.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Evaluate wildlife emergency	<p>1.1.Nature of emergency is investigated from eyewitness reports and/or inspection to determine what procedures should be implemented.</p> <p>1.2.Assessment of the incident is made to identify key factors that may impact on an appropriate response.</p> <p>1.3.State/Territory authorities are notified of incident according to enterprise guidelines.</p> <p>1.4.Interim care of animals is implemented where appropriate and according to enterprise procedures pending instructions from authorities.</p> <p>1.5.Appropriate staff is deployed in interim care for animals according to assessment of incident and enterprise guidelines.</p> <p>1.6.Personnel assisting in interim care are appropriately equipped and briefed according to enterprise and legislative requirements.</p> <p>1.7.Care instructions from authorities and/or veterinarians are implemented according to legislative and enterprise requirements.</p> <p>1.8.Information is collected about the reported situation to determine response.</p> <p>1.9.Informants are interviewed to obtain necessary details about the reported situations.</p>
2. Implement response to emergency	<p>2.1.Nature of emergency is investigated from eyewitnesses and/or inspection to determine what procedures should be implemented.</p> <p>2.2.Communications to manage situation are established</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>to enterprise policies and procedures.</p> <p>2.3. Resources and personnel are transported to site to implement action to enterprise procedures.</p> <p>2.4. Site procedures are established to legislative requirements, enterprise procedures and emergency plans to control risks to people, the environment and to property.</p> <p>2.5. Live fauna are moved in accordance with legislative and enterprise procedures.</p> <p>2.6. Dead fauna are removed from site and biological matter is disposed of in accordance with enterprise procedures and health and safety requirements.</p> <p>2.7. Site is cleaned in accordance with enterprise procedures to maintain public and environmental health and safety.</p> <p>2.8. Measures are implemented that minimise risk to significant places, area, habitats, species and communities.</p>
3. Coordinate response	<p>3.1. General public and media are informed of the nature of the incident and agency decisions in accordance with enterprise guidelines.</p> <p>3.2. Volunteers and staff are briefed on Occupational Health and Safety (OHS) hazards, preventive measures and reporting requirements.</p> <p>3.3. Volunteers are coordinated and deployed according to their skills and available personal protective equipment.</p> <p>3.4. Physical barriers are established to keep public away from animals to minimise distress to it and to protect the public.</p> <p>3.5. Media is managed until authorities provide instructions.</p> <p>3.6. Media is utilised according to instructions and enterprise procedures.</p>
4. Care for affected animals	<p>4.1. Team(s) are allotted to animals according to incident assessment, care instructions and skills within teams.</p> <p>4.2. Animal first aid is applied.</p> <p>4.3. Role in wildlife operations team is performed according to the command structure and procedures of the management plan.</p> <p>4.4. Animal is cared for using a range of skills and according to veterinary instructions and enterprise</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>procedures.</p> <p>4.5.OHS procedures are followed according to legislative, management plan and enterprise requirements.</p>
5. Determine management options	<p>5.1.Veterinary advice is sought where appropriate and according to enterprise guidelines.</p> <p>5.2.Biological and incident data on animals is collected according to enterprise procedures and scientific standards.</p> <p>5.3.Management options are evaluated according to advice, condition of animal, risk assessment and according to enterprise guidelines.</p> <p>5.4.Where required for scientific purposes and under enterprise procedures, released animals are humanely banded or tagged.</p> <p>5.5.Selected management option is implemented according to enterprise guidelines, OHS requirements and risk assessment.</p> <p>5.6.Equipment and staff required for returning animal to wild or temporary captive management are sourced to enterprise procedures.</p>
6. Remove carcass	<p>6.1.Where necessary, inter-agency agreement is developed with local authority for removal of carcass.</p> <p>6.2.Carcass is disposed of according to authority instructions.</p> <p>6.3.Equipment and staff for disposal are sourced to enterprise procedures.</p> <p>6.4.OHS requirements are met.</p>
7. Complete debrief and report	<p>7.1.Where applicable, incident management processes for debrief and wash-up are followed.</p> <p>7.2.Report provided to management according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- evaluate natural resource emergency
- implement and coordinate response to emergency
- care for affected animals
- determine management options
- remove animal carcasses
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- animal biology and general behaviour
- health risks associated with animals
- public relations and media management
- incident management systems
- State/Territory emergency procedures and networks
- machinery and equipment operation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• implement and coordinate an emergency response</li> <li>• care for affected animals</li> <li>• determine management options including return to wild or temporary captive management</li> <li>• remove animal carcasses</li> <li>• complete debrief and prepare reports.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Emergencies involving fauna may include:	<ul style="list-style-type: none"> <li>• marine animal incident management (whales and dolphins, seals and sea lions, turtles, sharks, dugongs, crocodiles, sea snakes, sea birds)</li> <li>• oil and chemical spills</li> <li>• injured or dangerous animals (small animals and birds causing nuisance to the public, animals, birds and reptiles behaving aggressively or likely to behave aggressively to the public or causing public fear, either due to their normal behaviour patterns and/or injury)</li> <li>• animals injured by flood, fire or disease.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Fauna
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCFAU501A Manage fauna populations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing fauna populations and defines the standard required to: assess fauna populations and their habitat; determine the stability and importance of fauna populations for their species; plan intervention measures to improve species distribution, habitat and survivability; prepare a fauna management plan in accordance with legislative requirements and enterprise procedures, including informing staff and stakeholders; control or maintain fauna populations.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managers of natural areas and technical specialists who manage and provide advice on fauna populations.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Access fauna populations	<p>1.1. Conduct surveys for distribution, ecology, viability, genetic diversity and threats.</p> <p>1.2. Increase or decrease in species population size and range is determined.</p> <p>1.3. Desirability of the population change is assessed in terms of impact on immediate environment.</p> <p>1.4. Condition of the environment and habitats is assessed for ongoing support of the species.</p> <p>1.5. Overall species numbers and other locations are researched to determine significance of local population.</p> <p>1.6. Attitudes of stakeholders to the species are assessed to determine acceptable range of population management options.</p> <p>1.7. Cost/benefit analysis of population management options is completed.</p>
2. Prepare management plan	<p>2.1. Plan of management is developed from assessment according to enterprise procedures.</p> <p>2.2. Submissions for funds are made to implement the plan of management according to enterprise procedures.</p> <p>2.3. Plan of management is assessed, endorsed and recommended according to enterprise procedures, costs and funds.</p>
3. Control or maintain fauna population	<p>3.1. Plan to control or maintain species is developed into a series of intervention measures in accordance with enterprise policy and resource constraints.</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>3.2.Measures to manage population are implemented according to legislative and enterprise requirements.</p> <p>3.3.Permits for population management are obtained according to legislative requirements.</p> <p>3.4.Stakeholders and staff are informed about population management measures according to enterprise procedures.</p> <p>3.5.Staff are trained, and where required, licensed to manage population.</p> <p>3.6.Occupational Health and Safety (OHS) and public safety requirements are met during process to manage population.</p> <p>3.7.Incidents with species are managed according to legislative, enterprise, occupational health and safety and public safety requirements.</p> <p>3.8.Plan of management is monitored and adjusted and results recorded in accordance with legislative requirements and enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess impacts of fauna population on the environment
- assess management options for fauna populations
- design intervention measures
- assess staff capability and provide training
- prepare management plan
- control or maintain fauna populations
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of

**REQUIRED SKILLS AND KNOWLEDGE**

cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- legislative and enterprise requirements
- biology of species, habitats, predators, competitors
- field monitoring and assessment techniques
- basic veterinary understanding of species
- management planning
- national and international research on fauna populations and genetic diversity
- firearms and/or trapping license requirements
- fauna capture and disposal techniques
- source information and implement instructions on the care of fauna
- Animal Care and Ethics Committee license requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Competence in managing fauna populations requires evidence that a fauna population has been successfully managed according to enterprise guidelines and industry best practice. The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess fauna populations and their habitat
- determine the stability and importance of fauna populations for their species
- plan intervention measures to improve species distribution, habitat and survivability
- prepare a fauna management plan in accordance with legislative requirements and enterprise procedures,

<b>EVIDENCE GUIDE</b>	
	including informing staff and stakeholders <ul style="list-style-type: none"> <li>control or maintain fauna populations.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>all species in local fauna populations.</li> </ul>
Population increase may include:	<ul style="list-style-type: none"> <li>methods of control of predators</li> <li>physical protection</li> <li>removal of competitors</li> <li>breeding programs</li> <li>management of genetic diversity.</li> </ul>
Population decrease may include:	<ul style="list-style-type: none"> <li>methods of control by poisoning, shooting, trapping, physical removal of habitats, transfer to another location, biological agents, and sterilisation. Protection, regeneration and/or restoration of habitats and re-introduction of fauna to designated areas.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Fauna
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHC FIR201A Assist with prescribed burning

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assisting with prescribed burning for agricultural or natural resource purposes and defines the standard required to: prepare machinery and equipment before burning; undertake burn operations and monitor weather conditions; use Personal Protective Equipment (PPE) as required and check, clean and store on completion of the burn; carry out clean up operations and monitor the site.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under close supervision with constant checking. Responsibility for some roles and coordination within a team may be required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assist with preparations for the burn	<p>1.1. Machinery and equipment to be used in the burn are prepared for use as directed.</p> <p>1.2. Safety equipment is checked and prepared for use.</p> <p>1.3. Information about contingency plans is read or listened to and clarification sought where required.</p> <p>1.4. Assets requiring protection during the burn are recognised and noted.</p> <p>1.5. Personal role and activities during the burn are checked with supervisor.</p> <p>1.6. Location and extent of the burn is discussed and clarified with the supervisor.</p>
2. Support conduct of burn	<p>2.1. Assistance with pre-burn checks is provided as directed by the supervisor.</p> <p>2.2. Burn operations are undertaken in a safe manner.</p> <p>2.3. Problems or concerns during the burn are raised with the supervisor.</p> <p>2.4. Communication is maintained at all times in accordance with the organisation's procedures.</p> <p>2.5. Conditions at the fire are observed and their effect on fire behaviour and development are noted and reported to the supervisor.</p> <p>2.6. Weather conditions and changes to fire behaviour are observed and reported to the supervisor.</p> <p>2.7. A safe escape route is identified and maintained at all times.</p> <p>2.8. Personal protective equipment is fitted properly and worn throughout the burn.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Participate in clean-up activities	3.1. Cleaning-up activities are carried out under direction in accordance with the organisation's procedures. 3.2. Personal protective equipment is cleaned and returned to storage. 3.3. Machinery and equipment used in the burn are cleaned and returned to storage. 3.4. Cleaning and maintenance are carried out in accordance with the organisation's procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- assist with preparations for the burn
- support conduct of the burn
- monitor fire behaviour and risk
- participate in clean-up activities
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- fire behaviour
- extinguishing media and equipment
- burning tactics and techniques
- fire hazards, safety techniques
- organisations operating procedures
- OHS and environmental legislative and enterprise requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare machinery and equipment before burning</li> <li>• undertake burn operations and monitor weather conditions</li> <li>• use PPE as required and check, clean and store on completion of the burn</li> <li>• carry out clean up operations and monitor the site.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Prescribed burning may include:	<p>the burning of either agricultural or natural areas, impacting on a range of threatened areas including:</p> <ul style="list-style-type: none"> <li>• buildings</li> <li>• utilities: <ul style="list-style-type: none"> <li>• power and telephone lines</li> <li>• water supply structures</li> <li>• communications towers</li> </ul> </li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• public lands</li> <li>• area of rare or sensitive flora and fauna</li> <li>• other crops</li> <li>• tree plantations</li> <li>• other property.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Natural area restoration
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCFIR501A Manage wildfire hazard reduction programs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the management of wildfire hazard reduction programs and defines the standard required to: rate wildfire hazards to the environment, buildings, structures and cultural sites according to fuel loads, climate, location, accessibility and ecology; develop strategies for wildfire hazard reduction; coordinate hazard reduction plans, strategies and operational procedures with other agencies and reviewed; maintain records of pesticides and chemical agents used, hazard reduction and fore incidents.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes managing wildfire hazard reduction programs through planning, advising and monitoring the performance of operational personnel undertaking fire prevention activities.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop wildfire prevention strategies	<p>1.1.Potential wildfire hazards to the environment are rated according to fuel loads, climate, location, accessibility, ecology and organisational priorities.</p> <p>1.2.Risks to buildings, structures and cultural sites from wildfires are rated in accordance to adjacent fuel loads, climate, location, accessibility and organisational priorities.</p> <p>1.3.Wildfire hazard reduction strategies take into account the local fire history, fuel loads, climate, location, accessibility, geophysical systems, ecology, organisational procedures and priorities, Occupational Health and Safety (OHS), local fire agencies and legislative requirements.</p> <p>1.4.Proposed wildfire hazard reduction strategy has local community support where appropriate.</p> <p>1.5.Strategies for wildfire hazard reduction proposed are in accordance with organisational priorities, local fire agencies and legislative requirements.</p> <p>1.6.Strategies comply with OHS, relevant regulatory requirements and enterprise guidelines.</p>
2. Implement and monitor wildfire hazard reduction	<p>2.1.Hazard reduction strategies implemented are appropriate to the enterprise's objectives, the nature of the site, location, resources and environmental conditions.</p> <p>2.2.Hazard reduction is undertaken in accordance with</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>organisational plans and procedures, OHS, local fire agencies, and legislative requirements.</p> <p>2.3. Hazard reduction activities are coordinated with other relevant agencies.</p> <p>2.4. Progress of hazard reduction activities is monitored.</p> <p>2.5. Hazard reduction plans, strategies and operational procedures are reviewed and recommendations for change are processed in accordance with organisational procedures.</p>
3. Process records	<p>3.1. Suggested and/or required changes to plans and strategies are reported in accordance with organisational procedures.</p> <p>3.2. Records document quantities and type of chemicals/biological agents used and where they were applied.</p> <p>3.3. Records document hazard reduction actions taken and where.</p> <p>3.4. Incident reports are processed in accordance with organisational procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop wildfire prevention strategies
- implement and monitor wildfire hazard reduction
- process records
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

**REQUIRED SKILLS AND KNOWLEDGE**

abilities.

**Required knowledge**

- wildfire prevention strategies.
- organisational environment and relative values.
- organisational procedures, legislative and OHS requirements.
- local authorities, agencies and other land users.
- hazards associated with wildfire prevention strategies.
- fire behaviour in a rural/bush environment.
- range of equipment applicable to wildfire hazard reduction.
- approved, safe use of equipment.
- environmental, public health and safety issues.
- types of chemical and biological hazards and how they should be handled.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- rate wildfire hazards to the environment, buildings, structures and cultural sites according to fuel loads, climate, location, accessibility and ecology
- develop strategies for wildfire hazard reduction
- coordinate hazard reduction plans, strategies and operational procedures with other agencies and reviewed
- maintain records of pesticides and chemical agents used, hazard reduction and fire incidents.

**Context of and specific resources for**

Competency requires the application of work practices

**EVIDENCE GUIDE****assessment**

under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Wildfire hazards may include:

- the amount of flammable vegetation
- type of vegetation (e.g., grass, heath, peat, crops, scrub or forest)
- buildings
- structures
- mobile property.

Wildfire hazard reduction strategies may include:

- slashing
- clearing vegetation
- animal grazing
- spraying vegetation with chemical and biological agents
- insurance
- community education
- regular facilities and building maintenance
- safe storage or removal of hazardous materials.

**Unit Sector(s)**

<b>Unit sector</b>	Fire
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**Co-requisite units**

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCHBR101A Support horse work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting horse work and defines the standard required to: apply safe work practices including animal welfare; clean housing, equipment and gear; handle and work around horses; assist with the repair and maintenance of features and prepare materials, tools and equipment for work.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies the provision of support to others undertaking the care of horses and the maintenance of horse equipment and housing.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for horse work	<p>1.1.The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2.Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3.Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5.Work support is provided according to Occupational Health and Safety (OHS) requirements, and according to workplace information.</p> <p>1.6.OHS hazards are identified and reported to the supervisor.</p>
2. Undertake horse work as directed	<p>2.1.Instructions and directions provided by supervisor are followed and clarification sought when necessary.</p> <p>2.2.Work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3.Horses are handled safely and problems referred to supervisor.</p> <p>2.4.Horses are checked for feed and water supply and signs of discomfort.</p> <p>2.5.Enterprise policy and procedures in relation to workplace practices, handling and disposal of</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>materials is observed.</p> <p>2.6. Problems or difficulties in completing work to required standards or timelines are reported to supervisor.</p>
3. Handle materials and equipment	<p>3.1. Waste material produced during work is stored in a designated area according to supervisor's instructions.</p> <p>3.2. Materials and equipment are handled and maintained according to supervisor's instructions and enterprise guidelines.</p> <p>3.3. A clean and safe work site is maintained while working.</p>
4. Clean up on completion of work	<p>4.1. Materials are returned to store or disposed of according to supervisor's instructions.</p> <p>4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions.</p> <p>4.3. Work outcomes are reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safety directions
- prepare materials, tools and equipment for work
- undertake horse work as directed
- handle materials and equipment
- clean up on completion of work
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

**REQUIRED SKILLS AND KNOWLEDGE**

- safe work practices
- horse handling techniques
- horse care
- tools and equipment
- repair and maintenance of facilities
- OHS and animal welfare legislation and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- apply safe work practices including animal welfare
- clean housing, equipment and gear
- handle and work around horses
- assist with the repair and maintenance of features
- prepare materials, tools and equipment for work.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Work may include:

- assistance with selecting, catching and tying up horses
- grooming and rugging horses
- cleaning and maintaining stable gear
- caring for horses
- feeding horses
- loading and unloading goods and materials
- carrying out routine maintenance on buildings, roads, troughs, fences
- cleaning yards, sheds, fixtures and fittings.

Tools and equipment may include:

- saddles
- ropes
- reins
- breastplates
- martingales
- bridles
- cruppers
- saddle bags
- headstalls
- saddle cloths
- feeders
- leads and rugs
- brushes and combs
- clippers
- bot knife
- scrapers
- soap
- hoof picks
- knives
- rasps
- pincers
- brushes
- hoof dressings.

Hazards may include:

- solar radiation
- dust
- noise
- air- and soil-borne micro-organisms
- chemicals and hazardous substances

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• sharp hand tools and equipment</li> <li>• manual handling</li> <li>• holes</li> <li>• slippery and uneven surfaces.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Horse breeding
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCHBR201A Monitor horse health and welfare

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes of dealing with horse injuries and emergencies when they occur and defines the standard required to: handle horses in a calm and professional manner; check horses for signs of lameness or soreness and report problems; carry out emergency procedures calmly and efficiently; identify symptoms of ill health or injury and treat minor injuries; apply hoof care treatment as instructed.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to providing support to professional health practitioners. The work in this standard is likely to be carried out under routine supervision within organisation guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Follow procedures for horse health and welfare	<p>1.1.Regular checks are taken to assess horse health and welfare according to the requirements of the organisation.</p> <p>1.2.Procedures for handling horses calmly and professionally are followed.</p>
2. Carry out horse checks	<p>2.1.All horses are routinely checked for signs of ill health.</p> <p>2.2.Horses are examined for signs of lameness or soreness and abnormalities reported in the methods prescribed in the organisations work procedures.</p> <p>2.3.Evidence of heat or swelling in legs is reported to manager or foreman and treated under instruction.</p> <p>2.4.Hooves cleaned and shoes are examined for wear and damage.</p> <p>2.5.Faulty, broken or loose shoes removed and farriery assistance is called, when required, in line with the organisations work procedures.</p> <p>2.6.While handling the horses, Occupational Health and Safety (OHS) hazards are continually identified, risks assessed and suitable controls implemented.</p> <p>2.7.Horses are handled safely and all required horse restraints are within the organisations and industry guidelines for animal health and welfare.</p>
3. Deal with horse emergencies	<p>3.1.Common signs of injury or life threatening conditions are detected and the situation quickly analysed before notification or action is taken.</p> <p>3.2.Life threatening ailments requiring emergency</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>treatment are notified to the trainer, manager or veterinarian and immediate assistance is called.</p> <p>3.3. Basic emergency and/or first aid procedures are carried out until professional help arrives.</p> <p>3.4. Cast horse is calmed and returned to its feet in a safe manner.</p> <p>3.5. Serious cuts and abrasions are promptly shown to the veterinarian and assistance provided, as required, during professional treatment.</p>
4. Provide veterinary procedure support	<p>4.1. Cuts, abrasions and bruises are treated under instruction from the veterinarian, manager or foreman.</p> <p>4.2. Horse is examined for signs of distress or soreness after work or mating procedures, and all abnormalities are reported.</p> <p>4.3. Appropriate hoof care treatment is applied as instructed by the manager or foreman.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and apply safe work practices
- handle horses
- perform duties around horses in a firm but calm, gentle and unhurried manner
- identify signs of ill health or injury, or signs of abnormal or depressed appetite
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.



## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- horses of all classes and horse husbandry
- the range of ailments that may occur or affect horses in the property
- the application of a range of basic treatments under veterinary supervision
- environmental controls and codes of practice applicable to the enterprise
- the organisations livestock production and management plans
- sound management practices and processes to minimise noise, odours and debris from the horse operations
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and OHS.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- handle horses in a calm and professional manner
- check horses for signs of lameness or soreness and report problems
- carry out emergency procedures calmly and efficiently
- identify symptoms of ill health or injury
- treat minor injuries and apply hoof care treatment as instructed.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Horse health and welfare checks may include:	<ul style="list-style-type: none"> <li>• checking of nasal passages</li> <li>• vaginal or rectal discharge</li> <li>• rectal temperature</li> <li>• coughing</li> <li>• abnormal coat conditions</li> <li>• changes to pulse</li> <li>• respiration changes abnormal behaviour</li> <li>• vices such as weaving depraved appetite or other boredom conditions that may reflect on the health of stabled horses.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCHBR202A Handle young horses

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of handling young horses and defines the standard required to: catch and handle foals; assist with weaning foals; teach weanlings to lead; catch, handle, groom and exercise yearlings; prepare yearlings for sale to industry standards.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working with minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Safely catch and handle foals	1.1. Foals of various ages are caught safely. 1.2. Foals are restrained for routine health and husbandry procedures.
2. Assist with weaning foals	2.1. Suitable facilities for the safe handling, training and weaning of foals are identified. 2.2. Foals are fitted with a halter according to enterprise guidelines. 2.3. Weanling foals are led according to enterprise guidelines. 2.4. Weanling foals legs are handled according to enterprise guidelines. 2.5. Weanling foals feet are picked up according to enterprise guidelines. 2.6. Rugs are fitted to weanlings.
3. Safely and competently perform routine tasks in the preparation and presentation of yearlings for sale	3.1. Routine daily checks of yearlings are carried out. 3.2. Yearlings are safely led for exercise and presentation. 3.3. Yearlings are exercised, shampooed, and groomed according to enterprise guidelines. 3.4. Bridles, bits, rugs and safety gear are fitted according to enterprise guidelines. 3.5. Sale presentation techniques are demonstrated.

## Required Skills and Knowledge

**REQUIRED SKILLS AND KNOWLEDGE**

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- identify hazards and follow safe work procedures
- handle animals in a safe and humane manner
- monitor animal behaviour and recognise abnormalities
- demonstrate safe and environmentally responsible workplace practices
- teach a weanling to accept a halter
- teach a weanlings to lead
- maintain facilities and equipment to industry standards
- communicate effectively and maintain accurate reports and records
- fit rugs to weanlings&yearlings
- safely exercise weanlings&yearlings
- groom a yearling
- safely fit, in an appropriate manner, bits, bridles and halters
- teach a yearling to lead for exercise and presentation for sale
- teach a yearling to stand correctly for presentation at sale
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- suitable facilities for weaning
- potential dangers to the foal during weaning and appropriate actions to reduce them, such as the removal of troughs or other objects that may cause injury
- stress responses sometimes associated with weaning, such as fretting, over-heating, refusing food, overeating, self-inflicted injuries.
- suitable facilities for yearling preparation
- potential dangers to the yearlings during sale preparation and appropriate actions to reduce them, such as removing any potential hazards from stalls and handling areas, exercising in confined areas, monitoring exercise and the effects of exercise on joints and bones of the legs
- various responses in yearlings associated with sale preparation such as fretting, poor appetite, overeating, stable vices
- Occupational Health and Safety (OHS) and animal welfare legislation and enterprise requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• catch and handle foals</li> <li>• assist with weaning foals</li> <li>• teach weanlings to lead</li> <li>• catch, handle, groom and exercise yearlings</li> <li>• prepare yearlings for sale to industry standards.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Young horses may include:	<ul style="list-style-type: none"> <li>• all breeds and types of foals, weanlings and yearlings.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCHBR203A Provide daily care for horses

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of providing daily care for horses and defines the standard required to: complete stable routines efficiently; complete daily horse maintenance; select horses for a range of purposes; catch and tie up horses; groom or rug horses as required by the organisation; clean and maintain equipment; work safely around horses.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the horse or livestock industries who are required to operate under routine supervision within organisation guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to work with horses	<p>1.1. Work to be undertaken is interpreted from the work program where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of horse routines.</p> <p>1.3. Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.</p> <p>1.4. Suitable personal protective equipment is selected, used and maintained.</p>
2. Clean stables and surrounding areas	<p>2.1. Horse is checked for condition, health and soundness and removed from stable or secured appropriately.</p> <p>2.2. Manure, soiled bedding and stale feed are inspected, removed, and abnormal conditions are reported.</p> <p>2.3. Bedding is raked or forked and fresh quantities are added as required.</p> <p>2.4. Feed bins, hay nets/bins and water troughs are cleaned thoroughly and troughs are filled with fresh water.</p> <p>2.5. Walkways are swept and/or raked and manure removed.</p> <p>2.6. Stale feed and manure is safely disposed of according to the organisation's environmental and waste management procedures.</p> <p>2.7. Buildings or fixtures that are in need of maintenance or are unsafe are reported to the stable management.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Perform daily work program	<p>3.1. Work program for each stable horse is carried out as instructed by the stud master or stable manager.</p> <p>3.2. Horses are selected for professional services, prepared, and the contractor is contacted as required by organisational procedures or supervisors instructions.</p> <p>3.3. Horses are prepared for specified daily work program as required by organisational procedures or supervisors instructions.</p> <p>3.4. Horses are washed down after working, dried, rugged, returned to their stable and fed.</p> <p>3.5. Work routines and performance records are kept and maintained as an integral part of the stable business.</p>
4. Select, catch and tie up horses	<p>4.1. Individual characteristics of horses are identified according to specified criteria and nominated animals are selected.</p> <p>4.2. Selected horse is caught quickly and gently and working gear is fitted.</p> <p>4.3. Legs and hooves of selected horse are inspected for abnormalities, cuts or damage.</p> <p>4.4. Horse is led to work area or rail quietly and calmly and safely secured.</p> <p>4.5. OHS hazards for handling horses are identified and safety concerns reported.</p> <p>4.6. Horses are handled safely and within the organisation's and industry guidelines for animal health and welfare.</p>
5. Groom and rug horses	<p>5.1. Horses are groomed to enterprise standard.</p> <p>5.2. Hooves and shoes are cleaned and checked for cracks, heat and other abnormalities, and dirt removed from the outer walls of the hooves.</p> <p>5.3. Rugs appropriate to the conditions are fitted according to enterprises requirements, while taking care to avoid chafing and rubbing.</p>
6. Clean and maintain stable gear	<p>6.1. All gear is regularly checked for wear and damage.</p> <p>6.2. Gear is thoroughly cleaned and polished and oils or preservatives applied as required as required.</p> <p>6.3. Working gear is maintained or repaired as required to ensure safe horse working conditions.</p> <p>6.4. Working gear and saddlery is cleaned and stored after use in line with organisation policy.</p>

ELEMENT	PERFORMANCE CRITERIA
7. Monitor health and welfare of horses	7.1. Signs of good health and condition are identified. 7.2. Symptoms of common illnesses and injuries are recognised and reported. 7.3. The welfare of horses is monitored and maintained. 7.4. Basic first aid is provided for minor injuries.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- handle and care for horses
- complete basic hoof care procedures
- groom horses
- care for saddlery and equipment
- measure quantities required for feed
- identify hazards and follow safe work practices
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- horses and horse husbandry
- safe handling of horses
- horse health, horse behaviour and psychology
- care and maintenance of hooves and the lower limbs
- environmental controls and codes of practice applicable to the enterprise
- organisational procedures for care of horses
- sound management practices and processes to minimise noise, odours and debris from the livestock operations

**REQUIRED SKILLS AND KNOWLEDGE**

- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- complete stable routines efficiently
- complete daily horse maintenance
- select horses for a range of purposes
- catch and tie up horses
- groom or rug horses as required by the organisation
- clean and maintain equipment
- work safely around horses.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Horses may include:

- all breeds and types of horses.

## Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCHBR204A Assist with mating procedures and parturition of horses

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assisting with the natural mating of horses and defines the standard required to: prepare and handle wet and dry mares for teasing; detect oestrus cycles; monitor mating or artificial insemination and take remedial action where needed; assist at foaling by monitoring foaling mares and reporting problems and record data of mare mating and foaling.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working with limited responsibility within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare mares for teasing and mating	<p>1.1. Mares displaying signs of oestrus in the paddock are identified and advice provided to supervisor.</p> <p>1.2. Mares are mustered safely and quietly from paddock to teasing yards using appropriate handling procedures.</p> <p>1.3. Mares are handled for teasing using appropriate handling procedures.</p> <p>1.4. Mare is restrained using appropriate restraining methods</p> <p>1.5. Mare's reaction to the teaser is noted and reported to supervisor.</p> <p>1.6. Suitable personal protective equipment is selected, used and maintained.</p> <p>1.7. Natural mating or artificial insemination procedures are implemented.</p> <p>1.8. Mares are returned to foals and settled after mating or AI.</p>
2. Handle mares for routine veterinary reproductive procedures	<p>2.1. Mares are led into crush, ensuring safety and wellbeing of both mare and foal, if present.</p> <p>2.2. Mare and foal are handled to ensure both are settled and safe.</p> <p>2.3. An appropriate restraint method in the crush is used.</p> <p>2.4. Assistance is provided to the veterinarian to prepare for examination of the mare when necessary.</p>
3. Care for and handle in-foal wet and dry mare	<p>3.1. External genitalia and udder of mares are examined using correct procedure.</p> <p>3.2. In-foal mares are examined for general health and</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>wellbeing and possible signs of abortion.</p> <p>3.3.Mares close to foaling are identified and advice provided to supervisor.</p> <p>3.4.Mares with foals at foot and the foal are examined for general health and wellbeing.</p>
4. Assist with foaling down mares	<p>4.1.Observe for signs of impending parturition in the mare.</p> <p>4.2.Ensure foaling mares are in a secure place where they can be observed and assisted if required.</p> <p>4.3.Report variations to the normal foaling pattern that may suggest difficulties.</p> <p>4.4.Observe that the newborn foal is able to stand and then treat the broken umbilical cord.</p> <p>4.5.Observe the condition of the mare including the expulsion of the placenta and mothering behaviour.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe operating procedures
- handle mares and foals safely and quietly
- check for health and wellbeing of mares and possible signs of abortion
- use a variety of teasing methods
- use a variety of restraints
- use safe work practices
- ensure animal welfare practices are used
- communicate effectively with other team members, veterinarians and supervisors
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- caring for and handling in-foal mares

## REQUIRED SKILLS AND KNOWLEDGE

- caring for and handling mares with foals at foot
- signs of oestrus
- signs of abortion
- signs of imminent foaling in mares
- teasing methods
- restraint methods used during teasing
- restraint methods used in the crush
- general health and wellbeing signs in mares
- foaling process in mares and signs of abnormalities
- relevant State/Territory legislation, regulations and Codes of Practice with regard to workplace Occupational Health and Safety (OHS), environment and animal welfare
- enterprise and industry policies with regard to recording and reporting routines.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare and handle wet and dry mares for teasing
- detect oestrus cycles
- monitor mating or AI and take remedial action where needed
- record data of mare mating.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Mares may include:	<ul style="list-style-type: none"> <li>those who may be in-foal, wet or dry and be of any type or breed.</li> </ul>
Mating may include:	<ul style="list-style-type: none"> <li>mares mated naturally or artificially inseminated.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCHBR302A Carry out basic hoof care procedures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining horse hooves in premium condition and defines the standard required to: handle and restrain horses of all classes for hoof procedures; use farriery tools to perform basic hoof care on horses; remove and replace shoes and clinch nails.
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### Application of the Unit

<b>Application of the unit</b>	The carrying out of basic hoof care under limited supervision from others, with checking only related to overall progress. The inspection and maintenance of hooves is performed within routines, methods and procedures, with necessary skills such as the basic use of farriery tools to complete routine hoof care.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to perform hoof care on horses	<p>1.1. Work to be undertaken is interpreted from work program, where necessary, and confirmed with management.</p> <p>1.2. Organisation requirements for the care and handling of horses within the guidelines of animal health and welfare are recognised and understood.</p> <p>1.3. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the process.</p> <p>1.4. Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.</p> <p>1.5. Suitable personal protective equipment is selected, used and maintained.</p>
2. Provide hoof care to horse	<p>2.1. Basic farriery tools are selected for appropriate use.</p> <p>2.2. Horses feet are picked up and hooves picked and cleaned according to set leg routines.</p> <p>2.3. Legs are held and the hoof presented to allow treatment to be carried out efficiently and safely.</p> <p>2.4. Basic hoof care (including routine trimming) is provided according to organisation guidelines and procedures.</p> <p>2.5. Occupational Health and Safety (OHS) hazards are continually identified while handling horses, risks assessed and suitable controls implemented.</p>
3. Replace dislodged and loose shoes	<p>3.1. Loose shoe is removed and straightened if required.</p> <p>3.2. Loose shoes are tightened by re-nailing or</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>application of extra nails.</p> <p>3.3.Cast shoe is reapplied taking care to avoid injury to the animal and all nails are clinched.</p> <p>3.4.Farrier assistance is called where corrective trimming or shoe shaping is required.</p>
4. Complete maintenance and administration	<p>4.1.Equipment is cleaned in according to manufacturer's specifications, organisational procedures and regulations.</p> <p>4.2.Attachments and other ancillary equipment are cleaned and stored according to with manufacturer's specifications, organisational procedures and regulations.</p> <p>4.3.All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately.</p> <p>4.4.All required documentation recorded accurately and promptly according to organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- competently handle and restrain horses of all classes for hoof procedures
- handle horses and duties around them in a firm but calm, gentle and unhurried manner
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**REQUIRED SKILLS AND KNOWLEDGE****Required knowledge**

- the structure of the hoof and associated problems
- hoof care and shoeing procedures
- hoof injury
- the need to maximise hygiene practices and awareness.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- handle and restrain horses of all classes for hoof procedures
- use farriery tools to perform basic hoof care on horses
- remove and replace shoes and clinch nails.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

**RANGE STATEMENT**

Hoof care procedures may include:	<ul style="list-style-type: none"> <li>• shoeing of all types and breeds of horses</li> <li>• hoof care (in particular young horses, requiring regular attention to minimise hoof damage through cracking, cuts or abrasions).</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Horse breeding
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCHBR303A Carry out mare mating or artificial insemination procedures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the quality management of mating or Artificial Insemination (AI) procedures to maximise conception rates and live foal outcomes and defines the standard required to: use appropriate oestrus detection methods; handle mares for serving or artificial insemination and assist as appropriate; recognise disease, health or injury; humanely and safely handle broodmares and their foals; provide support to veterinarian or stallion manager.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to work performed under the direction and supervision of the stallion manager or artificial inseminator.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to perform mare mating procedures	<p>1.1. Work to be undertaken is interpreted from work program, where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the production process.</p> <p>1.3. Organisation requirements for the care and handling of horses within the guidelines of animal health and welfare are recognised and understood.</p> <p>1.4. Suitable personal protective equipment is selected, used and maintained.</p>
2. Identify mares in a state of oestrus	<p>2.1. Mares due for service are identified and selected according to enterprise guidelines.</p> <p>2.2. Selected mare is caught and restrained for oestrus identification as instructed.</p> <p>2.3. Occupational Health and Safety (OHS) hazards are continually identified while handling horses, risks assessed and suitable controls implemented.</p> <p>2.4. Stud records are updated accurately either manually or electronically.</p>
3. Attend mares for service	<p>3.1. Mare is prepared for service routines in line with stud policy.</p> <p>3.2. Mare is restrained for natural service and foal secured in close proximity where appropriate.</p> <p>3.3. Mare is attended for the service or artificial</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>insemination process as required by organisational procedures.</p> <p>3.4.Mare is returned to box or paddock as instructed by the stud master.</p> <p>3.5.All required records and documentation are completed accurately and promptly in accordance with organisational requirements.</p>
4. Provide support for routine reproductive procedures	<p>4.1.Mare is carefully restrained, as required, for proposed procedure and in line with animal welfare guidelines.</p> <p>4.2.Support is provided to stud master or veterinarian for manual or ultrasound pregnancy testing procedures.</p>
5. Maintain accurate identification and records	<p>5.1.Details of identification and breeding are recorded accurately.</p> <p>5.2.Details of any treatment performed, including follow up treatment required, are reported to supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- use appropriate oestrus detection methods
- handle mares to prepare and carry out mating or AI
- recognise disease, health or injury for mares and their foals
- humanely and safely handle broodmares
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural,

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
social and religious backgrounds and with a range of physical and mental abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• identify hazards and assess risks</li> <li>• oestrus cycle in mares and dioestrus behaviour and its detection</li> <li>• anatomy and physiology of male and female reproductive systems in horses</li> <li>• conception and gestation in the mare</li> <li>• basic reasons for infertility in mares and what may be treated by veterinarians</li> <li>• nutritional requirements of mares prior to and post- mating</li> <li>• appropriate handling restraints</li> <li>• procedures for preparation for mating</li> <li>• artificial insemination procedures</li> <li>• animal welfare requirements</li> <li>• mare identification methods</li> <li>• stud record keeping procedures</li> <li>• mare handling procedures</li> <li>• requirements of veterinarians in carrying out pregnancy testing</li> <li>• relevant legislation and regulations relating to waste and environment management, animal health and welfare</li> <li>• relevant OHS legislation, codes of practice and workplace procedures</li> <li>• appropriate manufacturer's instructions and organisation procedures/instructions</li> <li>• organisation recording and reporting procedures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• use appropriate oestrus detection methods</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• handle mares for serving or artificial insemination and assist as appropriate</li> <li>• recognise disease, health or injury</li> <li>• humanely and safely handle broodmares and their foals</li> <li>• provide support to veterinarian or stallion manager.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Procedures to be completed includes:	<ul style="list-style-type: none"> <li>• work is interpreted from work program, where necessary, and confirmed with management.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCHBR304A Educate, ride and care for horses and equipment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of handling and riding horses to muster and check livestock and defines the standard required to: use calm and humane methods to minimise undue stress and risk to horses or handlers; prepare horses for riding; ride and educate horses as part of property operations; monitor health and condition of horses; maintain saddlery and horse equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the livestock industry who use horses to muster and check stock on a grazing enterprise. It is normally carried out independently according to enterprise procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to use horses for farm operations	<p>1.1. Work to be undertaken is interpreted from work program, where necessary, and confirmed with management.</p> <p>1.2. Horses are selected for the task.</p> <p>1.3. Horse's health and soundness is checked to ensure they are physically capable of the work required.</p> <p>1.4. Equipment is selected, checked, and maintained if necessary.</p> <p>1.5. Suitable personal protective equipment is selected, used and maintained.</p>
2. Ride horses	<p>2.1. Horses are caught and handled safely and humanely.</p> <p>2.2. Horses are ridden and educated to carry out stock work.</p> <p>2.3. Occupational Health and Safety (OHS) hazards for horse handling and riding are identified, risks assessed and risk controls are implemented.</p> <p>2.4. Personal Protective Equipment (PPE) is selected, used and maintained for horse handling and riding.</p>
3. Monitor horse health and condition	<p>3.1. Regular monitoring as a part of daily routines is carried out to identify signs of ill health and poor condition in horses.</p> <p>3.2. Horses in need of attention are mustered or caught as required, and condition reported and recorded.</p> <p>3.3. Prescribed treatments are administered for common ailments under supervision of the veterinarian or manager.</p> <p>3.4. Horses are checked for lameness and shoeing is</p>



ELEMENT	PERFORMANCE CRITERIA
	organised where required.
4. Care for saddlery and equipment	4.1. Basic working gear to suit the individual horse is selected and fitted. 4.2. Working gear is cleaned and checked as a part of regular daily routines. 4.3. Working gear is maintained or repaired as required to ensure safe horse working conditions. 4.4. Working gear and saddlery is cleaned and stored after use in line with organisation guidelines.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify common horse ailments
- develop an empathy with the horse or horses in their care
- handle horses for routine procedures
- effectively assess horse needs and capabilities
- ride and uneducated and experienced horses
- dress feet
- care for saddlery and equipment
- identify OHS hazards and implement safety procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- assessing horse conformation and work capabilities
- horse movement and behaviour
- signs of unsoundness and disease, work stress or other disorders in horses
- horse handling and riding techniques

**REQUIRED SKILLS AND KNOWLEDGE**

- relevant legislation and enterprise procedures relating to waste and environment management, animal health and welfare, and OHS.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- use calm and humane methods to minimise undue stress and risk to horses or handlers
- prepare horses for riding
- ride and educate horses as part of property operations
- monitor health and condition of horses
- maintain saddlery and horse equipment.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Types of horses may include:

- all breeds and types of horses and related equipment used to work and muster livestock.

<b>RANGE STATEMENT</b>	
Education and breaking of horses may include:	<ul style="list-style-type: none"> <li>grooming, rugging, shoeing, riding in confined and open areas, and stockwork in confined and open areas.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCHBR305A Handle and care for stallions

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of handling and caring for stallions, particularly through the mating process. It also includes collecting semen and caring for the horse to ensure minimal distress after mating and defines the standard required to: humanely and safely handle stallions; provide support to veterinarians for a range of procedures; maximise conception rates (and live foal outcomes) through efficient and well-managed stud activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under routine supervision within organisation guidelines. The position may involve responsibility for highly valuable animals. Through the effective implementation of this standard, conception rates (and live foal outcomes) are maximised through efficient and well-managed stud activities. Stallion use and care ensures the success of the stud as a business.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to handle stallions	<p>1.1. Work to be undertaken is interpreted from work program, where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the mating process.</p> <p>1.3. Tools and equipment suitable for the work to be undertaken are selected, checked and maintained if necessary.</p> <p>1.4. Suitable personal protective equipment is selected, used and maintained.</p>
2. Care for stallions	<p>2.1. Stallions are caught, groomed, checked and exercised as a part of daily routines to maintain fitness and monitor injury, condition and general health.</p> <p>2.2. Regular checking and accurate observation ensures that all changes in stallion behaviour and health are identified and recorded.</p> <p>2.3. Feed and water requirements are applied in strict compliance with prescribed nutritional programs and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>details recorded.</p> <p>2.4. Occupational Health and Safety (OHS) hazards are continually identified while handling horses, risks assessed and suitable controls implemented.</p> <p>2.5. Horse health routines are maintained through and between breeding seasons as prescribed by the supervising veterinarian and/or stud manager.</p>
3. Handle stallion for mating procedures	<p>3.1. Selected stallion is caught and identified in line with mating requirements.</p> <p>3.2. Suitable restraint is applied to stallion for mating activities.</p> <p>3.3. All handling of the stallion is done within the guidelines of animal welfare codes and practices.</p> <p>3.4. Organisation hygiene practices are applied to ensure that risks of disease are minimal.</p> <p>3.5. Mating or semen collection is completed according to organisation standards, and to minimise stress to the stallion.</p> <p>3.6. Post-mating procedures are completed as instructed by stud master or veterinarian.</p>
4. Complete hygiene and administration activities	<p>4.1. Equipment is cleaned and stored according to manufacturer's specifications, organisational procedures and regulations.</p> <p>4.2. All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately.</p> <p>4.3. All required records and documentation are completed accurately and promptly in accordance with organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- recognise disease, ill health or injury

## REQUIRED SKILLS AND KNOWLEDGE

- humanely and safely handle stallions and mares
- provide support to veterinarian for a range of procedures
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- the need for accurate identification and recording in the mating process
- common equine injury and disease that affects breeding horses
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- relevant OHS and animal welfare legislation, regulations, codes of practice and enterprise procedures
- appropriate legislative requirements, manufacturer's instructions and organisation procedures/instructions
- organisation recording and reporting procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• humanely and safely handle stallions</li> <li>• provide support to veterinarians for a range of procedures</li> <li>• maximise conception rates (and live foal outcomes) through efficient and well-managed stud activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Handling and care may include:	<ul style="list-style-type: none"> <li>• all breeds and types of stallions.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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## Co-requisite units

<b>Co-requisite units</b>		



## Competency field

Competency field	
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## AHCHBR306A Prevent and treat equine injury and disease

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preventing and treating injuries and disease in horses and defines the standard required to: recognise common ailments; identify signs of ill health and injury or signs of abnormal or depressed appetite; handle and restrain horses for observation and treatment as required; treat equine injury and disease; complete horse health and medication records; perform preventative actions such as stable hygiene practices and quarantine procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit is carried out independently within own area of responsibility. Quarantine measures, vaccinations or other preventative procedures will also be completed under the instruction from the manager (or veterinary surgeon).
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to treat horses	<p>1.1. Work to be undertaken is interpreted from work program, where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the process.</p> <p>1.3. Tools and equipment suitable for the work to be undertaken are selected, checked and maintained if necessary.</p> <p>1.4. Suitable personal protective equipment is selected, used and maintained.</p>
2. Recognise and report common ailments	<p>2.1. Routine and regular checks are made of horses to detect abnormal conditions.</p> <p>2.2. Common ailments are distinguished through signs of distress, elevated temperatures, or skin or joint condition.</p> <p>2.3. Abnormal conditions are reported to the manager (or veterinary doctor) and actions are taken under instruction and supervision.</p> <p>2.4. Initial first aid procedures are carried out for horses until professional help arrives.</p>
3. Apply disease or ailment prevention procedures	<p>3.1. Stable/paddock quarantine procedures are carried out according to enterprise practice.</p> <p>3.2. Stable hygiene practices are maintained at high</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>levels in accordance with routine instructions.</p> <p>3.3. Routine annual or outbreak stimulated vaccination of horses is carried out under supervision of the veterinary practitioner with a minimum of stress to animals.</p> <p>3.4. Routine drenching and skin washing procedures are carried out to prevent or control external or internal parasites.</p> <p>3.5. While handling horses, Occupational Health and Safety (OHS) hazards are continually identified, risks assessed and suitable controls implemented.</p> <p>3.6. Comprehensive records of veterinary medication and treatment by other professionals are maintained for each individual animal.</p>
4. Treat equine injury and disease	<p>4.1. Twitches and other restraining devices are used, as required, depending upon the individual horse's temperament.</p> <p>4.2. Prescribed veterinary medicines are administered at correct dose, according to instructions, with minimal stress to the horse and under supervision by manager or veterinary doctor.</p> <p>4.3. All handling of the horses is done within the guidelines of animal welfare codes and practices.</p>
5. Complete hygiene and administration	<p>5.1. All equipment used in treating horses is cleaned hygienically and stored in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>5.2. All containers, leftover fluids, waste and debris from the treatments are disposed of safely, hygienically and appropriately.</p> <p>5.3. All required records and documentation are completed accurately and promptly in accordance with operational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- identify hazards and implement safe work procedures
- handle horses and duties around them in a firm but calm, gentle and unhurried manner
- identify signs of ill health and injury or signs of abnormal or depressed appetite
- handle and restrain horses for observation and treatment as required
- complete horse health and medication records clearly, accurately and in line with established practice for such records
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- common horse diseases
- the range of common ailments that may occur or affect horses
- the application of a range of treatments under veterinary supervision
- symptoms of life threatening conditions
- methods of horse handling
- indicators that can be used to assess horse health
- horse behavioural problems
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- the need to maximise hygiene practices and awareness
- environmental controls and codes of practice applicable to the enterprise - processes to minimise noise, odours and debris from the livestock operations
- potential hazards associated with the operation of basic tools, and equipment
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, and the use and control of machinery and equipment.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise common ailments</li> <li>• identify signs of ill health and injury or signs of abnormal or depressed appetite</li> <li>• handle and restrain horses for observation and treatment as required</li> <li>• treat equine injury and disease</li> <li>• complete horse health and medication records</li> <li>• perform preventative actions such as stable hygiene practices and quarantine procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Prevention and treatment may include:	<ul style="list-style-type: none"> <li>• regular checking of types and breeds of horses on the property for signs of ill health, distress or abnormal conditions.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Horse breeding
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCHBR307A Assess suitability of horses for stock work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assessing suitability of horses for purpose and defines the standard required to: handle horses safely; identify horse conformation; assess soundness and temperament of horses; maintain accurate data documentation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to assessing conformation, temperament and soundness of horses and is an important skill in making sure an animal is fit for purpose and in determining sale value. The work in this standard is likely to be carried out as part of a team or independently.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Objectively assess a horse's conformation	<p>1.1. Conformation of horse is reported on using standard conformation terminology.</p> <p>1.2. Desirable conformation of a horse is reported on using standard conformation terminology.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are continually identified while handling horses, risks assessed and suitable controls implemented.</p>
2. Assess unsoundness and blemishes in the horse	<p>2.1. Unsoundness and blemishes of the fore limbs are identified and reported.</p> <p>2.2. Unsoundness of the hind limbs are identified and reported.</p> <p>2.3. Unsoundness and blemishes of the hooves are identified and reported.</p> <p>2.4. General unsoundness and blemishes are identified and reported.</p>
3. Report on the way of going of horses	<p>3.1. Essential elements of the way of going of the horse are identified and reported on.</p> <p>3.2. Natural gaits of the horse are identified and reported on.</p> <p>3.3. Defects in the way of the going of the horse are identified and reported on.</p>
4. Report on the undesirable vices and habits of horses	<p>4.1. Vices dangerous to people are identified and reported on.</p> <p>4.2. Vices dangerous to horses are identified and reported on.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and work safely with horses
- identify horse conformation, soundness and temperament
- defer to veterinary advice if necessary
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant occupational health and safety legislation, regulations and codes of practice
- recognise and report on desirable and undesirable conformation using accepted conformation terminology
- recognise and report on common vices in horses
- safe horse handling techniques
- recognise and report on desirable and undesirable natural gaits.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• handle horses safely</li> <li>• identify horse conformation</li> <li>• assess soundness and temperament of horses</li> <li>• maintain accurate data documentation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Horses assessed may include:	<ul style="list-style-type: none"> <li>• any breed being ridden for the purpose of stock work.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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# AHCHBR308A Maintain horses in a healthy state and safe environment

## Modification History

Release	TP Version	Comment
1	AHC10v6	Initial release

## Unit Descriptor

This unit describes the skills and knowledge required to maintain horse health and welfare through the application of regular programs.

In order to undertake this unit candidates should be capable of applying work health and safety procedures to the safe handling of horses.

## Application of the Unit

This unit of competency is intended to apply to any horse breeding environment and is generally applicable to most horse industry enterprises. It supports stud workers and supervisors, stud managers and others authorised to manage horse health and welfare.

In addition to legal and ethical responsibilities, it is a requirement that horses are handled gently and calmly. The individual is required to exhibit appropriate care for horses so that stress and discomfort is minimised.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Nil

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain horse environment	<p>1.1 Housing is arranged to meet the individual <i>needs</i> of the animal</p> <p>1.2 The <i>animal environment</i> maintained in an appropriate manner which takes into consideration animal welfare principles and work health and safety procedures</p> <p>1.3 Food storage areas and water supply are cleaned and maintained to keep all areas are free of contaminants</p> <p>1.4 Routine cleaning and maintenance of stables, yards and paddocks is established and monitored to ensure an hygienic environment</p>
2. Monitor and maintain a horse vaccination program	<p>2.1 Vaccination requirements for different <i>horse classes</i> are identified and understood</p> <p>2.2 Vaccination program is maintained according to agreed schedule</p> <p>2.3 Vaccination schedule is documented and appropriate certification records are maintained</p>
3. Implement a horse health maintenance program	<p>3.1 Regular regime of checking animals for signs of illness/injury is carried out</p> <p>3.2 Causes and symptoms of <i>common illnesses, injuries and parasitic infections</i> are identified and treatment is provided under supervision</p> <p>3.3 Internal and external parasites are identified and their impact on horses is assessed</p> <p>3.4 Communicable diseases are identified and control measures are implemented under direction of appropriate personnel</p> <p>3.5 Maintenance program/s are established and monitored for internal and external parasite control</p>
4. Implement a hoof care and maintenance program	<p>4.1 Common hoof diseases and injuries are recognised and appropriate treatment or referral to specialist is arranged as required</p> <p>4.2 Common gait abnormalities are identified and reported and treatment is arranged in accordance with organisational procedures</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	4.3 Hoof care and shoeing, including corrective measures, are appropriate to horses' welfare and training program
	4.4 Effective communication with farriers is maintained and all records of work carried out are kept according to organisational requirements
	4.5 Regular hoof care routine for horses is implemented

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

- Verbal communication and interpersonal skills to:
  - liaise with employer, stable staff, horse health specialists and others regarding the health and welfare of the horse, including giving and receiving instructions and discussing treatment options
  - develop and maintain strong reporting relationships
  - support others in handling and providing treatment to horses
- Written skills to compile and maintain documentation
- Literacy skills to understand and apply written materials such as organisational procedures and workplace health and safety requirements
- Planning and organising skills to organise, conduct and maintain a program of regular parasite, health and injury checks
- Identification and problem solving skills to:
  - apply safe handling and work practices
  - administer medication and treatments
  - assess vital signs and respond to illnesses or injuries in horses
  - comply with animal welfare policies in the care and management of horses
  - recognise signs and symptoms of communicable diseases

### Required knowledge includes:

#### Knowledge of:

- horse handling and restraint techniques, common horse behaviour and social traits
- minimum welfare and/or council requirements and regulations for keeping animals
- workplace health and safety regulations relating to the use and storage of chemicals and pharmaceuticals
- vaccination requirements and any regulations established by controlling bodies or government agencies
- common illnesses and injuries in horses including first aid, types of medication and

treatments

- commonly used health parameters for the animal e.g. temperature, respiration rate, hydration, temperature control, heart rate
- the application of a range of basic treatments under veterinary supervision
- symptoms of and procedures for notifiable diseases
- regulations regarding the use of therapeutic substances
- principles of hygiene and best practice as they relate to animal care
- structure of the hoof/foot
- common hoof/foot disorders such as: thrush, corns, quarter cracks, bruising, and abscess
- infection transfer
- required quarantine procedures in case of localised infectious disease

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and include demonstration of candidates ability to perform the following:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions that are to apply when managing horse health and welfare</li> <li>• implementation of procedures and techniques for the safe, effective and efficient provision of horse health and welfare</li> <li>• working with others to implement and complete horse health and welfare procedures that meet required outcomes</li> <li>• treat common diseases and recognise common ailments, ill health and injury in horses</li> <li>• handle and restrain horses for observation and treatment as required</li> <li>• treat horse injury and disease</li> <li>• complete horse health and medication records</li> <li>• perform preventative actions such as stable hygiene practices and quarantine procedures</li> </ul>
<b>Context of and specific resources</b>	Assessment is to occur under standard and authorised work practices, safety requirements and environmental



<b>for assessment</b>	<p>constraints.</p> <p>Assessment must include observation of relevant skills.</p> <p>The following resources must be available:</p> <ul style="list-style-type: none"> <li>• materials and equipment relevant to assessing candidate's ability to manage horse health and welfare</li> <li>• safe handling areas, such as stables</li> <li>• work instructions and related documentation</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of candidate's required knowledge</li> <li>• observed, documented and first hand testimonial evidence of candidate's application of practical tasks</li> <li>• inspection of completed work</li> </ul> <p>Where performance is not directly observed any evidence should be authenticated by supervisors or other appropriate persons.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Needs</i></b> may include:	<ul style="list-style-type: none"> <li>• environmental</li> <li>• physical</li> <li>• security</li> <li>• emotional</li> </ul>
<b><i>Animal environment</i></b> includes:	<ul style="list-style-type: none"> <li>• housing</li> <li>• shelters</li> <li>• paddocks</li> <li>• fences</li> </ul>
<b><i>Horse classes</i></b> cover:	<ul style="list-style-type: none"> <li>• foals and weanlings</li> <li>• mares</li> <li>• stallions</li> <li>• other adult horses</li> </ul>

	<ul style="list-style-type: none"> <li>• previously vaccinated</li> <li>• unvaccinated</li> </ul>
<p><i>Common illnesses, injuries and parasitic infections</i> may include:</p>	<ul style="list-style-type: none"> <li>• illnesses: <ul style="list-style-type: none"> <li>• circulatory disorders</li> <li>• eye, nose and mouth disorders</li> <li>• digestive disorders</li> <li>• metabolic disorders</li> <li>• musculo-skeletal disorders</li> <li>• neurological disorders</li> <li>• respiratory disorders</li> <li>• skin disorders</li> </ul> </li> <li>• injuries: <ul style="list-style-type: none"> <li>• bruises</li> <li>• falls</li> <li>• girth galls</li> <li>• joint injuries</li> <li>• sprained ligaments or tendons</li> <li>• strained muscles</li> <li>• tack rubs</li> <li>• wounds</li> <li>• parasitic infections</li> <li>• external - lice, ticks</li> <li>• internal - worms</li> </ul> </li> </ul>

## Unit Sector(s)

Horse Breeding

## AHCHBR309A Determine nutritional requirements for horses

### Modification History

Release	TP Version	Comment
1	AHC10v6	Initial release

### Unit Descriptor

This unit involves the skills and knowledge required to interpret the nutritional requirements of horses and formulate appropriate rations to maintain suitable health.

### Application of the Unit

This unit of competency is intended to apply to any horse breeding environment and is generally applicable to most horse industry enterprises. It supports stud workers and supervisors, stud managers and others authorised to manage and maintain horse health.

In addition to legal and ethical responsibilities, it is a requirement that horses are handled gently and calmly. The individual is required to exhibit appropriate care for horses so that stress and discomfort is minimised.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a      Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used,

unit of competency further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the nutritional requirements for <i>different classes of horses</i>	<p>1.1 The nutritional requirements that meet the <i>individual needs of horse</i>, are identified according to <i>nutritional principles</i> and in consultation with appropriate personnel</p> <p>1.2 Rations are prepared as appropriate to the animal's condition, workload and age</p> <p>1.3 A <i>basic ration</i> is formulated for an individual horse</p> <p>1.4 Paddocked horses are provided with standing and <i>supplementary feed</i> according to their needs</p>
2. Assess feed, additives and supplements for horses	<p>2.1 Feed is selected on the basis of quality, nutritional and economic value, according to organisational policies and procedures</p> <p>2.2 Supplements and feed additives for specific animals are assessed on the basis of active ingredients, price and nutritional needs</p>
3. Establish and monitor individual feeding regimes for horses	<p>3.1 An <i>individual feeding regime</i> is established according to the needs of the horse</p> <p>Each animal's eating behaviour, food intake and work level is identified and documented in accordance with organisational policy and procedures</p> <p>3.3 Feed regime is monitored and adjusted when required</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

- Problem-solving skills to:
  - select and formulate rations to meet individual horse's nutritional requirements
  - assess the effects of additives and supplements on the performance of horses
  - adjust feeding regimes in response to changing horse behaviour and needs
- Planning and organising skills to:
  - prepare individual rations based on nutritional requirements

- feed horses within required time frames
- monitor feeding regimes and make appropriate modifications
- Communication skills to liaise with relevant personnel to determine nutritional requirements of horses and appropriate feed, additives and supplements
- Literacy skills to maintain and monitor feed records and follow instructions to prepare feed rations
- Numeracy skills to identify and correctly prepare and weigh up feed components and supplements.

**Required knowledge includes:**

**Knowledge of:**

- common horse behaviour, social traits and vices to enable feeding regimes to be implemented effectively
- signs of changes in horse eating behaviour to enable problems to be identified and addressed
- horse digestive system such as mouth and teeth, stomach, small and large intestines to enable identification and correction of feeding problems
- nutritional composition of common foods
- sources and importance of energy, protein, fibre, minerals and vitamins in food rations to meet horse’s nutritional requirements
- feed additives and supplements and their composition to enable potential effects to be monitored
- nutritional requirements with respect to the animals age, and needs while breeding, growing and preparation for sale
- developing and modifying the feeding regimes of a range of horses at varying stages in life cycle, breeding, growing and preparation for sale

**Evidence Guide**

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and include demonstration of candidates ability to perform the following:</p> <ul style="list-style-type: none"> <li>• applying knowledge of factors affecting the nutritional requirements of different horses in the work environment, including the effects of additives and supplements, to prepare and</li> </ul>

	<p>provide balanced diets and food for horses demonstrating an understanding of quality, type and value of feed and needs of individual horses</p> <ul style="list-style-type: none"> <li>• completing tasks within nominated time frames and applies safe work practices when determining nutritional requirements of horses</li> <li>• applying effective contingency management techniques to make adjustments to feeding regimes in response to changing conditions, such as signs of problem eating displayed by individual horses</li> <li>• documenting and maintaining feed records and adjusting in response to changing requirements</li> </ul>
Context of and specific resources for assessment	<p>Assessment must include observation of carrying out and monitoring feeding regimes on individual horses on multiple occasions to demonstrate competency and consistency of performance.</p> <p>Assessment must also ensure access to:</p> <ul style="list-style-type: none"> <li>• a variety of horses in various stages of preparation including paddocked horses</li> <li>• information about the properties of additives and supplements</li> <li>• appropriate feed, additives and supplements and feeding equipment</li> <li>• organisational policies and procedures in relation to feeding horses</li> <li>• appropriate personnel</li> </ul>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of interaction with horses during assessment of nutritional needs, and implementation and monitoring of feeding regime</li> <li>• oral and or written questioning to assess knowledge of factors affecting the nutritional requirements of a range of horses</li> <li>• portfolio of feeding records</li> <li>• third-party reports from a supervisor detailing performance</li> </ul>

## Range Statement

The range statement relates to the Unit of Competency as a whole.	
<i>Individual needs of horses</i> may include:	<ul style="list-style-type: none"> <li>• work requirements</li> <li>• individual taste</li> <li>• behaviour</li> <li>• condition</li> <li>• age</li> <li>• environment</li> <li>• workload</li> <li>• stage of training</li> </ul>
<i>nutritional principles</i> may include:	<ul style="list-style-type: none"> <li>• nutrients:             <ul style="list-style-type: none"> <li>• protein</li> <li>• fat</li> <li>• trace elements</li> <li>• fibre</li> <li>• minerals</li> <li>• energy</li> <li>• grain and roughage balance</li> </ul> </li> </ul>
<i>Basic rations</i> may include:	<ul style="list-style-type: none"> <li>• local varieties or species of grass or pasture, hays and fodders</li> <li>• pre-packaged food or bulk base food</li> </ul>
<i>Supplementary feed</i> may include:	<ul style="list-style-type: none"> <li>• vitamins</li> <li>• oils</li> <li>• calcium</li> <li>• electrolytes</li> <li>• potassium citrate</li> <li>• iron</li> <li>• hoof hardener</li> <li>• molasses</li> <li>• mineral salt lick</li> <li>• herbal remedies</li> </ul>
<i>Individual feeding regimes</i> may include:	<ul style="list-style-type: none"> <li>• size</li> <li>• time and frequency</li> <li>• age effects</li> <li>• gender effects</li> <li>• level of work</li> <li>• individual taste</li> <li>• location of work and feeding</li> <li>• normal habitat</li> <li>• metabolism</li> </ul>

	<ul style="list-style-type: none"><li>• time of year and available natural feeds</li></ul>
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## Unit Sector(s)

Horse Breeding



## AHCHBR401A Carry out stud stable management duties

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers procedures involved with carrying out stud stable management duties and defines the standard required to: complete appropriate forms and records; manage the nomination of horses for sale and exhibition; maintain operational and breeding records; supervise financial and business management affairs.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to horse stud staff who nominate horses for sale or exhibition, complete and forward required pedigrees, transfer forms and stud records for the property and other administrative matters.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Gather and manage information for managing the stable	<p>1.1. Work to be undertaken is interpreted from work program where necessary, and confirmed with management.</p> <p>1.2. Documents within the organisation that detail the requirements of the production program are identified and obtained.</p> <p>1.3. Record keeping systems in place within the stud are maintained and managed to ensure sound records may be accessed at any time.</p> <p>1.4. Discussions are held with operational personnel and immediate management to discuss the requirements of them in relation to record keeping and horse identification.</p>
2. Nominate horses for sales or exhibition	<p>2.1. Appropriate entry forms are obtained, completed and submitted for the specified activity.</p> <p>2.2. Horses are nominated manually or electronically through established systems and according to organisational procedures.</p> <p>2.3. Entry fees are paid up prior to the required nomination time.</p>
3. Apply relevant requirements	<p>3.1. Required pedigrees and histories are obtained from, or supplied to, the controlling agents.</p> <p>3.2. Horse transfer/ registration forms are completed and forwarded to the relevant controlling body.</p> <p>3.3. While working around the stud, all OHS procedures and practices are used to minimise risk.</p>
4. Maintain stud record	<p>4.1. Mares or horses arriving at stud are identified in line</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>with established stud protocols.</p> <p>4.2. Breeding and operational records are kept accurately either manually or electronically.</p> <p>4.3. Financial records of both receipts and expenditure are entered in the designated stud or property records.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- meet the needs of breed societies and stud book keepers for information, records and registrations
- collate information and report accurately on financial matters
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs, and material Safety Data Sheets
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- requirements and procedures laid down by the relevant breed societies or the keeper of the relevant stud book
- the nature of actual stud business in which the individual works, and some understanding of the established processes and protocols
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- appropriate legislative requirements, manufacturers' instructions and enterprise procedures/instructions
- relevant State/Territory legislation, regulations and codes of practice with regard to

**REQUIRED SKILLS AND KNOWLEDGE**

workplace Occupational Health and Safety (OHS), and the use and control of machinery and equipment.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- complete appropriate forms and records
- manage the nomination of horses for sale and exhibition
- maintain operational and breeding records
- supervise financial and business management affairs.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Management duties may include:

- the range of recording and administrative functions for horse studs for any breed, or breeding registered horses for any purpose.

### Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCHBR402A Supervise raising young horses

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising raising young horses and defines the standard required to: handle foals from birth to yearlings; conduct detailed staff briefings with regard to tasks and safety issues; supervise the raising of young horses; recognise abnormal behavioural signs and signs of abnormal development; carry out foal conformation corrective action; monitor the health and well-being of foals, weanlings and yearlings; maintain accurate data records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to horse handlers and stud workers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor foal development	<p>1.1.Regular observations are taken to assess foal health and development according to the requirements of the organisation.</p> <p>1.2.Symptoms of ill health, common diseases and developmental disorders are recognised, reported and acted upon.</p> <p>1.3.Foal health and growth rate is recorded in accordance with enterprise requirements.</p> <p>1.4.Vaccination is carried out under instruction as required according to organisation procedures or by a veterinarian.</p> <p>1.5.Occupational health and safety hazards are identified, risk assessed and suitable controls implemented.</p>
2. Assess young horse conformation and correct where possible	<p>2.1.Conformation of foal is assessed using standard conformation terminology.</p> <p>2.2.Corrective action plan is developed and implemented at foal stage to address treatable undesirable conformation.</p>
3. Meet the dietary requirements of young horses	<p>3.1.Mares and foals are monitored to ensure adequate nutrition for the mare and milk supply for the foal.</p> <p>3.2.Foals are weaned onto suitable pasture and supplemented with appropriate feeds if required.</p> <p>3.3.Feed requirements of growing horses are met, with excessive protein and mineral deficiencies being avoided.</p> <p>3.4.Feeding plans for yearlings allow growth and</p>

ELEMENT	PERFORMANCE CRITERIA
	development for sale or growing on.
4. Supervise the handling and education of young horses	4.1. Young horses are kept in paddocks and facilities that minimise the risk of injury and blemishes. 4.2. Young horses are handled from foals to be able to be led and tied up. 4.3. Young horses are provided with the social support of other young horses or foster mares to help them settle and adapt from weaning. 4.4. Weanlings and yearlings are taught to parade for sale.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- handle foals from birth to yearlings
- recognise abnormal behavioural signs and signs of abnormal development
- maintain accurate data documentation
- report on foal conformation
- carry out conformation corrective action plans
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant legislation and regulations relating to waste and environment management, and animal health



**REQUIRED SKILLS AND KNOWLEDGE**

- relevant Occupational Health and Safety (OHS) and animal welfare legislation, codes of practice and enterprise requirements
- diseases and common illnesses associated with young horses
- developmental disorders of young horses
- desirable and undesirable conformation
- strategies to address undesirable conformation or characteristics.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- handle foals from birth to yearlings
- conduct detailed staff briefings with regard to tasks and safety issues
- supervise the raising of young horses
- recognise abnormal behavioural signs and signs of abnormal development
- carry out foal conformation corrective action
- monitor the health and well-being of foals, weanlings and yearlings
- maintain accurate data records.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Horses may include:	<ul style="list-style-type: none"> <li>all types and breeds of young horses.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Horse breeding
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCHYD301A Implement a maintenance program for hydroponic systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a maintenance program for hydroponic systems and defines the standard required to: read nutrient analysis information; assist in performing nutrient measurement tests; administer nutrients to a hydroponic system as instructed; undertake hydroponic system maintenance and repairs of sheds, structures and other associated equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit includes monitoring the health of the plants, the hydroponic environment, and the nutrient solution that is vital to the success of hydroponic farming.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor plant health	<p>1.1. Workplace information is interpreted and clarified with the supervisor.</p> <p>1.2. Growth rate of plants are assessed against targets set in the production plan.</p> <p>1.3. Plants are assessed for overall health according to sound horticultural practice.</p> <p>1.4. Plant is assessed for onset of fruit according to production plan.</p>
2. Monitor the hydroponic environment	<p>2.1. Environmental parameters are monitored according to the production plan and adjustments made as required.</p> <p>2.2. Samples are collected and sent off for analysis to identify potential sources of contamination.</p> <p>2.3. Hygiene procedures are monitored and adjusted according to enterprise guidelines.</p> <p>2.4. Disposal of materials is monitored to ensure it follows enterprise guidelines, and with due consideration of the environmental implications.</p>
3. Monitor nutrient solution	<p>3.1. Ingredients of the hydroponic nutrient solution are identified.</p> <p>3.2. Samples are taken for testing and analysis.</p> <p>3.3. Results are interpreted and discussed with the supervisor.</p> <p>3.4. Nutrient solution is modified in accordance with results to ensure the correct balance of ingredients for optimum growing conditions.</p>
4. Perform routine	<p>4.1. All buildings and structures are inspected and</p>

ELEMENT	PERFORMANCE CRITERIA
maintenance checks	<p>checked for wear and tear.</p> <p>4.2. Equipment for delivering the nutrient solution is checked according to enterprise guidelines.</p> <p>4.3. Equipment controlling the atmospheric and root zone environments is checked according to enterprise guidelines.</p> <p>4.4. OHS hazards are identified, risk assessed and suitable controls implemented according to enterprise guidelines.</p>
5. Complete monitoring activities	<p>5.1. Any significant problems are reported to the manager and/or owner operator.</p> <p>5.2. All checks are recorded according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- read and interpret design and layout plans
- test and calibrate hydroponic equipment
- monitor and test environment parameters and nutrient solutions
- read and interpret test results accurately
- record all test results clearly and concisely with attention to detail
- undertake minor repairs of equipment, e.g. pumps, pipes and drippers
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- equipment used in hydroponic systems

**REQUIRED SKILLS AND KNOWLEDGE**

- properties of a nutrient solution
- testing methods for the gauging of environmental parameters
- testing methods for a hydroponic nutrient solution
- recirculated and non-recirculated systems
- media choices and their properties
- characteristics of healthy plants
- potential problems associated with a range of crops grown in a hydroponic environment
- environmental implications of the disposal of chemicals or chemical containers, and the drainage of high nutrient effluent.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- read nutrient analysis information
- assist in performing nutrient measurement tests
- administer nutrients to a hydroponic system as instructed
- undertake hydroponic system maintenance and repairs of sheds, structures and other associated equipment.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
System may include:	<ul style="list-style-type: none"> <li>hydroponic systems including equipment and nutrient solutions.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Hydroponics
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCHYD302A Install hydroponic systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing recirculating or non-recirculating hydroponic systems and defines the standard required to: prepare a site for installation of a hydroponics system according to instructions and directions; prepare materials and equipment for installation; install components and structure associated with a hydroponic system; commission system according to instructions and directions; store and maintain associated installation equipment and materials.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be under limited supervision from others, with checking only related to overall progress and is usually done within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1.Site plans and design specifications are interpreted and clarified with the supervisor.</p> <p>1.2.Underground services are identified according to site plans.</p> <p>1.3.Site is assessed to identify any potential problems.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed and suitable controls implemented.</p> <p>1.5.Environmental implications of installing the hydroponic system are identified.</p> <p>1.6.The site is cleared for installation according to enterprise guidelines.</p> <p>1.7.Equipment and materials required for installation are determined and arranged according to design and layout plans.</p>
2. Install a hydroponic system	<p>2.1.Site is prepared for the installation of drainage channels and water collection, and storage facilities according to design specifications.</p> <p>2.2.Install drainage components and water collection, and storage facilities according to design specifications.</p> <p>2.3.Hydroponic system infrastructure is assembled according to design specification.</p> <p>2.4.Hydroponic system components are installed according to design and layout plans and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>manufacturers specifications.</p> <p>2.5.Any problems associated with installation are communicated to the client and/or manager.</p>
3. Test and calibrate the system	<p>3.1.Hydroponic infrastructure and systems are checked to ensure they are in good working order and meet required specifications.</p> <p>3.2.Hydroponic equipment is calibrated to ensure readings are accurate.</p> <p>3.3.Media is installed according to enterprise guidelines.</p> <p>3.4.The hydroponic system is test run ready for the planting of the crop.</p> <p>3.5.Check list of all testing results is completed and approved by client/management.</p>
4. Complete installation operations	<p>4.1.All tools and equipment are cleaned and stored according to enterprise guidelines.</p> <p>4.2.Site is tidied and waste is removed and disposed of in a manner that minimises risk of damage to the environment.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- test and calibrate hydroponic equipment
- remove any waste material from site in an environmentally safe and sensitive manner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**REQUIRED SKILLS AND KNOWLEDGE****Required knowledge**

- recirculated and non-recirculated systems
- media choices and their properties
- legislation regarding the installation of hydroponic systems
- head pressure and flow rates
- environmental implications of the drainage of high nutrient effluents.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare a site for installation of a hydroponics system according to instructions and directions
- prepare materials and equipment for installation
- install components and structure associated with a hydroponic system
- commission system according to instructions and directions
- store and maintain associated installation equipment and materials.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
System may include:	<ul style="list-style-type: none"> <li>recirculating or non-recirculating hydroponic systems in glasshouses or shade houses.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Hydroponics
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCHYD501A Develop a plan for a hydroponic system

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of designing a hydroponic system and describes the standard required to: research the growing requirements, risks and returns of the proposed crop; survey the site for suitability and environmental impacts, and gain approvals; select or design s system and customise it for the site and purpose; develop a design plan including costings, specifications and on-site procedures and schedules.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who design systems for hydroponic production of horticultural crops.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out preliminary research	<p>1.1.Type of crop to be grown is researched based on sound marketing principles.</p> <p>1.2.The growing requirements of the crop are researched based on sound horticultural practices.</p> <p>1.3.The associated risks of growing a particular crop are established based on sound horticultural practices.</p> <p>1.4.Estimated yield and crop turnover time is calculated from historical data and research statistics.</p> <p>1.5.Quantity of the plants to be grown is determined based on a cost benefit analysis.</p>
2. Assess the suitability of a site	<p>2.1.The physical characteristics of the site are assessed.</p> <p>2.2.The proximity of the site to markets is ascertained and assessed.</p> <p>2.3.Legal requirements in relation to the site and the development of a hydroponic farm are identified.</p> <p>2.4.The environmental implications of developing a hydroponic farm on the site are identified and considered.</p>
3. Select the required system	<p>3.1.Main types of hydroponic systems are researched.</p> <p>3.2.Analysis is carried out on each type of system for the chosen crops.</p> <p>3.3.A cost/benefit analysis is carried out on each system for each type of crop required.</p> <p>3.4.The type of hydroponic system to be installed is determined.</p>
4. Design the	4.1.The water collection and storage system is selected

ELEMENT	PERFORMANCE CRITERIA
hydroponic system	<p>and documented on the plan.</p> <p>4.2.The irrigation system and components are selected according to the required volume of water and flow rate.</p> <p>4.3.The fertigation system is selected and documented.</p> <p>4.4.The dimensions of the controlled environment structure are determined following full consideration of the relevant factors.</p> <p>4.5.Environmental control system is determined and specifications documented on the plan.</p>
5. Prepare and document the design	<p>5.1.A design plan drawn to scale is developed, which can be readily interpreted and understood.</p> <p>5.2.Specifications and detailed costings are determined with the help of experts, if required.</p> <p>5.3.Detailed on-site procedures and schedules required for production are developed and documented.</p> <p>5.4.Documentation is presented to the client or management for final approval.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop a plan for a hydroponic system applies to the
- organise information derived from the research process in a written report
- draw a scaled design by hand and/or on computer
- use a range of financial analysis tools to determine viability of the system
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
abilities
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• advantages and disadvantages of the different equipment used in hydroponic systems</li> <li>• technical requirements and operating parameters of recirculated and non-recirculated systems</li> <li>• media choices, their properties and enterprise specifications</li> <li>• legislation and regulations relating to the establishment of a hydroponic system</li> <li>• an awareness of the environmental implications of the disposal of chemicals or chemical containers, and the drainage of high nutrient effluent.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• research the growing requirements, risks and returns of the proposed crop</li> <li>• survey the site for suitability and environmental impacts, and gain approvals</li> <li>• select or design a system and customise it for the site and purpose</li> <li>• develop a design plan including costings, specifications and on-site procedures and schedules.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Hydroponic systems may include:	<ul style="list-style-type: none"> <li>• recirculating such as:             <ul style="list-style-type: none"> <li>• gravity fed</li> <li>• non-recirculating systems.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Hydroponics
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCILM201A Maintain cultural places

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining cultural places as instructed by supervisors and defines the standard required to: assess the level of work required to maintain the cultural place; carry out maintenance activities in accordance with organisational and cultural requirements; report deterioration or damage to place; report incidents of breaches of legislation including vandalism.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision and may involve operating in a team environment with deference to elders.  Note: For Indigenous cultural places, the delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess maintenance work required	1.1. Works required under the plan of management and enterprise procedures are identified. 1.2. Machine, equipment and materials to carry out maintenance works are identified. 1.3. Type and amount of materials required for maintenance work are estimated.
2. Prepare for maintenance	2.1. Machine, equipment and materials to carry out maintenance works are organised. 2.2. Safety equipment and materials are prepared and assembled according to enterprise Occupational Health and Safety (OHS) policy.
3. Maintain condition of place	3.1. Maintenance work is undertaken according to work programs and according supervisor's instructions. 3.2. Presence of threats is reported to supervisor. 3.3. Evidence of deterioration and wear is reported to supervisor. 3.4. Site is made good on completion of maintenance works according to supervisor's instructions enterprise guidelines.
4. Protect cultural place	4.1. Any evidence of damage to place is reported to supervisor. 4.2. Any breach of legislation or enterprise regulations is reported to supervisor.

ELEMENT	PERFORMANCE CRITERIA
	4.3. Protective barriers and signs are maintained according to enterprise procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- assess maintenance work required
- maintain condition of place
- protect cultural places
- prepare for maintenance
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- OHS responsibilities
- common pests and diseases
- techniques of site protection
- range of maintenance works undertaken on cultural sites
- enterprise procedures relating to the reporting of deterioration or damage to place or reporting of incidents
- site recording systems used by the enterprise or community
- relevant archaeological practices and procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess the level of work required to maintain the cultural place</li> <li>• carry out maintenance activities in accordance with organisational and cultural requirements</li> <li>• report deterioration or damage to place</li> <li>• report incidents of breaches of legislation including vandalism.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Cultural places may include:	<ul style="list-style-type: none"> <li>• areas of non-indigenous activity</li> <li>• buildings and other structures</li> <li>• natural areas of indigenous cultural significance, historical events and monuments</li> <li>• areas of indigenous activity such as burial, occupation and contact sites, engravings, grinding grooves, sacred trees, rock pictures, fish traps, middens and mounds.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Indigenous land management
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCILM202A Observe and report plants and/or animals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of observing, recording and reporting on the presence of plants and/or animals against criteria provided by a supervisor or as required under legislation or regulations, and defines the standard required to: observe and accurately identify species of animals in a natural area; observe and accurately identify species of plants in a natural area; record and report observations in required format; carry out a survey of plants and animals in a natural area causing minimal disruption to the environment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking. Competency involves the application of knowledge and skills to a range of observation and reporting situations usually within established workplace routines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and organise observations	<p>1.1. Defined process for observation is prepared and agreed by supervisor.</p> <p>1.2. Equipment for observation is obtained according to enterprise procedures.</p> <p>1.3. Requirements under legislation, protection agreements and enterprise procedures for species are noted.</p>
2. Collect information and record	<p>2.1. Plants and animals and their presence are identified orally or from field guides to enterprise guidelines.</p> <p>2.2. Plants and animals and/or samples are collected as required under enterprise guidelines.</p> <p>2.3. Protection and quarantine requirements under legislation, protection agreements and enterprise procedures for species are observed.</p> <p>2.4. Observation activities minimise degradation and disturbance and comply with legislation and Occupational Health and Safety (OHS) requirements.</p>
3. Report data	<p>3.1. Information on observed plants and animals are recorded and organised according to enterprise guidelines.</p> <p>3.2. Information is communicated to supervisors according to enterprise guidelines.</p> <p>3.3. Records are compatible with enterprise recording and database arrangements.</p>



ELEMENT	PERFORMANCE CRITERIA
	3.4. Occurrence of an organism is plotted and described using maps and grid references.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan and organise observations
- recognise fauna and flora
- collect information and record
- interpret data
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- criteria used to group species
- common and scientific names of plants and animals
- biological species occurring in the study area
- the importance, value or potential impact of the species in a designated area
- rare and endangered species
- undesirable plants (weeds) and animals
- maps and grid references.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• observe and accurately identify species of animals in a natural area</li> <li>• observe and accurately identify species of plants in a natural area</li> <li>• record and report observations in required format</li> <li>• carry out a survey of plants and animals in a natural area causing minimal disruption to the environment.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plant species may include:	<ul style="list-style-type: none"> <li>• species covering listed threatened species</li> <li>• listed notifiable or noxious weeds</li> <li>• plants not previously seen at regularly visited site</li> <li>• plants to be reported under enterprise or industry guidelines.</li> </ul>
Animal species may include:	<ul style="list-style-type: none"> <li>• listed threatened species</li> <li>• listed notifiable species</li> <li>• animals not previously seen at regularly visited site</li> <li>• invertebrates</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• aquatic organisms</li> <li>• animals to be reported under enterprise or industry guidelines.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Indigenous land management
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCILM203A Record information about country

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of recording information and knowledge on country from both an Indigenous and non-Indigenous perspective and defines the standard required to: record details of plant and animal species; collate information on indigenous culture and history for country; document environmental changes and trends; collect and use information according to community guidelines and protocols.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working on an individual basis, and also includes the ability to work within a hierarchy of management and with others in a culturally appropriate way. Note: Delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collect information	<p>1.1. Boundaries and extent of country are determined according to community guidelines and protocols.</p> <p>1.2. Plant and animal species are identified by local or common name.</p> <p>1.3. Special features and sites of country are identified.</p> <p>1.4. Knowledge on relationships of plants and animals is investigated from Indigenous land and sea management and cultural perspectives.</p> <p>1.5. Information on relevant management practices for country is investigated.</p> <p>1.6. History of dispossession is acquired from community sources and available literature.</p> <p>1.7. Simple food chains relevant to country are defined.</p>
2. Review changes	<p>2.1. Environmental changes since dispossession and the impacts of these changes on plant and animal communities are identified.</p> <p>2.2. Environmental trends and their potential impacts on country are documented.</p> <p>2.3. Land and sea management practices that address environmental change are recorded.</p>
3. Document information	<p>3.1. Information about country is recorded according to community guidelines and protocols.</p> <p>3.2. Access to information is provided to those who are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>authorised according to community guidelines and protocols.</p> <p>3.3. Ownership of information is appropriately recognised and recorded.</p> <p>3.4. Conditions and parameters defining use of information is clearly documented.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collect information
- document information
- operate according to community guidelines and protocols
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- designated areas and features of country
- local and/or common names for plants and animals
- basic ecological concepts
- protocols and customs relating to disclosure of knowledge about country
- dispossession and land rights legislation
- OHS and environment legislative and enterprise requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• record details of plant and animal species</li> <li>• collate information on Indigenous culture and history for country</li> <li>• document environmental changes and trends</li> <li>• collect and use information according to community guidelines and protocols.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Information about country may include:	<ul style="list-style-type: none"> <li>• information from both an indigenous and non indigenous perspective.</li> </ul>
Country may include:	<ul style="list-style-type: none"> <li>• an area of land and/or water with cultural significance to a group.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Indigenous land management
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCILM301A Propose appropriate uses of traditional customs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of the use of traditional customs by indigenous people in caring for country and defines required to: identify the role of traditional customs in indigenous communities; outline importance of native title rights and interests recognised under non-indigenous law; propose appropriate applications of traditional customs.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be under limited supervision with checking related to overall progress. Responsibility for the work of others may be involved. Some discretion is required in working within community protocols and guidelines.  Note: Delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify the role of traditional customs in indigenous communities	<p>1.1. Specific impacts of traditional customs on a local community are investigated.</p> <p>1.2. The impact of role delineation of indigenous men and women on land management practices is defined according to community protocols.</p> <p>1.3. Current customs are compared with those of pre-European settlement to determine any impacts on the management of country.</p>
2. Outline impact of native title rights and interests recognised under non-Indigenous law	<p>2.1. Implications of the potential conflict of interest between people exercising their native title rights, which are in contravention of non-indigenous law, are investigated.</p> <p>2.2. Instances where people exercising their native title rights are contained within non-indigenous law are outlined.</p> <p>2.3. The limitations placed on the exercise of native title rights and interests by other valid grants of title under non-indigenous law, and how these different rights and interests in land might coexist are determined.</p> <p>2.4. The implications of the potential conflict of interest between the exercise of native title rights and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>interests and the rights of others with interests in land are assessed.</p> <p>2.5. Ramifications of the outcomes of practicing traditional customs and native title are discussed.</p>
3. Propose appropriate applications of traditional customs	<p>3.1. Situations involving traditional customs or native title which result in ethical implications in carrying out responsibilities are identified.</p> <p>3.2. The use of traditional customs as an alternative to or in conjunction with mainstream legal and management systems is outlined.</p> <p>3.3. Advice for legal representatives regarding the integration of traditional customs and mainstream legal and management systems is outlined.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- discuss matters relating to traditional customs with the appropriate people according to community protocols
- appropriately discuss gender roles in ways that do not offend any appropriate people
- analyse general situations in regard to interaction of mainstream law and management with traditional customs
- speak to persons with significant professional training in law
- carry out basic investigative research on areas of use of traditional customs
- observation of protocols for entry to traditional lands
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- cultural customs and heritage

**REQUIRED SKILLS AND KNOWLEDGE**

- relevant state land and resources acts/legislation
- legal representative's roles.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify the role of traditional customs in indigenous communities
- outline impact of native title rights and interests recognised under non-indigenous law
- propose appropriate applications of traditional customs.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Areas of traditional customs may include:

- indigenous rights to natural and cultural resources and their uses.
- indigenous understandings about country for

**RANGE STATEMENT**

	<p>certain groups.</p> <ul style="list-style-type: none"> <li>• indigenous means for dealing with abuse of rights and understandings about country.</li> <li>• indigenous means for dealing with enforcement of the rights and understandings about country.</li> <li>• indigenous means for solving problems or issues associated with use of natural and cultural resources on country.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Indigenous land management
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCILM302A Provide appropriate information on cultural knowledge

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintenance of cultural knowledge by indigenous people and if and how this knowledge may be provided to others and defines the standard required to: investigate cultural knowledge in accordance with cultural protocols; investigate relationships between land features, seasons and spirituality; identify plants, animals and resources used for medicine and food; provide information on cultural knowledge in accordance with cultural protocols.
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### Application of the Unit

<b>Application of the unit</b>	This unit is normally carried out within own area of responsibility. It requires some judgement and discretion, and would be carried out under minimal supervision within enterprise guidelines. Note: Delivery and assessment against this competency standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Investigate cultural knowledge	<p>1.1.Cultural knowledge is accessed through reference to an appropriate person according to community guidelines and cultural protocols.</p> <p>1.2.Key principles, values and practices of cultural knowledge are determined and recorded according to community protocols.</p> <p>1.3.The relationship between cultural knowledge and management of country is defined according to community protocols.</p> <p>1.4.Ownership of and parameters for transferring cultural knowledge are established according to community protocols.</p>
2. Identify locations and patterns of plants and animals in a specific area	<p>2.1.Relationships between land, rivers, lakes and sea management practices and seasonal cycles are identified and documented in an accessible record.</p> <p>2.2.Common and indigenous names are used to describe plants and animal according to community guidelines and cultural protocols.</p> <p>2.3.Relationships between spirituality and people to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>complement the accessible record are noted.</p> <p>2.4. Appropriate people are used to confirm findings.</p>
<p>3. Identify plants, animals and resources used for medicine and food</p>	<p>3.1. Bush foods and medicines for a specific area are identified and recorded.</p> <p>3.2. Common and indigenous names are used to describe plants and animal according to community guidelines and cultural protocols.</p> <p>3.3. Plant and animal samples are collected for future identification.</p> <p>3.4. Issues in relation to indigenous access and use are defined and documented.</p>
<p>4. Relate information on cultural knowledge to others</p>	<p>4.1. Information on cultural knowledge is provided to those who are authorised to possess that knowledge according to community guidelines and cultural protocols.</p> <p>4.2. Information on cultural knowledge is related in an appropriate format and medium according to community guidelines and cultural protocols.</p> <p>4.3. Requests for disclosure of information on cultural heritage that infringes intellectual property rights of a group or community are referred to appropriate persons according to community guidelines and cultural protocols.</p> <p>4.4. Requests for disclosure of information on aspects of cultural knowledge by unauthorised individuals are appropriately declined.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- investigate cultural knowledge
- identify locations and patterns of plants and animals in a specific area
- identify plants, animals and resources used for medicine and food
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible



**REQUIRED SKILLS AND KNOWLEDGE**

information collected and select and apply procedures for a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- cultural knowledge about plant and animals relating to a particular community, group or region
- common and indigenous names for plants and animals
- cultural protocols relevant to region, community and scope and type of cultural knowledge
- role and rights of indigenous peoples in maintaining and controlling cultural knowledge
- individuals who are authorised to possess cultural knowledge
- intellectual and cultural property rights.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- investigate cultural knowledge in accordance with cultural protocols
- investigate relationships between land features, seasons and spirituality
- identify plants, animals and resources used for medicine and food

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>provide information on cultural knowledge in accordance with cultural protocols.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Cultural knowledge may include:	<ul style="list-style-type: none"> <li>indigenous land, rivers, lakes and sea resources and their uses, and the relationships between plants, animals and community.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Indigenous land management
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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# AHCILM305A Work with an Aboriginal Community or organisation

## Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release. Supersedes and is not equivalent to AHCILM303A

## Unit Descriptor

This unit covers the process of operating in an Aboriginal Community or organisation while demonstrating an awareness of Aboriginal identity, history and spirituality.

## Application of the Unit

This unit is normally carried out within own area of responsibility. It requires some judgement and discretion, and would be carried out under minimal supervision within enterprise guidelines. The unit applies to participants working in and with Aboriginal communities and organisations and is also applicable to the work of repatriation workers and anthropologists.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define Australian history from an Aboriginal cultural and Community perspective	<p>1.1 Major characteristics of the social structures of Aboriginal societies are determined</p> <p>1.2 Impacts on Aboriginal social structures following European colonisation are identified</p> <p>1.3 Examples of resistance to European colonisation are recorded</p> <p>1.4 Positive and negative effects of European colonisation are documented</p> <p>1.5 Various approaches and resources which can be employed in order to identify cultural authorities for specific Country and Community are determined</p> <p>1.6 Contemporary Aboriginal social, economic and political trends are researched in the context of Community life</p>
2. Summarise actions of governments to deal with the effects of European colonisation on Aboriginal people	<p>2.1 Major legislation and/or policy directions of governments that affect Aboriginal people are identified</p> <p>2.2 Legal parameters relating to Aboriginal land ownership, acquisition and management are defined</p> <p>2.3 Impacts of laws and/or policies on social structures of Aboriginal peoples are documented</p>
3. Outline strategies for working with Aboriginal organisations and people	<p>3.1 Differences in relation to working as an Aboriginal person (or non-Aboriginal person) within Aboriginal and non-Aboriginal communities and organisations are acknowledged and considered</p> <p>3.2 Aboriginal ways of working are identified</p> <p>3.3 Potential conflicts are recognised</p> <p>3.4 <i>Strategies</i> for minimisation of conflicts are identified and implemented</p>
4. Operate effectively in a job role working with an Aboriginal Community or organisation	<p>4.1 <i>Aboriginal cultural protocols</i> are observed according to Community and/or organisational guidelines and procedures</p> <p>4.2 Community traditions and customs are respected according to workplace policies and procedures</p> <p>4.3 Productive relationships are built and maintained within the Aboriginal Community and organisation</p> <p>4.4 Mutual respect is created and given as evidenced by effective engagement and shared outcomes with the Community and/or organisation over time</p>

**ELEMENT****PERFORMANCE CRITERIA**

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4.5 Feedback on personal *work* performance, interpersonal ways of relating and adherence to Aboriginal cultural protocols is valued and obtained

## Required Skills and Knowledge

### Required skills include:

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**Ability to:**

- gather information about Aboriginal and non-Aboriginal social structures
- summarise actions of governments to deal with the effects of European colonisation
- deal with personal negative responses/reactions in a positive way
- implement strategies that support the concept/implementation of Aboriginal management (principles)
- understand and engage effectively in mediation and conflict resolution
- operate effectively within an Aboriginal Community or organisational job role
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- apply sustainable environmental practices
- apply workplace health and safety requirements

### Required knowledge includes:

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**Knowledge of:**

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- Aboriginal communities and social structures
- Aboriginal cultural customs and heritage
- history of British society and dispossession in Australia
- Aboriginal history and impact of European colonisation
- legislation and its impact on Aboriginal communities
- Cultural and Heritage Legislation or relevant NPWS legislation

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment</p>
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Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</b>	<p>The delivery and assessment of training of this unit must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and Custodians of that specific Country.</p> <p>Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• work within and between Aboriginal and non-Aboriginal social structures</li> <li>• apply an understanding of the perceptions and impacts of government action to deal with the effects of European colonisation within Aboriginal communities</li> <li>• demonstrate empathy and respect in working with Aboriginal communities and organisations</li> <li>• build effective and productive working relationships with Aboriginal people and communities</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• an Aboriginal Community, educational or workplace setting</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess competency in following Aboriginal cultural protocols. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate relating to and engaging Aboriginal persons and Aboriginal Community</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of work conducted in Aboriginal Community and/or organisation</li> <li>• evaluation of the outcomes of work conducted in</li> </ul>

	<p>Aboriginal Community and/or organisation</p> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <p>AHCILM306A Follow Aboriginal cultural protocols</p> <p>AHCILM404A Record and document Community history</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Strategies</i></b> may include:	<ul style="list-style-type: none"> <li>• ideas for ‘breaking the ice’ at first meetings</li> <li>• ways to demonstrate respect for cultural authority</li> <li>• ways of educating oneself about Aboriginal cultural protocols</li> <li>• discussing ideas with bi-culturally competent others</li> <li>• undertaking Aboriginal language courses</li> <li>• spending time in an Aboriginal Community</li> </ul>
<b><i>Aboriginal cultural protocols</i></b> may include:	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy,</li> </ul>



	<p>religion, spirituality, art, environment, values, beliefs and lore/law.</p> <ul style="list-style-type: none"> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• ways in which consultations should be conducted</li> </ul>
<b>Work</b> may include:	<ul style="list-style-type: none"> <li>• a variety of forms of interaction with Aboriginal people and Community</li> <li>• presentations</li> <li>• consultations</li> <li>• research</li> <li>• mentoring</li> <li>• consulting</li> <li>• recording</li> <li>• sharing knowledge</li> <li>• writing reports</li> </ul>

## Unit Sector(s)

Indigenous land management

## AHCILM306A Follow Aboriginal cultural protocols

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release. Supersedes and is not equivalent to AHCILM304A

### Unit Descriptor

This unit provides an awareness of the protocols involved in Aboriginal culture, including the need to identify the appropriate person/s when approaching a Community and the cultural and social protocols associated with that task.

### Application of the Unit

This unit applies to following cultural protocols and details the specific cultural, gender and kinship sensitivities of working in Aboriginal communities and on Country with diverse cultural requirements. The unit applies to working with lore/law men and women either autonomously or under the supervision and cultural authority of Traditional Owner/s and/or Elder/s for specific Country. This unit is also applicable to the work of repatriation workers and anthropologists. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify Aboriginal beliefs and associated cultural protocols for <i>different Country</i>	1.1 The importance of <i>Aboriginal beliefs</i> and the relationship of these beliefs with cultural landscapes are identified and documented 1.2 Gender roles are recognised and respected 1.3 Language groups and kinship networks within specific Country that inform the basis of social relationships and Community roles are respected 1.4 <i>Cultural taboos</i> , factions and avoidance relationships are recognised and respected 1.5 The rights of individuals within communities and on Country to hold specific knowledge and ceremony are acknowledged 1.6 The rights of individuals within communities and on Country to hold responsibility for Aboriginal-sites and the cultural rules associated with sharing that knowledge are acknowledged 1.7 The inherent diversity that exists within cultures and communities is respected and affirmed
2. Identify Aboriginal cultural authorities for specific Country in culturally appropriate ways	2.1 Various approaches and resources that can be employed in order to identify cultural authorities for specific Country are applied 2.2 Difficulties in identifying cultural authorities in various states and territories is researched 2.3 The appropriate cultural authorities are identified and consulted 2.4 The identification by <i>cultural authorities</i> of appropriate persons within communities who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places is applied 2.5 The provision of advice by cultural authorities is respected; with advice and decisions by cultural authorities on

ELEMENT	PERFORMANCE CRITERIA
	<p>identifying appropriate persons for consultation implemented</p> <p>2.6 Rights and responsibilities associated with cultural knowledge, story, song, site, and ceremony are respected and implemented</p> <p>2.7 Cultural knowledge holders inform the decision-making process to determine the cultural significance of objects and/or places</p> <p>2.8 Traditional knowledge and practices in managing Country and environment are acknowledged and respected</p>
<p>3. Relate <i>Aboriginal cultural protocols</i> to Community consultation</p>	<p>3.1 Key protocols required for Aboriginal Community consultation are identified and recorded</p> <p>3.2 Determination of Aboriginal people as the primary source of cultural information is acknowledged</p> <p>3.3 Decision making by Aboriginal cultural authorities for when consultation is required, the selection of participants, and ways in which consultations are conducted is determined</p> <p>3.4 Communication approaches that place Aboriginal cultural protocols and values as a principal concern are implemented</p> <p>3.5 Participation in Community consultation following appropriate cultural protocols for that Country and Community is undertaken</p>
<p>4. Recognise and administer Aboriginal ownership and intellectual property rights</p>	<p>4.1 Ownership rights and intellectual property rights of Aboriginal cultural information and material is established</p> <p>4.2 Rights to control cultural heritage by Aboriginal people as custodians of Aboriginal culture are recognised</p> <p>4.3 Access restrictions to cultural knowledge, information and material are applied</p> <p>4.4 Confidentiality measures for recording secret, sacred materials are followed</p> <p>4.5 The ownership of cultural knowledge, information and material, is determined and administered</p> <p>4.6 Any identified infringement of copyright is reported to appropriate personnel</p>
<p>5. Access, transfer and use cultural information and material</p>	<p>5.1 Permissions from cultural authorities, relevant individuals and organisations for access and use of Aboriginal cultural information and material are sought and may be obtained or denied</p> <p>5.2 Parameters for processes of transfer of cultural knowledge are established and implemented</p> <p>5.3 Adherence to cultural restrictions on Aboriginal cultural information and Aboriginal material is observed</p> <p>5.4 Copyright and licensing issues related to access and use of</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	Aboriginal cultural material and cultural information are acknowledged and observed
	5.5 Aboriginal cultural requirements for communications about, and display, access and handling of, Aboriginal cultural information and material are followed
	5.6 The implications of consent for accessing, transferring and using cultural information and materials are known and agreed
6. Use appropriate personal and social protocols	6.1 Appropriate use of personal protocols of addressing persons and greetings, personal contact, and gestures is observed
	6.2 Personal presentation and conduct is guided by respect for local and Community traditions
	6.3 Personal communication styles for language, non-verbal communication, discussion, meaning, questioning, eye contact and silence reflect the customs and idioms of the local Community
	6.4 A flexible attitude is used to address situations of cultural diversity and cross-cultural differences

## Required Skills and Knowledge

### Required skills include:

#### Ability to:

- respect cultural diversity and sensitivity to social, cultural values and beliefs
- use technology to access written, oral or visual source material
- carry out library and internet research
- comprehend written, oral or visual source material
- interpret written, oral or visual source material
- apply listening skills
- apply oral communication skills
- relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- exercise discretion and confidentiality

### Required knowledge includes:

#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared.
- Cultural and Heritage Legislation or relevant NPWS legislation
- sustainable environmental practices
- workplace health and safety requirements

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and participation with Traditional Owners and/or Elders and custodians of that specific Country.

In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the

	<p>delivery and assessment of <i>Cultural Units</i> to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.</p> <p>Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• identify and seek participation of appropriate cultural authorities for a Community, place or for a site</li> <li>• identify cultural information, material and cultural expression appropriate to be shared</li> <li>• describe elements of cultural diversity within Aboriginal communities</li> <li>• describe natural resources and how they relate to cultural protocol, spirituality, art, environment, values, beliefs and lore/law</li> <li>• describe the cultural rights and responsibilities when using Community knowledge, information and material</li> <li>• identify groups to be consulted in relation to owners/custodians of cultural and Community knowledge, information and/or material</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> </ul>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in following Aboriginal cultural protocols. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate relating to and engaging Aboriginal persons and Aboriginal Community</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in Ceremony and/or Sites work related to the knowledge and skills outlined in this Unit</li> </ul>

	Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• AHCILM306A Follow Aboriginal cultural protocols</li> <li>• AHCASW308A Apply cultural significance to Aboriginal-sites and landscapes</li> <li>• AHCILM404A Record and document Community history</li> </ul> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Aboriginal beliefs*** may refer to:

- connection to Country
- creation events
- structure of Community such as lore/law men and women, elders and custodians
- practicality and purpose
- appropriate behaviour, protocols and restrictions
- spiritual value of knowledge and stories
- communal ownership of some knowledge and material
- intergenerational ownership of some knowledge and material
- oral tradition of passing on knowledge and responsibilities
- roles as custodians of specified knowledge, ceremony, designs, information



	<ul style="list-style-type: none"> <li>• kinship and relationships</li> <li>• storytelling</li> </ul>
<i>Different Country</i> may include:	<ul style="list-style-type: none"> <li>• adjoining local Aboriginal Land Council boundaries</li> <li>• remote Aboriginal communities in the same or different States and Territories</li> <li>• different spaces within the same geographical area</li> </ul>
<i>Cultural taboos</i> may include:	<ul style="list-style-type: none"> <li>• anything that is offensive to the group or person in question</li> <li>• naming deceased persons</li> <li>• speaking of persons and/or places and/or practices that are not to be spoken of in public</li> <li>• cross gender practices and/or proximity in some situations</li> </ul>
<i>Cultural authorities</i> may include:	<p>Cultural authority refers to the most appropriate senior person/s that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder, Aboriginal Land Council, etc.</p> <p>A ceremonial/cultural manager in terms of Aboriginal customary law means someone who does the work either under the direct supervision of the Aboriginal Owner or does the work that is authorised by the Owner. In a ceremony for example, the ceremonial manager(s) may provide the food and do the performance (work). Traditional roles and responsibilities swap over depending on a person's status in any given situation – ie – whose land / estate one is on for business.</p>
<i>Aboriginal cultural protocols</i> may include:	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law.</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> </ul>

	<ul style="list-style-type: none"><li>• issues of ownership</li><li>• ownership of intellectual property</li><li>• copyright and copyright infringement</li><li>• acknowledging participation and ownership</li><li>• communicating about cultural material</li><li>• accessing, displaying and handling cultural material</li><li>• identifying appropriate people to be consulted</li><li>• occasions when consultation is required</li><li>• ways in which consultations should be conducted</li></ul>
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## Unit Sector(s)

Indigenous land management

# AHCILM307A Implement Aboriginal cultural burning practices

## Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release

## Unit Descriptor

This unit covers the process of using traditional Aboriginal practices in controlled burning on Country to manage natural and cultural resources.

## Application of the Unit

This unit applies to Aboriginal-sites workers and Land Managers who burn on Country as part of their job role. The unit involves and requires a high level of awareness and experience with Aboriginal culture and communities and the need to observe Aboriginal cultural protocols. It is expected that this work will be undertaken as part of a team working under supervision in most cases. Cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit. This applies when restrictions are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will have to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

## Employability Skills Information

This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan burn activities	1.1 Working relationships that will assist in the planning and implementation of traditional Aboriginal cultural burning on Country are developed with <i>stakeholders</i> 1.2 Appropriate <i>cultural authorities</i> are identified and consulted and approval to be on Country obtained 1.3 Cultural knowledge is accessed through the appropriate knowledge holder and/or cultural manager 1.4 A comprehensive <i>burning plan</i> and schedule for the <i>total land mass</i> is developed based on traditional cultural knowledge of seasonal conditions, Aboriginal ceremonial requirements, environmental sustainability considerations and safety concerns
2. Protect life, property and conserve fauna and flora species in burn area	2.1 Burn is implemented according to Aboriginal cultural burning techniques and consistent with the burn plan and schedule 2.2 Visitors are excluded from target areas, entertainment areas and areas possibly affected by smoke or risk from escaping fire 2.3 Field workers are instructed in <i>ignition techniques and patterns</i> , fire control and safety procedures to conduct the burn 2.4 Neighbours and agencies are advised of the intention to burn to ensure safety and maintain client relations 2.5 <i>Aboriginal sites</i> , assets and entertainment areas are protected according to <i>Aboriginal cultural protocols</i> and fire industry practices 2.6 If required, <i>fire breaks</i> are applied to the area to maintain control of the fire and <i>burn intensity</i> 2.7 Fauna in danger in the burn area is removed prior to the controlled cultural burn where possible 2.8 Flora is assessed for impact on fire-sensitive communities and species

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
3. Burn defined areas	<p>3.1 Weather forecasts and current <i>weather conditions</i> are assessed to determine appropriate conditions and timing for burn</p> <p>3.2 Fire is applied to targeted areas according to Aboriginal cultural burning techniques, traditional frequency and organisation requirements</p> <p>3.3 Targeted areas defined by <i>burn specification or limiting factors</i> are defined</p> <p>3.4 Area is checked to ensure all sections have received required burn in accordance with the burning plan</p> <p>3.5 Assessment of burn is completed and recorded</p> <p>3.6 Area burnt is <i>monitored</i> to organisation procedures to avoid wildfire outbreaks</p> <p>3.7 Seasonal conditions and life cycles of flora and fauna are assessed for the cessation of fire practices</p>

## Required Skills and Knowledge

### Required skills include:

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#### Ability to:

- define the location and extent of fire application
- evaluate the cultural and economic benefits of fire management practices
- assess the quality of fire burns
- respect cultural diversity and sensitivity to social, cultural and professional values and beliefs
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

### Required knowledge includes:

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#### Knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- traditional Aboriginal rationale and techniques for cultural burning
- the life cycles of flora and fauna of forests/plantations and effect of burning operations
- required intensity and appropriate frequency of fire
- sequence, location and pattern of recent and historical fire burns
- the dependence of the terrestrial ecosystems on fire
- selection of existing and construction of additional fire breaks
- Aboriginal ceremonial requirements for fire practices
- seasonal cycle of weather patterns
- effects of fire on human physiology
- emergency fire services
- radio communication
- organisational and enterprise policies and procedures for conservation of places of cultural significance
- Cultural and Heritage Legislation or relevant NPWS legislation
- sustainable environmental practices
- safety procedures for conducting fire operations
- workplace health and safety requirements

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and participation with Traditional Owners and/or Elders and custodians of that specific Country and follow any relevant Parks/Reserves policies and plan of management guidelines and culture and heritage legislation.</p> <p>In accordance with Aboriginal cultural protocols, cultural knowledge copyright considerations and Aboriginal lore/law restrictions, it is essential that this requirement be respected and implemented in the delivery and assessment of <i>Cultural Units</i> to guarantee cultural authenticity and quality control around the delivery of training and assessment for Aboriginal-sites workers.</p> <p>Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• identify appropriate cultural authorities for a Community, place or for a Site</li> <li>• develop working relationships with Aboriginal and non-Aboriginal stakeholders</li> <li>• apply traditional Aboriginal cultural burning techniques</li> <li>• control burning operations</li> <li>• protect life, property and conserve fauna and flora species during burning</li> <li>• achieve the correct intensity of burn</li> <li>• adhere to organisational safety and environmental protection policies and procedures</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• on Country, a Community, educational or workplace setting including Aboriginal cultural keeping places</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> </ul>

	<ul style="list-style-type: none"> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> <li>• organisational safety and environmental policies and procedures</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess competency in protecting Aboriginal places of cultural significance. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate on Country participating in all aspects of a cultural burning operation</li> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <p>AHCILM306A Follow Aboriginal cultural protocols</p> <p>AHCASW308A Apply cultural significance to Aboriginal sites and landscapes</p> <p>Assessment for this unit should comprise a combination of theory and practical application. Both aspects of assessment are best conducted on Country for this unit.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>Stakeholders</b> may include:	<ul style="list-style-type: none"> <li>• Aboriginal Land Councils</li> <li>• Indigenous Ranger groups</li> <li>• Traditional Owners and Cultural managers</li> </ul>
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	<ul style="list-style-type: none"> <li>• Aboriginal communities and Clans</li> <li>• museums</li> <li>• Culture and Heritage government departments and representatives</li> <li>• National Parks personnel</li> <li>• sites workers</li> <li>• archaeologists</li> <li>• anthropologists</li> </ul>
<p><b><i>Cultural authorities</i></b> may include:</p>	<p>Cultural authority refers to the most appropriate senior person/s that is able to speak for particular Country, cultural objects, ceremony and/or materials in a specific place. A cultural authority could be a Traditional Owner, a Native Title Claimant, Aboriginal Culture and Heritage Body, Elder, Aboriginal Land Council, etc.</p> <p>A ceremonial/cultural manager in terms of Aboriginal customary law means someone who does the work either under the direct supervision of the Aboriginal Owner or does the work that is authorised by the Owner. In a ceremony for example, the ceremonial manager(s) may provide the food and do the performance (work). Traditional roles and responsibilities swap over depending on a person's status in any given situation – ie – whose land / estate one is on for business.</p>
<p><b><i>Burning plan</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• appropriate frequency of fire</li> <li>• sequence, locations and pattern of recent and historical fire burns</li> <li>• schedules and maps of burn areas</li> <li>• seasonal cycle of weather patterns</li> <li>• timing of ignition of burns and cessation of fire practices</li> <li>• defining the location and extent of fire application</li> <li>• selection of existing and construction of additional fire breaks</li> <li>• familiarity with local landscape</li> <li>• evaluating the cultural and economic benefits of fire management</li> <li>• assessing the quality of fire burns</li> <li>• safety procedures for conducting fire operations</li> <li>• risk management of fire operations</li> <li>• reasons for burning: <ul style="list-style-type: none"> <li>• cleaning out Country</li> <li>• cultural and economic benefits</li> <li>• ceremonial requirements</li> <li>• species diversity</li> <li>• species regeneration</li> <li>• hunting methods</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• facilitation of travelling through Country</li> <li>• creation of fire breaks</li> <li>• communication</li> <li>• land ownership</li> </ul>
<b>Total land mass</b> may include:	<ul style="list-style-type: none"> <li>• an entire National Park/Reserve</li> <li>• part of an entire National Park/Reserve</li> <li>• several burn sites mapped together</li> <li>• an Aboriginal Land Council boundary</li> </ul>
<b>Ignition techniques and patterns</b> may include:	<ul style="list-style-type: none"> <li>• ignition method</li> <li>• lighting pattern</li> <li>• ignition spacing</li> </ul>
<b>Aboriginal Sites</b> may include:	<ul style="list-style-type: none"> <li>• shelters with deposits</li> <li>• open camp site</li> <li>• midden</li> <li>• shelter with midden</li> <li>• shelter with art</li> <li>• isolated find</li> <li>• undefined sites</li> <li>• axe grinding grooves</li> <li>• bora/ceremonial ring</li> <li>• burial site</li> <li>• rock engraving</li> <li>• scarred tree</li> <li>• carved tree</li> <li>• natural mythological site</li> <li>• restricted site</li> <li>• quarry</li> <li>• ochre quarry</li> <li>• fish trap</li> <li>• stone arrangement</li> <li>• mound (oven)</li> <li>• mia mia</li> <li>• waterhole (well)</li> <li>• contact/mission</li> <li>• abraded grooves</li> <li>• Aboriginal Place (declared under NPW Act)</li> <li>• Aboriginal Area (declared under NPW Act)</li> <li>• protected archaeological site</li> <li>• Conservation agreement</li> <li>• massacre</li> <li>• reserve</li> </ul>

<p><b><i>Aboriginal cultural protocols</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• gender roles in relation to knowledge and cultural practices</li> <li>• information sensitivity and access</li> <li>• appropriate information transfer</li> <li>• negotiations with local Aboriginal Community about information transfer</li> <li>• cultural diversity</li> <li>• natural resources and their importance for economy, religion, spirituality, art, environment, values, beliefs and lore/law.</li> <li>• rights and responsibilities associated with cultural knowledge, story, song, Site, and ceremony</li> <li>• interpersonal ways of relating</li> <li>• the talking of Community politics</li> <li>• repatriation of artefacts</li> <li>• issues of ownership (clans/nations)</li> <li>• ownership of intellectual property</li> <li>• acknowledging participation and ownership</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• occasions when consultation is required</li> <li>• ways in which consultations should be conducted</li> </ul>
<p><b><i>Fire breaks</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• existing gaps in vegetation or fuel areas</li> <li>• barriers to slow or stop progress of fire</li> <li>• natural features of creeks, rivers, lakes, rock walls</li> <li>• constructed features of access tracks, roads, highways and landscaping</li> <li>• defensible spaces</li> </ul>
<p><b><i>Burn intensity</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• low intensity burns</li> <li>• high intensity burns</li> </ul>
<p><b><i>Weather conditions</i></b> to be monitored:</p>	<ul style="list-style-type: none"> <li>• temperature</li> <li>• relative humidity</li> <li>• wind</li> <li>• atmospheric stability</li> <li>• rainfall</li> <li>• seasonal cycle of weather patterns</li> </ul>
<p><b><i>Burn specification or limiting factors</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• size</li> <li>• area</li> <li>• location</li> <li>• name</li> <li>• physical landmarks</li> </ul>

	<ul style="list-style-type: none"><li>• ownership boundaries</li><li>• natural geographic locations</li></ul>
<i>Monitoring of burning</i> may include:	<ul style="list-style-type: none"><li>• observations</li><li>• predictions</li><li>• recording</li><li>• fuel moisture content</li><li>• wind speed and direction</li><li>• flame height</li><li>• rate of spread</li><li>• smoke development</li></ul>

## Unit Sector(s)

Indigenous land management

## AHCILM401A Protect places of cultural significance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the protection of places of cultural significance and defines the standard required to: develop working relationships with stakeholders in cultural sites; canvass views in determining the heritage value and preservation issues of a cultural site; plan for the protection of a cultural site including resources required and submissions to be completed; observe cultural protocols in dealing with stakeholders and land managers; identify threats and develop action and emergency plans to mitigate and manage the risk of damaging incidents or loss of heritage value; document the submissions to implement conservation and restoration activities and support the incident management activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose work includes protecting indigenous peoples' places of culture in co-operation with stakeholders and protecting places of cultural significance with reference to indigenous communities and/or line management. A high level of cultural awareness and the need to observe cultural protocols are important in parts of the process. Note: for indigenous cultural places, the delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Communicate with stakeholders	<p>1.1. Working relationships are developed with stakeholders that assist in the management of culturally significant places.</p> <p>1.2. Communication approaches are developed that accommodate cultural views.</p> <p>1.3. Views are regularly obtained on the way in which the cultural significance and resource can be conserved and used.</p> <p>1.4. Views obtained are conveyed into enterprise and park/reserve planning process.</p>
2. Conserve significance	<p>2.1. Enterprise conservation policies and plans are used with stakeholder views to plan ongoing conservation actions.</p> <p>2.2. Operational activities are developed and implemented to implement the conservation strategies and plans in a culturally sensitive manner.</p> <p>2.3. Staff are organised to implement conservation</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>actions that minimise deterioration and damage.</p> <p>2.4. Staff are supervised during restoration projects.</p> <p>2.5. Resources are obtained for conservation and restoration activities.</p> <p>2.6. Submissions are made to the enterprise budget process for funds to implement the conservation and restoration activities.</p>
3. Manage incident	<p>3.1. Operational plans are developed to manage incidents consistent with plan of management and risk management analysis.</p> <p>3.2. Staff responsibilities are assigned to manage types of incidents.</p> <p>3.3. Equipment and supplies are obtained and maintained to enable effective response to incidents.</p> <p>3.4. Staff are trained in the management of the types of incidents for which they have an involvement.</p> <p>3.5. Submissions are made to the enterprise budget process for funds to support the incident management activities.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- consult with indigenous communities
- observe cultural protocols
- plan ongoing conservation actions
- conserve significance of place of culture
- manage incidents and threats
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex

**REQUIRED SKILLS AND KNOWLEDGE**

workplace measures and data

- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- enterprise policies and procedures for conservation of places of cultural significance
- indigenous protocols, consultation processes and networks
- non-indigenous cultural groups
- budgetary and financial approval processes.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- develop working relationships with stakeholders in cultural sites
- canvass views in determining the heritage value and preservation issues of a cultural site
- plan for the protection of a cultural site including resources required and submissions to be completed
- observe cultural protocols in dealing with stakeholders and land managers
- identify threats and develop action and emergency plans to mitigate and manage the risk of damaging incidents or loss of heritage value
- document the submissions to implement conservation and restoration activities and support the incident



<b>EVIDENCE GUIDE</b>	
	management activities.
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Cultural places may include:	<ul style="list-style-type: none"> <li>• areas of non-indigenous activity</li> <li>• buildings and other structures</li> <li>• natural areas of indigenous cultural significance</li> <li>• historical events and monuments</li> <li>• areas of indigenous activity such as:               <ul style="list-style-type: none"> <li>• burial</li> <li>• occupation and contact sites</li> <li>• engravings</li> <li>• grinding grooves</li> <li>• rock pictures</li> <li>• fish traps</li> <li>• middens</li> <li>• mounds.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Indigenous land management
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCILM402A Report on place of potential cultural significance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers reporting on place of potential cultural significance and defines the standard required to: survey an area for landforms and sites that may hold cultural significance; assess any physical signs, and source local information on human activity in the area, to indicate culturally significant sites; liaise with indigenous community to research indigenous history of sites and ensure cultural protocols are maintained; maintain field notes on the location and details of sites; implement protection measures pending further investigation; and development and documentation of an assessment report for places of cultural significance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes investigating and reporting on places of potential cultural significance in consultation with stakeholders and/or traditional owners. A high level of cultural awareness and the need to observe cultural protocols are important parts of the process. Note: for indigenous cultural places the delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Investigate evidence of past activities	<p>1.1.Movement through park/reserve is managed to minimise disturbance and degradation to the park/reserve and surrounding environments; especially in relation to known and potential places of significance; and complies with legislative requirements, Codes of Practice and the park/reserve management strategy and plan.</p> <p>1.2.Land forms including caves and potential sites for rock art, flora, fauna and settings are observed to identify potential places of previous human activity which could have cultural and/or natural significance, as part of operational duties.</p> <p>1.3.Signs of previous human activity are assessed and documented.</p> <p>1.4.Park/reserve activities are reviewed in light of potential significance and maintained, modified or halted to enterprise procedures to maintain significance.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>1.5. Where activities have or may affect the potential significance, notes and records are made of the original state of the non-indigenous activities at the place, or directions are sought from indigenous stakeholders or cultural reference group in reference to indigenous activities.</p> <p>1.6. Where potential places of significance are identified, field notes are taken of location in terms of other park/reserve features, survey markers, and/or global positioning.</p> <p>1.7. Reasons for identifying potential significance are recorded.</p> <p>1.8. Location is referred to indigenous stakeholders or cultural reference group for any directions.</p>
2. Implement interim protection measures	<p>2.1. Immediate and longer-term risks associated with the conservation of the place are identified according to enterprise guidelines, relevant charters and Codes of Practice.</p> <p>2.2. Interim protective measures are taken to avoid degradation, disturbance, and deterioration, and any action which may break cultural protocols.</p> <p>2.3. Existing activities of personnel and visitors are modified to reduce/eliminate risks to the significance of the place.</p>
3. Report observation	<p>3.1. Field notes on location are collated and recorded to enterprise requirements.</p> <p>3.2. Enterprise records are reviewed to reveal any existing information about the non-indigenous significance of the place.</p> <p>3.3. Colleagues are notified in a report about finding and interim protective measures.</p> <p>3.4. Advice is sought on the potential cultural and natural significance of the place and any additional required protective measures from indigenous stakeholders or cultural reference group, from specialists in or external to the enterprise, according to enterprise procedures.</p> <p>3.5. Interim assessment of place is documented and reported to enterprise and legislative requirements and best practice guidelines and Codes of Practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify evidence of past activities
- consult with indigenous communities
- assess place of cultural significance
- implement interim protection measures
- document an assessment report
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types of cultural places in land based, coastal zones and/or marine parks/reserves
- threats to cultural places from both natural causes and human activity
- applicable State/Territory and Commonwealth legislation
- international, national and local standards and best practice guidelines and relevant Codes of Practice
- accepted scientific processes, including conservation processes and charters
- enterprise procedures for reporting places of potential significance
- relevant protective measures
- methods of locating position of site
- field note use.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• survey an area for landforms and sites that may hold cultural significance</li> <li>• assess any physical signs, and source local information on human activity in the area, to indicate culturally significant sites</li> <li>• liaise with indigenous community to research indigenous history of sites and ensure cultural protocols are maintained</li> <li>• maintain field notes on the location and details of sites</li> <li>• implement protection measures pending further investigation</li> <li>• development and documentation of an assessment report for places of cultural significance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Significant cultural areas may include:	<ul style="list-style-type: none"> <li>• areas of non-indigenous activity</li> <li>• buildings and other structures</li> <li>• natural areas of indigenous cultural significance</li> <li>• historical events and monuments</li> <li>• areas of indigenous activity such as burial,</li> </ul>

**RANGE STATEMENT**

	occupation and contact sites, engravings, grinding grooves, rock pictures, fish traps, middens and mounds.
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**Unit Sector(s)**

<b>Unit sector</b>	Indigenous land management
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCILM403A Contribute to the proposal for a negotiated outcome for a given area of country

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers contributing to the proposal for a negotiated outcome for a given area of country and defines the standard required to: gather information to support the proposal for a negotiated outcome for a given area of land; contribute to the development of the proposal; provide feedback on the development of proposal.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes supporting and contributing to the development of a proposal for a negotiated outcome for a given area of country. Note: delivery and assessment against this unit must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Gather information to support the proposal for a negotiated outcome for a given area of land	1.1. Information required to support the proposal development is identified, gathered, recorded and stored as required. 1.2. Legislation and government policies and/or plans of management relevant to the proposal are reviewed. 1.3. Consultation about the proposal is undertaken with stakeholders according to community protocols. 1.4. Areas of conflict between the different legislation and traditional customs are identified and notified to the proposal developer according to community protocols. 1.5. The scope of available alternatives for management and/or resolution of land, rivers, lakes and sea use issues are defined. 1.6. A description of the types of circumstances under which different alternatives can be applied is outlined. 1.7. Processes that can be used to implement alternatives are defined and related to both mainstream ideas and culturally appropriate approaches for the area.
2. Contribute to the development of the proposal	2.1. Information relating to the expected outcomes of the proposal is identified, gathered, recorded, stored and analysed. 2.2. Information relating to the proposal development is identified, gathered, recorded, stored and analysed during its development as required.

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Information relating to the expected outcomes of the proposal is related to stakeholders during proposal development process.</p> <p>2.4. Main characteristics of any relevant State or Territory and Commonwealth Native Title Legislation and Lands Acts that apply to given area of country are identified.</p> <p>2.5. The implications of Native Title on given area of country are detailed using appropriate formats.</p>
<p>3. Provide feedback on the development of proposal</p>	<p>3.1. Oral or written feedback on the proposal is provided to the proposal developer.</p> <p>3.2. The proposal is explained to key stakeholders using appropriate formats according to community protocols.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- gather information to support the proposal for a negotiated outcome for a given area of land
- contribute to the development of the proposal
- provide feedback on the development of proposal
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- cultural customs and heritage

## REQUIRED SKILLS AND KNOWLEDGE

- relevant State land and sea resources acts/legislation
- relevant Local Government land and sea resources acts/legislation
- relevant Commonwealth land and sea resources acts/legislation
- community organisations
- roles of different organisations in land and sea management
- the existence of alternative forms of input and control in land and sea management
- the existence of legislative reform processes.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- gather information to support the proposal for a negotiated outcome for a given area of land
- contribute to the development of the proposal
- provide feedback on the development of proposal.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Management alternatives may include:	<ul style="list-style-type: none"> <li>a range of available alternatives for management and/or resolution of land, rivers, lakes and sea use issues.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Indigenous land management
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCILM404A Record and document community history

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers recording and document community history and defines the standard required to: prepare for interviews and group sessions; conduct both individual and group interviews to elicit a wide range of information; take notes and details of conversations for further reference and to source supporting information; transcribe and edit information, accessing supporting documentation where possible; store recorded media and transcripts to maintain recording quality and accuracy and security and privacy requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who record oral and community history for natural and cultural resource management purposes. A high level of cultural awareness and the need to observe cultural protocols are important parts of the process. Note: for indigenous contexts, the delivery and assessment against this unit must comply with community protocols and guidelines, and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for interviews and group sessions	<p>1.1. Topic and events in research are identified according to enterprise guidelines.</p> <p>1.2. People who may be able to provide information on topic and events (narrators) are identified according to enterprise procedures and cultural protocols.</p> <p>1.3. Process of individual and/or group sessions with narrators is developed according to enterprise requirements, cultural protocols and topic and events to be covered.</p> <p>1.4. Basic questions for interviews with narrators are developed and checked according to enterprise procedures, cultural protocols and best practice.</p> <p>1.5. Equipment, locations and other resources are obtained and checked according to enterprise guidelines.</p> <p>1.6. Selected narrators are invited according to enterprise procedures and prior arrangements.</p>
2. Conduct interviews	2.1. Oral history process is explained to narrators to obtain their consent to record and use information

ELEMENT	PERFORMANCE CRITERIA
	<p>provided.</p> <p>2.2. Recording equipment is set up and tested for operation.</p> <p>2.3. Recording media is uniquely identified for later reference according to enterprise procedures.</p> <p>2.4. Basic questions are used to initiate the interview.</p> <p>2.5. Notes are taken to identify supplementary questions and to support recording media.</p> <p>2.6. Interview process is managed to obtain expected and unexpected information, including memories of incidents.</p> <p>2.7. Narrator is supported to express memories and opinions in an uncritical and positive setting.</p> <p>2.8. Interviewer provides positive feedback on the narrator's assistance, in line with enterprise procedures and cultural protocols.</p> <p>2.9. Interviewer manages the environment and distractions to maintain a positive response from the narrator.</p> <p>2.10. Session lengths are managed to avoid tiring narrators and interviewer.</p>
3. Conduct group sessions	<p>3.1. Oral history process is explained to group of narrators to obtain their consent to record and use information provided.</p> <p>3.2. Recording equipment is set up and tested for operation to cover all group members.</p> <p>3.3. Recording media and members voices are uniquely identified for later reference according to enterprise procedures.</p> <p>3.4. Basic questions are used to initiate the group session.</p> <p>3.5. Interaction between narrators and interviewer is managed to maintain flow of information from all narrators.</p> <p>3.6. Notes are taken to identify supplementary questions and to support recording media.</p> <p>3.7. Group discussion process is managed to obtain expected and unexpected information, including memories of incidents.</p> <p>3.8. Narrators are supported to express memories and opinions in an uncritical and positive setting, including identification of different aspects of one</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>incident.</p> <p>3.9. Interviewer manages the environment, group interactions and distractions to maintain a positive response from the group.</p> <p>3.10. Interviewer provides positive feedback on the narrators' assistance, in line with enterprise procedures and cultural protocols.</p> <p>3.11. Session lengths are managed to avoid tiring narrators and interviewer.</p>
4. Transcribe and edit information	<p>4.1. Recorded media and transcripts are handled to maintain recording quality and accuracy, and security and privacy requirements, according to enterprise procedures.</p> <p>4.2. Interviews and/or group sessions are transcribed to provide a draft transcription according to enterprise procedures and agreement(s) with narrator(s).</p> <p>4.3. Draft written and/or oral transcripts are provided to narrator(s) for editing according to enterprise procedures and agreement(s) with narrator(s).</p> <p>4.4. Editing is completed according to narrator(s) wishes.</p> <p>4.5. Information on narrator(s) doubts/hesitancy on certain facts, and conflicting information between interviews is recorded separately from transcripts and managed according to enterprise procedures and cultural protocols.</p>
5. Store records	<p>5.1. Recorded media and transcripts are stored to maintain recording quality and accuracy, and security and privacy requirements, according to enterprise procedures.</p> <p>5.2. Access to records is controlled according to the narrator(s) wishes.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

## REQUIRED SKILLS AND KNOWLEDGE

- prepare for interviews and group sessions
- conduct interviews
- conduct group sessions
- transcribe and edit information
- store records
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- subject areas covered in the interviews/sessions
- objectives of the natural and/or cultural resource research
- range of communication approaches
- relevant cultural protocols
- enterprise procedures relating to the recording, management and storage of oral and community information
- recording techniques and media
- set-up of microphones and video cameras
- use of still cameras.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare for interviews and group sessions</li> <li>• conduct both individual and group interviews to elicit a wide range of information</li> <li>• take notes and details of conversations for further reference and to source supporting information</li> <li>• transcribe and edit information, accessing supporting documentation where possible</li> <li>• store recorded media and transcripts to maintain recording quality and accuracy and security and privacy requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Community history may include:	<ul style="list-style-type: none"> <li>• eyewitnesses to events relating to natural and/or cultural resource management</li> <li>• long time residents of a place or area who have observed natural and/or cultural processes</li> <li>• those knowledgeable about stories or customs handed down through generations.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Indigenous land management
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCILM405A Develop work practices to accommodate cultural identity

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing work practices to accommodate cultural identity and defines the standard required to: outline effects of current work related issues for indigenous communities and individuals; determine the impacts of competing factors on self esteem/identity; design work practices to accommodate cultural identity; incorporate elements to boost self esteem of indigenous workers; respond to workplace issues where work practices are poorly aligned to cultural identity.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job involves accommodating cultural identity and recognising the role that history has had in shaping cultural identity in relation to working within an indigenous community or organisation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Investigate government policies and practices relating to indigenous peoples since European settlement	<p>1.1.The intentions of government policies and practices since European settlement are outlined.</p> <p>1.2.The effects of these policies and practices on Aboriginal and Torres Strait Islander communities are summarised.</p> <p>1.3.How these policies and practices affected own community and/or family are outlined.</p>
2. Identify changes that have occurred in indigenous societies	<p>2.1.Government policies operating since European settlement are summarised and documented.</p> <p>2.2.The changes that have occurred to Aboriginal and Torres Strait Islander societies as a result of policies and practices, the responses and the views of indigenous groups are outlined.</p> <p>2.3.The impacts of these changes on the indigenous community and/or family are described.</p>
3. Outline effects of current work related issues on indigenous societies	<p>3.1.Key work related issues that impact on Aboriginal and Torres Strait Islander societies today are defined.</p> <p>3.2.The people involved in key issues are described and recorded.</p> <p>3.3.The community views on issues are summarised and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>recorded.</p> <p>3.4.Methods of addressing the keys issues are summarised.</p> <p>3.5.The future outcomes and/or resolutions for these issues are predicted.</p>
4. Determine the impacts of competing factors on self esteem/identity	<p>4.1.Events/occurrences in everyday life that give rise to feelings of both positive and negative self-esteem are described.</p> <p>4.2.Elements which affect self-esteem are listed.</p> <p>4.3.How these elements impact on self are described and recorded.</p> <p>4.4.Positive strategies for dealing with impacts on self-esteem/identity are developed.</p>
5. Design work practices to accommodate cultural identity	<p>5.1.Work practices, which enhance individual's morale, are defined and implemented.</p> <p>5.2.Elements which affect self-esteem in work environments are incorporated into the work practices.</p> <p>5.3.Staff are consulted in the preparation and design of these work practices according to community and organisational protocols and guidelines.</p> <p>5.4.Positive strategies for dealing with impacts on self-esteem/identity are developed.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- investigate government policies and practices relating to indigenous peoples since European settlement
- identify changes that have occurred in indigenous societies
- synthesise changes that have occurred in indigenous societies
- outline effects of current work related issues
- determine the impacts of competing factors on self-esteem/identity
- design work practices to accommodate cultural identity
- use literacy skills to read, interpret and follow organisational policies and

**REQUIRED SKILLS AND KNOWLEDGE**

procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- indigenous communities and protocols
- cultural customs and heritage
- connections between self-esteem, identity, community and work
- indigenous history
- legislation and policies impacting on indigenous communities and organisations
- key work issues
- work practices.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- outline effects of current work related issues for indigenous communities and individuals
- determine the impacts of competing factors on self esteem/identity
- design work practices to accommodate cultural



<b>EVIDENCE GUIDE</b>	
	identity <ul style="list-style-type: none"> <li>• incorporate elements to boost self esteem of indigenous workers</li> <li>• respond to workplace issues where work practices are poorly aligned to cultural identity.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Work practices may include:	<ul style="list-style-type: none"> <li>• selection procedures</li> <li>• promotion procedures</li> <li>• enforcement of legislation and regulations</li> <li>• consultative or participative mechanisms</li> <li>• cultural and intellectual property rights</li> <li>• training processes</li> <li>• work ethic</li> <li>• procedures and policies of the workplace.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Indigenous land management
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCILM501A Conduct field research into natural and cultural resources

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of conducting field research into natural resource and cultural areas for resource management and related purposes and defines the standard required to: use a range of electronic and manual recording systems to support research; identify stakeholders including current tenure, Indigenous history and community interest; review existing knowledge; develop research objectives, staff, resources and design; conduct field investigations to investigate impacts on fauna, flora and natural resources of the site; report on the field investigation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who conduct field research into natural resource and cultural areas for resource management and related purposes. It is often done prior to, or in conjunction with, the development of a resource management plan.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Review existing knowledge	<p>1.1.Existing information gathered through investigation and enterprise recording processes is examined to determine key features.</p> <p>1.2.Oral evidence, where it exists, is reviewed.</p> <p>1.3.Sites are inspected to assess condition and availability of further information.</p> <p>1.4.Information, records and places previously destroyed or damaged or under threat are identified as factors to be incorporated in the assessment process, strategies and plans.</p> <p>1.5.Scope of information is assessed for adequacy against the requirements of legislation, Codes of Practice and protocols.</p> <p>1.6.Appropriate database, geographic information system and other electronic and manual recording systems are identified for data collection according to enterprise procedures.</p> <p>1.7.Sources of expertise in research environments, identification of pollution, degradation and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>disturbance, and national and international issues and agreements are identified and accessed within and external to the enterprise.</p> <p>1.8.Areas of inadequate information are identified and recorded.</p>
2. Identify stakeholders	<p>2.1.Stakeholders are identified in conjunction with local communities and groups, and government documentation and interviews.</p> <p>2.2.The current and relevant past land tenure for the place/area is investigated and recorded.</p> <p>2.3.Indigenous interests are determined through culturally appropriate approaches to regional and community organisations and individuals.</p> <p>2.4.Proper protocols are applied and key consultations conducted in approaches to regional and community organisations and individuals.</p> <p>2.5.Privacy requirements are complied within, according to the directions of stakeholders and according to legislative and enterprise requirements.</p> <p>2.6.Process of identifying stakeholders may be completed under the direction of a relevant cultural reference group.</p>
3. Develop research approach	<p>3.1.Objectives of the field research are determined in conjunction with those commissioning the research according to enterprise procedures.</p> <p>3.2.Objectives are used to identify specific types of investigation, techniques to be used, and physical areas of investigation.</p> <p>3.3.The types of investigation and techniques selected are assessed for hazards and risks in designated environment, including the special OHS requirements, access issues, and management of the research in a range of weather and area conditions.</p> <p>3.4.Existing information and data records are reviewed to determine the starting point(s) for the fieldwork.</p> <p>3.5.Research methodology is consistent with the research objectives and in accordance with established natural resource management practice.</p> <p>3.6.Required resources are identified to establish and maintain the research program within the required time schedules and are appropriate to the environments that will be encountered.</p> <p>3.7.Personnel are selected for their competency in</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>research techniques and safe operation in the expected environmental/cultural conditions.</p> <p>3.8.Stakeholders to be included in the consultation process are identified.</p> <p>3.9.Costs of field research are estimated and submitted for approval according to enterprise procedures.</p> <p>3.10. Sampling and recording processes are established for research information according to enterprise requirements, best practice and scientific standards.</p>
4. Conduct field investigations	<p>4.1.Consultation and fieldwork undertaken to obtain information required to meet investigation objectives.</p> <p>4.2.Previously determined methodology is adjusted in light of progressive results and stakeholder feedback.</p> <p>4.3.Observations, records and monitoring are in accord with scientific practice and coordinated to meet research objectives.</p> <p>4.4.Impacts from areas external to area under investigation are identified.</p> <p>4.5.Equipment, techniques and people deployed to carry out investigations.</p> <p>4.6.Each field operation is documented and approved according to legislative and enterprise requirements for work in the research environment.</p> <p>4.7.Where required, appropriate equipment and skills are sourced for the capture, management and sampling of animal species.</p> <p>4.8.Information is analysed for impact on previously held hypothesis and other resources.</p>
5. Develop process for involving decision-makers	<p>5.1.Information on stakeholders is used to determine interests held by organisations, groups and individuals, and cultural dimensions.</p> <p>5.2.Issues to be addressed with interest groups are defined.</p> <p>5.3.Consultation and decision-making process is developed to address the issues with individuals, groups and organisations in a culturally appropriate manner.</p> <p>5.4.Appropriate time is provided for consultative processes within groups and between individuals to occur and to obtain feedback on issues.</p> <p>5.5.Decision-making group, such cultural reference</p>

ELEMENT	PERFORMANCE CRITERIA
	groups and other groups are formed where assistance is required to direct investigation, access information, to address issues and/or review the significance of place/area.
6. Report on the field investigation	<p>6.1. Stakeholders are consulted on draft findings.</p> <p>6.2. The basis for the determination of outcomes is documented to legislative requirements, the organisation's policies and practices, and international and national processes.</p> <p>6.3. The determination of significance is submitted to the organisation and its external review processes, as required by legislation and Codes of Practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- review existing knowledge
- identify stakeholders
- develop research approach
- conduct field investigations
- develop process for involving decision-makers
- report on the field investigation
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- conservation legislation, charters, Codes of Practice relating to natural and cultural resource areas

## REQUIRED SKILLS AND KNOWLEDGE

- various systems and processes for assessing significance
- ecology and biological diversity including aspects of living organisms, habitats and communities, and interactions between species
- geological diversity including aspects of stratigraphy, palaeontology, paedology, and soil classification
- relationships between geology and flora/fauna in natural resource environments
- microbiology including entomology for the area under assessment
- population dynamics and control approaches
- monitoring including life cycles and food chains
- general understanding of range of cultural issues
- accepted scientific processes, including conservation processes and charters
- historical research processes
- research processes into cultures, religions, political systems, and arts and crafts.
- geography, societies and related economics
- general understanding of impacts of natural resources, such as geological settings, ecological processes, and interaction between natural and cultural processes
- monitoring including fabric deterioration, damage and likely causes of deterioration and damage
- relevant international, national and local legislation and agreements as applying to park/reserve, including a good understanding of the concepts and potential operation of the Burra Charter, guidelines associated with the Charter and other ICOMOS
- legislation under which enterprise operates and research is commissioned
- grouping of Indigenous peoples appropriate to the area under review, and their cultural heritage
- processes defined in the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Island Heritage Places
- links between Indigenous heritage and natural resources.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this



<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• use a range of electronic and manual recording systems to support research</li> <li>• identify stakeholders including current tenure, Indigenous history and community interest</li> <li>• review existing knowledge</li> <li>• develop research objectives, staff, resources and design</li> <li>• conduct field investigations to investigate impacts on fauna, flora and natural resources of the site</li> <li>• report on the field investigation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Field research techniques may include:	<ul style="list-style-type: none"> <li>• identification of ecosystems and mapping of cycles and species</li> <li>• recording species, populations, densities and health of the species</li> <li>• field observations and manual recording</li> <li>• taking, preserving and examining samples</li> <li>• capturing and examining wildlife</li> <li>• taking photographic records</li> <li>• tracking individual specimens by manual and electronic means</li> <li>• establishing databases and loading records</li> <li>• planning information collection to cover specific seasonal impacts</li> <li>• to obtain longitudinal data.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Indigenous land management
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCILM502A Develop conservation strategies for cultural resources

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing conservation strategies for cultural resources and defines the standard required to: development of conservation strategies and management policies for cultural resources as part of the overall park management and planning process and defines the standard required to review the cultural features in the area and level of deterioration; assess the compatibility of current utilisation with cultural and heritage values; investigate feasible land uses that maintain the cultural integrity of the site; carry out a risk assessment for damage/deterioration to cultural sites; consult with stakeholders according to cultural protocols; develop strategies for management of cultural resources.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who develop conservation strategies and management policies for cultural resources as part of the overall park management and planning process.  Note: for indigenous cultural places, the delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Define components of cultural heritage significance	<p>1.1. Geographic and operational boundaries for conservation policy are defined.</p> <p>1.2. Results of studies of cultural significance for places and areas within the boundaries are reviewed and collated to develop park/reserve/region significance.</p> <p>1.3. Limits of acceptable change in the forms of deterioration and damage to the places of cultural significance are developed to legislative and enterprise requirements.</p>
2. Review past strategies, plans and activities	<p>2.1. Previous strategies and plans are compared with collated assessment of significance to determine compatibility.</p> <p>2.2. Current activities in the area are reviewed to assess their compatibility with the collated assessment of significance.</p> <p>2.3. Areas of incompatibility are documented to enterprise procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Review current and potential resource uses	3.1. Impact of current uses on the cultural resources, including setting and surrounds, is assessed against the set limits of acceptable change to determine success of conservation approach. 3.2. Feasible uses and/or client requirements are assessed. 3.3. Possible changes to uses are developed to ensure cultural values are maintained.
4. Identify threats to cultural places	4.1. Threats to cultural significance, both external and internal to the area under consideration, are identified. 4.2. A risk assessment is made of all threats to determine potential impact on strategies. 4.3. Policy changes required to address the threats are documented to enterprise requirements.
5. Develop strategies for management of cultural resource	5.1. Draft policy is developed to address the cultural significance that meets any shortfalls in previous strategies, allows for compatible resource uses, and addresses risks associated with any threats to the cultural values of the area. 5.2. Consultations are conducted with stakeholders on draft policy in accordance with legislative, enterprise and good practice requirements. 5.3. Consultations comply with cultural protocols and enterprise approaches to stakeholders. 5.4. Draft strategies are modified to reflect stakeholder views as required in legislation, enterprise strategies and procedures and good practice. 5.5. Strategies are submitted for approval to legislative and enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- define components of cultural heritage significance

## REQUIRED SKILLS AND KNOWLEDGE

- review past strategies, plans and activities
- review current and potential resource uses
- identify threats to cultural places
- develop strategies for management of cultural resources
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- the range of conservation strategies for cultural areas
- the range of scientific and other concepts that are to be integrated into the policies
- policies applying across all levels of government and within the specific region, including those under catchment plans
- international treaties, agreements and charters
- Australian Natural Heritage Charter and the Burra Charter and the interpretation of the charters
- enterprise policies and procedures
- design and implementation of consultation processes
- policy analysis and impact statements
- tendering and contracting processes.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• review the cultural features in the area and level of deterioration</li> <li>• assess the compatibility of current utilisation with cultural and heritage values</li> <li>• investigate feasible land uses that maintain the cultural integrity of the site</li> <li>• carry out a risk assessment for damage/deterioration to cultural sites</li> <li>• consult with stakeholders according to cultural protocols</li> <li>• develop strategies for management of cultural resources.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Places of cultural significance may include:	<ul style="list-style-type: none"> <li>• areas of non-indigenous activity</li> <li>• buildings and other structures</li> <li>• natural areas of indigenous cultural significance</li> <li>• historical events and monuments</li> <li>• areas of indigenous activity such as burial, occupation and contact sites, engravings, grinding grooves, rock pictures, fish traps, middens and mounds</li> <li>• buildings and other structures such as jetties and piers</li> <li>• wrecks of vessels</li> <li>• tidal movement</li> <li>• fresh water springs above and below low</li> </ul>

**RANGE STATEMENT**

	tide/high tide.
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**Unit Sector(s)**

<b>Unit sector</b>	Indigenous land management
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCILM503A Manage restoration of cultural places

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing the restoration of cultural places and defines the standard required to: incorporate the prior assessment of significance into an operational plan; research traditional building techniques to carry out repairs and maintenance; seek expert advice to meet special building and conservation requirements from the plan of management; maintain the cultural integrity of the site and surrounds during and on completion of building.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose work involves the management of other involved in the restoration of cultural places.  Note: for indigenous cultural places, the delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan required restoration measures	<p>1.1.Prior assessment of significance incorporated into strategies and plans for area and place are accessed to determine range of required and appropriate actions.</p> <p>1.2.Short term plan of management and conservation is developed from area strategies and plans according to legislative requirements, enterprise procedures, and national and international charters.</p> <p>1.3.Traditional building techniques and materials, and material availability are researched to plan maintenance of fabric in traditional styles.</p> <p>1.4.Any prior works not in keeping with significance are identified to determine appropriate maintenance actions.</p> <p>1.5.Any necessary structural engineering maintenance is determined from experts to incorporate actions into maintenance schedule.</p> <p>1.6.Maintenance schedule is developed to meet plan of management and conservation according to enterprise procedures.</p> <p>1.7.Submissions are made to obtain appropriate funds to complete works according to enterprise procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	1.8. Restoration work is planned in compliance with Occupational Health and Safety and relevant legislative requirements.
2. Managing restoration works	2.1. Expert advice is obtained on specific maintenance works and associated contracts to meet plan of management and conservation. 2.2. Special building and conservation requirements to maintain significance are specified in maintenance documentation. 2.3. Workers/contractors are informed and supervised to ensure significance of place is maintained in terms of no damage to surrounds, environment, fabric or building, re-use of traditional materials, use of traditional building techniques, introduction of appropriate new materials, and management of work areas, debris and working materials.
3. Clean-up after work	3.1. Workers/contractors are informed and supervised to ensure significance of place is maintained in terms of no damage to surrounds, environment, fabric or building, and removal of materials, equipment and tools.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan required restoration measures
- restore fabric
- clean up after work
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of

**REQUIRED SKILLS AND KNOWLEDGE**

cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- Burra Charter, heritage and building acts, and other relevant legislation
- conservation architecture
- historic archaeology
- relevant oral and community history
- traditional and current building practices
- managing projects
- building/maintenance requirements and specifications
- Occupational Health and Safety (OHS) risk management.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- incorporate the prior assessment of significance into an operational plan
- research traditional building techniques to carry out repairs and maintenance
- seek expert advice to meet special building and conservation requirements from the plan of management
- maintain the cultural integrity of the site and surrounds during and on completion of building.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The plan of management and conservation may include:	<ul style="list-style-type: none"> <li>• strategies and actions included in the park/reserve plan of management for the maintenance and use of the place for activities such as tourism</li> <li>• actions requested by stakeholders</li> <li>• actions resulting from site inspection</li> <li>• actions to record current state of the place.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Indigenous land management
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCILM504A Develop strategies for Indigenous land or sea management

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing strategies for contemporary land or sea management from an indigenous perspective and defines the standard required to: research contemporary indigenous land and sea management practices; develop management strategies for a specified area; source and apply for funds; consult with others on strategies, priorities and project works.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who work in indigenous land management.  Note: Delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Research contemporary indigenous land and sea management practices	<p>1.1.Relevant contemporary indigenous land and sea management practices are outlined according to community guidelines and cultural protocols.</p> <p>1.2.Relevant issues connected with this practice are defined.</p> <p>1.3.Relevant and appropriate people are consulted according to community guidelines and cultural protocols.</p> <p>1.4.Associated issues related to contemporary indigenous land and sea management practices are identified.</p> <p>1.5.Details of consultation/research are documented.</p>
2. Develop management strategies for a specified area	<p>2.1.Strategies are based on contemporary indigenous land and sea management practices.</p> <p>2.2.Priorities for management are identified according to level of importance or threats to area.</p> <p>2.3.New approaches to management are developed to address priorities within the context of legislation, cultural protocols and community needs.</p> <p>2.4.Timelines and steps to implementation of strategies are developed.</p> <p>2.5.Costs of resources, labour and materials required to action management strategies are defined.</p> <p>2.6.Preliminary project design is completed to identify</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>project steps and funding requirements.</p> <p>2.7. Arrangements for project implementation are made to enterprise requirements and legislation.</p>
3. Source and apply for funds	<p>3.1. Appropriate finding sources are investigated and identified.</p> <p>3.2. Applications are made for funds according to legislative, community and enterprise requirements.</p> <p>3.3. Applications are endorsed by appropriate persons before submission.</p>
4. Consult with others on strategies, priorities and project work	<p>4.1. Authorised persons are briefed on the strategies, priorities and actions planned according to community guidelines and cultural protocols.</p> <p>4.2. Staff is trained in new procedures developed to address strategies.</p> <p>4.3. Project implementation details are developed in consultation with staff, appropriate persons and communities.</p> <p>4.4. Endorsement from appropriate persons, groups and communities, and relevant government stakeholders is gained before works commence.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conduct research.
- work to prescribed community protocols.
- coordinate and work within teams in community environments.
- research contemporary indigenous land and sea management practices
- develop management strategies for a specified area.
- source and apply for funds.
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

**REQUIRED SKILLS AND KNOWLEDGE**

- clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
  - use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- indigenous land/sea management practices.
- cultural customs and heritage.
- application of protocols.
- Native Title Acts.
- relevant state land acts/legislation.
- research processes.
- interaction between natural and cultural processes.
- cultural knowledge on plants, animals and relationship to country.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- research contemporary indigenous land and sea management practices
- develop management strategies for a specified area
- source and apply for funds
- consult with others on strategies, priorities and project works.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources

**EVIDENCE GUIDE**

	for some worksites may differ due to the regional or enterprise circumstances.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Indigenous cultural land and sea practices may include:

- flora and fauna management
- fire regimes
- site protection
- ceremonial practices
- rehabilitation
- endangered species management
- replanting projects
- education of non-indigenous people to carry on management practices
- aqua and vivi-culture techniques
- spiritual maintenance of country.

Areas relevant to this standard include:

- own country or area of choice, e.g., defined community area
- National Park
- state forest
- nature reserves
- Crown lands
- marine park
- private land.

**Unit Sector(s)**

<b>Unit sector</b>	Indigenous land management
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCILM505A Map relationship of business enterprise to culture and country

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of mapping the relationship of business enterprises to culture and country and defines the standard required to: describe the goals and activities of the indigenous business; define the legal parameters of the business organisation; analyse the positions and power relationships for decision-making within an indigenous community; relate indigenous community and business roles to the concept of country; develop strategies that support the concept/implementation of indigenous management (principles).
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit is likely to be carried out independently, with the need to work within cultural protocols. It includes a level of responsibility for communication with all stakeholders involved in the program.</p> <p>Note: Delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish reasons for entering/establishing business	1.1.The reasons for entering business are described. 1.2.The relationship between culture and the reasons for entering business are mapped. 1.3.The business activity is explained as it relates to the structure of community and/or family grouping. 1.4.The business activity is explained as it relates to and with country.
2. Interpret the legal parameters of the business organisation	2.1.The organisational structure is defined. 2.2.The legal basis and appropriate documentation for the structure is identified. 2.3.The documentation is reviewed. 2.4.The powers and authorities of the business are analysed. 2.5.The legal limitations and requirements are described.
3. Investigate the roles of key positions in the organisation and/or	3.1.Titles of key positions in the organisation and/or community are identified and listed.

ELEMENT	PERFORMANCE CRITERIA
community	3.2.The duties of these positions are summarised. 3.3.The source of power or responsibility for these positions is outlined. 3.4.The limitations of the duties and decisions that may be made by these positions are described. 3.5.The role of these positions are analysed in terms of the structure of the community and/or family grouping. 3.6.The role of these positions are analysed in terms of relationship to country.
4. Evaluate the decision making process as it relates to the organisation and/or community	4.1.The decision-making process required to be followed in the organisation and/or community is described. 4.2.The responsibilities of each position in this decision-making process are identified. 4.3.Decisions that have been made using this process are described. 4.4.The effectiveness of the decision making process is evaluated. 4.5.The dynamics of the processes in making these decisions are explained. 4.6.Recommendations as to how this process can be improved are made.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- deal with personal negative responses/reactions in a positive way
- develop strategies that support the concept /implementation of indigenous management (principles)
- recognise and encourage the development of an individual's interpersonal skills
- analyse and evaluate skills
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports

**REQUIRED SKILLS AND KNOWLEDGE**

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- legislation formulation
- specific legislation
- legal aspects of business structures
- constitutions and other corporate documentation
- organisational structures theories
- decision-making processes
- community structure
- National Reconciliation Strategy on Economic Independence.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- describe the goals and activities of the indigenous business
- define the legal parameters of the business organisation
- analyse the positions and power relationships for decision-making within an indigenous community
- relate indigenous community and business roles to



<b>EVIDENCE GUIDE</b>	
	<p>the concept of country</p> <ul style="list-style-type: none"> <li>develop strategies that support the concept/implementation of indigenous management (principles).</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The structure of family or community groupings may include:	<ul style="list-style-type: none"> <li>clan groupings</li> <li>language groupings</li> <li>physical location</li> <li>family groupings</li> <li>kinship</li> <li>customs</li> <li>relationships to country and Dreaming</li> <li>family requirements and gender relationships.</li> </ul>
Business as it relates to country may include:	<ul style="list-style-type: none"> <li>restrictions in relation to access</li> <li>restrictions in relation to development</li> <li>ways of interacting with/on country</li> <li>ceremonial activities and requirements</li> <li>cultural activities and requirements</li> <li>family requirements and gender relationships</li> <li>observing appropriate protocols in talking about country.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Indigenous land management
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCILM506A Operate within community cultures and goals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of exploring and understanding the culture and goals of a community or group and operating appropriately within those parameters and defines the standard required to: investigate the diversity of groups within a community and their culture; identify the roles of informal leaders and influencers in community groups, as well as elders in indigenous communities; research the background and goals of community groups, and their attitudes and perspectives on natural resource management issues; plan for consultation within the community by working with the cultures and goals of the groups that comprise it.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to persons who explore and understand the culture and goals of a community or group and operate appropriately within those parameters.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify community values	<p>1.1. Range of groups in community is identified through interaction with community members and groups to determine potential diversity of values.</p> <p>1.2. Values held by various sections of the community relevant to program activities are identified for planning of promotional and group activities.</p> <p>1.3. Cultural authority is identified in indigenous communities and groups to implement appropriate protocols.</p> <p>1.4. Community leaders in terms of community involvement and opinion making are identified from community interaction.</p>
2. Research community history and plans	<p>2.1. History of community relevant to program is identified for use in promotional, educational and group activities.</p> <p>2.2. Relevant documents, symbols, places of value and oral traditions are identified to place program and group in local context.</p> <p>2.3. Community plans are identified for use in promotional, educational and group activities.</p>
3. Establish role of group in community	<p>3.1. Potential roles of program and group to community are identified for use in group activities.</p> <p>3.2. Interaction with community is managed to build rapport with individuals and groups.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. Consultation processes are established and maintained with community members and groups. 3.4. Image of group and program in community is maintained by acknowledging community concerns and promoting positive image of group and program.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify community values
- research community history and plans
- conform to social protocols for a range of cultures in the community
- develop an approach that is inclusive of indigenous gender issues
- source key information from community sources including approaching leaders
- establish role of groups within the community
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant government and community action programs
- processes for development and delivery of programs
- typical community and local government structures and organisation
- group processes
- broad Australian and regional history
- current social and environment affairs for local community and wider region
- rural industry operation and processes (for rural programs)
- process for identifying cultural protocols

**REQUIRED SKILLS AND KNOWLEDGE**

- understanding of what may be noteworthy to community and newsworthy to media.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- investigate the diversity of groups within a community and their culture
- identify the roles of informal leaders and influencers in community groups, as well as elders in indigenous communities
- research the background and goals of community groups, and their attitudes and perspectives on natural resource management issues
- plan for consultation within the community by working with the cultures and goals of the groups that comprise it.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Operating within community cultures and goals includes:

- exploring and understanding the culture and goals of a community or group and operating appropriately within those parameters.

**Unit Sector(s)**

<b>Unit sector</b>	Indigenous land management
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCILM508A Propose a negotiated outcome for a given area of country

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the process of proposing a negotiated outcome for a given area of country according to community guidelines and best practice procedures and defines the standard required to: identify implications for an area of country for government agency and community; detail processes and proposals for resolving issues regarding access and use of land; gather and analyse information on a given area to develop an analytical framework for land use; formulate and communicate proposals for given area of country; document and seek endorsement for a proposal that seeks to negotiate an outcome for a given area of country.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to negotiators who work independently and work within cultural protocols. It includes a level of responsibility for communication with all stakeholders involved in the program.</p> <p>Note: Delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.</p>
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### Licensing/Regulatory Information

Not Applicable



## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify, select and define relevant issues related to the given area of country	<p>1.1. Community, government and agency perspectives, and issues likely to impact on proposals are accurately identified.</p> <p>1.2. The implications and impact of issues and perspectives on the given area of country are identified.</p> <p>1.3. Priority areas for further research, assessment and clarification of issues are recommended.</p> <p>1.4. Proposals for given area of country are defined in terms of context, issues to be addressed, expected outcomes, possible complications, precedents and key stakeholders.</p> <p>1.5. With the support of elders and other key stakeholders, an outline of the scope and appropriate processes for conducting negotiated outcomes for that area of country are detailed.</p>
2. Gather and analyse	2.1. Information required to support proposals is

ELEMENT	PERFORMANCE CRITERIA
information on given area of country	<p>identified according to community protocols.</p> <p>2.2.Information required to support proposals is gathered, analysed and interpreted according to community and agency guidelines and best practice procedures.</p> <p>2.3.An analytical framework for the development of an appropriate approach to the proposal is developed.</p> <p>2.4.Legislation, national and international protocols and conventions relevant to the given area of country are investigated and implemented, where appropriate.</p> <p>2.5.The implications for own people from these examples are described in ways that stakeholders can understand.</p>
3. Formulate and communicate proposals for given area of country	<p>3.1.A range of options is developed for the proposal, including mechanisms for implementation, monitoring and evaluation.</p> <p>3.2.The range of options is communicated in a timely and understandable way to those who are party to the negotiations.</p> <p>3.3.Relevant people to be included in the negotiation are kept informed of progress of work and consulted as appropriate.</p> <p>3.4.Recommendations are made for options based on likely effectiveness, implementation time frame and costs (including infrastructure), interaction with other proposals (existing or being developed), and consistency with government legislation and policy.</p> <p>3.5.Examples of instances where other indigenous peoples have used international legal systems to support environmental issues in their own countries are collated.</p>
4. Complete a proposal for a negotiated outcome for a given area of country	<p>4.1.Proposal is documented according to community and agency guidelines and best practice procedures.</p> <p>4.2.Possible alternatives to use are described ensuring compatibility with legal and administrative circumstances for the area of country.</p> <p>4.3.Relevant people to be included in the negotiation are consulted on final draft proposal and implications for the community.</p> <p>4.4.Proposal is completed following endorsement from key stakeholders for given area of country.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify, select and define relevant issues related to the given area of country
- gather and analyse information on given area of country
- formulate and communicate proposals for given area of country
- complete a proposal for a negotiated outcome for a given area of country
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- report preparation
- consultation approaches
- conflict resolution
- cultural customs and heritage
- relevant state land and resources acts/legislation
- international environment forums
- relevant international and national conventions and agreements
- management and use of the resources of the specific area.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify implications for an area of country for government agency and community</li> <li>• detail processes and proposals for resolving issues regarding access and use of land</li> <li>• gather and analyse information on a given area to develop an analytical framework for land use</li> <li>• formulate and communicate proposals for given area of country</li> <li>• document and seek endorsement for a proposal that seeks to negotiate an outcome for a given area of country.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The following negotiated outcomes may apply to this standard:	<ul style="list-style-type: none"> <li>• co-existence agreements</li> <li>• heads of agreement</li> <li>• land use strategy agreements</li> <li>• sea use strategy agreements</li> <li>• contracts with government</li> <li>• joint management agreements</li> <li>• Memorandum of Understanding.</li> </ul>

## Unit Sector(s)

Unit sector	Indigenous land management
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCILM509A Plan burning activities for natural and cultural resource management

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of using controlled burning to manage natural and cultural resources and defines the standard required to: control burning operations; protect life and property during burning ; achieve the correct intensity of burn.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to land managers who use controlled burning as a natural and cultural resource management tool.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Protect life and property	1.1. Burn is implemented according to the plan. 1.2. Visitors are excluded from target areas, entertainment areas and areas possibly affected by smoke or risk from escaping fire. 1.3. Field workers are instructed in burn and safety procedures to conduct the burn using the Incident Control System. 1.4. Neighbours and agencies are advised of the intention to burn to ensure safety and maintain client relations. 1.5. Cultural sites, assets and entertainment areas are protected according to fire industry practices. 1.6. Fire breaks are applied to the area to maintain control of the fire and burn intensity. 1.7. Standby fire units are available to control unexpected outbreaks.
2. Burn defined areas	2.1. Weather forecasts and current weather conditions are assessed to determine appropriate conditions and timing for burn. 2.2. Fire is applied to targeted areas to organisation requirements. 2.3. Area is checked to ensure all portions intended have received required burn. 2.4. Assessment of burn is completed and recorded to organisation procedures. 2.5. Area burnt is monitored to organisation procedures to avoid wildfire outbreaks.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- the life cycles of flora and fauna of forests/plantations and effect of burning operations
- required intensity of fire
- the dependence of the terrestrial ecosystems on fire
- emergency fire services
- radio communication
- effects of fire on human physiology
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the life cycles of flora and fauna of forests/plantations and effect of burning operations
- required intensity of fire
- the dependence of the terrestrial ecosystems on fire
- emergency fire services
- radio communication
- effects of fire on human physiology.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the



<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• control burning operations</li> <li>• protect life and property during burning</li> <li>• achieve the correct intensity of burn.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Planned burning may include:	<ul style="list-style-type: none"> <li>• the range of resources available for conducting a planned burn</li> <li>• the range of laws covering planned burning activities</li> <li>• the range of purposes for which a planned burn is used.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Indigenous land management
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCILM510A Plan for successful cultural practice at work

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release. Supersedes and is not equivalent to AHCILM507A

### Unit Descriptor

This unit covers the process of planning for culturally appropriate work practices to enable Aboriginal and non-Aboriginal practitioners to be successful in their chosen field of work or vocation.

### Application of the Unit

This unit applies to those persons who plan for culturally appropriate work practices that enable practitioners to be successful in their chosen field of work or vocation.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

AHCILM306A Follow Aboriginal cultural protocols

### Employability Skills Information

This unit contains employability skills

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse essential features of Aboriginal families and cultures	1.1 Information about Australian Aboriginal history up to the present time is accessed and reviewed 1.2 Concepts such as Dreaming, connection to Country and other Aboriginal beliefs are researched 1.3 Traditional and contemporary social structures of Aboriginal families and societies are identified 1.4 <i>Elements of Aboriginal societies</i> (i.e. spirituality, land, ecology, social structure, political structure) are researched and used to inform interactions with Aboriginal people
2. Review changes to Aboriginal societies since <i>European settlement</i>	2.1 Colonisation and the impacts on Aboriginal peoples are researched and documented 2.2 Racist behaviours and the impact that these have had on Aboriginal peoples is identified 2.3 Personal responses to information about the positive and negative effects of colonisation are analysed 2.4 Research into the <i>impacts of colonisation, settlement and government policies on Aboriginal cultural practices</i> is conducted and analysed
3. Identify government efforts to address continuing effects of colonisation	3.1 Various policies implemented by governments in Aboriginal affairs are investigated and analysed 3.2 The processes involved in government consultation with Aboriginal people, communities and organisations are identified 3.3 Effects of government policies in Aboriginal affairs and their implementation processes on communities are evaluated 3.4 Effectiveness of a chosen government policy is investigated through Community consultation and evaluated 3.5 Strategies for addressing any public perception of 'special treatment' for Indigenous peoples in relation to the chosen policy are developed in consultation with Community
4. Apply understanding of Aboriginal cultural protocols and identity to daily work routines	4.1 Features of Aboriginal identity and personal <i>cultural maintenance</i> are identified 4.2 How these features are expressed in daily work life is analysed and used to inform workplace relationships and interactions 4.3 The obligations of cultural maintenance in relation to a work issue is identified and analysed 4.4 Allowances for absences due to family/seasonal cultural

ELEMENT	PERFORMANCE CRITERIA
5. Plan culturally appropriate work practices	<p>practices and bereavement are applied appropriately</p> <p>4.5 Workplace conflicts are worked through and dealt with in culturally appropriate ways</p> <p>4.6 Possible strategies for cultural maintenance in work and the workplace are collaboratively developed</p> <p>5.1 A vision/workplace goals for own work are developed</p> <p>5.2 Common culturally inappropriate work practices are identified and discussed</p> <p>5.3 Strategies to change these practices are collaboratively developed</p> <p>5.4 An implementation and evaluation plan for the strategies is developed</p> <p>5.5 Ways in which Aboriginal practitioners can effect change to create greater cultural awareness in the workplace are proposed</p>

## Required Skills and Knowledge

### Required skills include:

#### Ability to:

- identify essential features of Aboriginal families and cultures
- investigate impacts of changes on Aboriginal societies since European settlement
- analyse effects of examining isolated cultural elements of a holistic culture as individual doctrines
- participate in 'cultural maintenance'
- plan culturally appropriate work practices
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities

### Required knowledge includes:

#### Knowledge of:

- history and effects of European invasion on Aboriginal and Torres Strait Islander peoples
- the concept of cultural maintenance
- change processes
- planning work practices
- areas of overlap within sections of Aboriginal cultural life
- Aboriginal worldview, including the dimension of holistic notion of culture

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	The delivery and assessment of this unit must comply with Community protocols and be carried out in consultation with and in participation with Traditional Owners and/or Elders and custodians of that specific Country.

	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge. Candidates must demonstrate evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• show comprehensive understanding of the essential features of Aboriginal families and culture applied in workplace relationships</li> <li>• review impacts on Aboriginal societies and communities of European settlement and subsequent government policies</li> <li>• describe and/or identify practices in the workplace aimed at sustaining Aboriginal cultural maintenance</li> <li>• plan culturally appropriate work practices</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Assessment events must be contextualised to meet the needs of the particular group, including:</p> <ul style="list-style-type: none"> <li>• a Community, educational or workplace setting</li> <li>• involvement of people approved by cultural authorities and/or Traditional Owners of the relevant local Community</li> <li>• candidates who have gained relevant knowledge and skills through their life experience</li> </ul>
<p><b>Method of assessment</b></p>	<p>A range of assessment methods should be used to assess competency in planning for successful cultural practice at work. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with third-party workplace reports of on-the-job performance</li> <li>• verbal or written questioning</li> <li>• observation of participation in workplace planning or activities</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Elements of Aboriginal society</i></b> may refer to:</p>	<ul style="list-style-type: none"> <li>• connection to Country</li> <li>• creation events</li> <li>• structure of Community such as lore/law men and women, elders and custodians</li> <li>• practicality and purpose</li> <li>• appropriate behaviour, protocols and restrictions</li> <li>• spiritual value of knowledge and stories</li> <li>• communal ownership of some knowledge and material</li> <li>• intergenerational ownership of some knowledge and material</li> <li>• oral tradition of passing on knowledge and responsibilities</li> <li>• roles as custodians of specified knowledge, ceremony, designs, information</li> <li>• kinship and relationships</li> <li>• storytelling</li> </ul>
<p><b><i>European settlement</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• original 18<sup>th</sup> century encounters with Aboriginal peoples</li> <li>• pastoral settlement of Australia in the last 200 hundred years up to present time</li> </ul>
<p><b><i>Impacts on Aboriginal cultures and cultural practices</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• social, cultural, religious, economic, spiritual, language factors and outcomes</li> <li>• Aboriginal perspectives</li> </ul>
<p><b><i>Cultural maintenance</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• participation in personal and Community cultural activities and ceremonies</li> <li>• family and kinship obligations</li> <li>• time out on Country and time to fulfil cultural ceremony obligations and interests</li> <li>• obligations to cultural sites, landscapes and cultural materials</li> </ul>

## Unit Sector(s)

Indigenous land management





## AHCILM601A Manage cultural processes in an Indigenous organisation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing cultural processes in an indigenous organisation according to community and organisational guidelines and best practice procedures: recognise differences between indigenous and non indigenous management processes; identify the accommodation required to meet non indigenous business requirements through indigenous management processes; apply a strategic/business planning model to an indigenous organisation.
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### Application of the Unit

<b>Application of the unit</b>	This unit is carried out at a strategic level, with the need to work within cultural protocols and promote cultural diversity and integrity.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define indigenous management processes as compared with non indigenous strategies	<p>1.1.The framework/organisational structure for the organisation and/or the community is identified.</p> <p>1.2.Indigenous management processes are identified and described.</p> <p>1.3.Non indigenous management processes are identified and described.</p> <p>1.4.Comparisons between indigenous management process and non indigenous management processes are recognised and recorded.</p> <p>1.5.Differences between indigenous management structures and non indigenous management processes are recorded and analysed.</p>
2. Analyse strategies for working with non indigenous organisations and people	<p>2.1.Differences in relation to working as an indigenous person within a non indigenous organisation and/or person(s) are recorded.</p> <p>2.2.Potential conflicts are recognised.</p> <p>2.3.Strategies for minimisation of conflicts are identified and implemented.</p>
3. Analyse the impact of a non indigenous framework on an indigenous business structure	<p>3.1.Requirements of a non indigenous framework are identified and analysed.</p> <p>3.2.Indigenous ways of working are identified and analysed.</p> <p>3.3.Potential conflicts in relation to an indigenous organisation working within a non indigenous structure are identified and recorded.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4.Possible strategies to negotiate through the conflict are identified and implemented.
4. Develop and implement a vision for the business	4.1.Planning processes are identified and evaluated. 4.2.Identify goals and directions for the business. 4.3.Apply goals and directions to operate within a culturally appropriate framework. 4.4.A model for planning business activities is developed and presented.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- manage cultural processes in an indigenous organisation applies to the
- deal with personal negative responses/reactions in a positive way.
- develop strategies that support the concept/implementation of Indigenous management (principles).
- understand and engage effectively in mediation and conflict resolution.
- recognise and encourage the development of an individual's interpersonal skills.
- analyse and evaluate skills.
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- contemporary management practices and styles.
- indigenous management practices and styles.
- business planning and strategic planning practices.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise differences between indigenous and non indigenous management processes</li> <li>• identify the accommodation required to meet non indigenous business requirements through indigenous management processes</li> <li>• apply a strategic/business planning model to an indigenous organisation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Indigenous management processes involved may include:	<ul style="list-style-type: none"> <li>• indigenous ways of managing such as group decision making processes</li> <li>• "flatter" management structures (egalitarian)</li> <li>• focus of control</li> <li>• and organisational structures.</li> </ul>
Non indigenous management	<ul style="list-style-type: none"> <li>• decision-making processes top-down</li> <li>• formal management structures</li> </ul>

**RANGE STATEMENT**

processes involved may include:	<ul style="list-style-type: none"> <li>• focus of control</li> <li>• organisational structures</li> <li>• communication patterns.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Indigenous land management
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCINF201A Carry out basic electric fencing operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing and maintaining electric fences in a rural enterprise and defines the standard required to: select the correct tools and equipment; apply appropriate methods to install and maintain electric fences; erect fences to contour; safely install components without damage; dismantle and transport fences.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision within established routines, methods and farm procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for fencing operations	<p>1.1. Tools and materials appropriate to meet job requirements are selected and checked against the work plan.</p> <p>1.2. Routine pre-operational checks of tools are carried out and adjustments made according to manufacturers specifications.</p> <p>1.3. Faulty or unsafe tools are identified and segregated for repair or replacement according to enterprise requirements.</p> <p>1.4. Potential and existing hazards in the workplace are risk assessed and minimised according to Occupational Health and Safety (OHS) and enterprise requirements.</p>
2. Carry out fencing operations	<p>2.1. Suitable personal protective equipment is selected, used and maintained according to OHS and workplace procedures.</p> <p>2.2. Dismantling operations are carried out, as required, with a focus on minimising unnecessary damage and recovering all re-useable materials.</p> <p>2.3. Repair requirements are identified and carried out according to work plan procedures.</p> <p>2.4. Sundry electric fences are erected to contour according to work plan and OHS requirements.</p> <p>2.5. Electric fence components are installed neatly according to manufacturer's specifications.</p> <p>2.6. All work is carried out safely according to OHS and enterprise requirements.</p>



ELEMENT	PERFORMANCE CRITERIA
3. Complete fencing operation	3.1. Post holes are firmly filled to remove potential hazards and minimise environmental impact. 3.2. Work site is cleared and tidied and all non-reusable materials are disposed of in an environmentally responsible manner. 3.3. Tools and re-usable materials are transported safely from the work site and stored according to enterprise and manufacturers recommendations. 3.4. Further identified work or repair requirements are reported according to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- minimise environmental impact
- interpret and apply task instruction
- complete work efficiently within timeframes
- maintain physical fitness
- read and interpret work plans
- communicate with work team and supervisor
- calculate and measure fencing wire requirements
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- uses and structures of a range of electric fence types
- uses and types of standard fencing tools and materials
- common electric fencing hazards and safety precautions
- dangers posed by electricity to personnel and livestock
- difference between portable and mains power
- OHS legislative requirements
- relevant codes of practice with regard to protection of the environment.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select the correct tools and equipment</li> <li>• apply appropriate methods to install and maintain electric fences</li> <li>• erect fences to contour</li> <li>• safely install components without damage</li> <li>• dismantle and transport fences.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Electric fences:	any electric fencing system components such as: <ul style="list-style-type: none"> <li>• portable live posts</li> <li>• insulators</li> <li>• energiser and wire.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Infrastructure
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCINF202A Install, maintain and repair fencing

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of installing, maintaining and repairing fencing and defines the standard required to: select the appropriate materials and tools; erect fence; install gates and components; assess the fencing site for environmental impacts of the fence; undertake repairs, record work activities and clean up the fencing site; remove and dispose of, or recycle waste.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to workers in rural organisations who operate under limited supervision with checking only related to overall progress within established enterprise routines and procedures.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for fencing work	<p>1.1. Appropriate tools and materials are selected in accordance with task requirements, manufacturer's guidelines and fence design.</p> <p>1.2. Faulty or unsafe tools are identified and put aside for repair or replacement.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p> <p>1.4. Transport of fencing materials, tools and equipment to worksite is arranged.</p>
2. Undertake fence installation	<p>2.1. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>2.2. Posts and stays are installed and secured in accordance with industry practice.</p> <p>2.3. Wire is strung and tensioned in accordance with manufacturer's guidelines and industry practice.</p> <p>2.4. Wire netting or other fencing materials are attached in accordance with manufacturer's guidelines and industry practice.</p> <p>2.5. Gates are positioned and attached and checked for correct operation.</p>
3. Maintain and repair fencing	<p>3.1. Faults or structural damage are identified and necessary repairs are carried out in accordance with industry practice and manufacturer's guidelines.</p> <p>3.2. Dismantling operations are carried out recovering re-useable materials.</p> <p>3.3. Further maintenance or repair works are identified</p>

ELEMENT	PERFORMANCE CRITERIA
	and reported. 3.4. Used fencing material is packed for reuse or disposed of according to enterprise procedures.
4. Complete fencing work	4.1. Work area is cleared and tidied and all non re-useable materials are disposed of in an environmentally responsible manner. 4.2. Tools, personal protective equipment and re-useable materials are cleaned and stored. 4.3. Work activities are recorded in accordance with industry practice.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work practices
- site fencing materials and tools for efficient use
- use fencing tools safely and in accordance with manufacturer's guidelines
- install fence posts and stays
- tension fencing wire and netting in accordance with manufacturers guidelines
- string, strain and tie off wires safely and efficiently
- use hand tools safely
- operate powered fencing machinery in a safe, efficient and controlled manner
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- designs and purpose of a range of conventional fencing
- wire types, knots, tensions applications and limitations
- common hazards involved in fencing installation, maintenance and repair

**REQUIRED SKILLS AND KNOWLEDGE**

- uses and types of fencing tools and equipment
- fencing materials manufacturers specifications and guidelines
- OHS and environmental legislation, codes of practice and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select the appropriate materials and tools
- erect fence, install gates and components
- assess the fencing site for environmental impacts of the fence
- undertake repairs
- record work activities
- clean up the fencing site and remove and dispose of, or recycle, waste.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Fences may include:

- post and wire
- wire netting.

**Unit Sector(s)**

<b>Unit sector</b>	Infrastructure
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCINF203A Maintain properties and structures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining and repairing properties and structures, in a situation that does not require the specialist skills of another trade, and defines the standard required to: demonstrate correct selection and safe use of tools; apply basic building or construction techniques; store or dispose of unused or waste materials.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking usually within a team environment.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify and confirm maintenance requirements	<p>1.1. Visual inspections are conducted of structures and facilities to locate and evaluate defects, deterioration and impending defects.</p> <p>1.2. Property infrastructure and resources are checked for correct operation, minor maintenance needs and damage.</p> <p>1.3. Maintenance plan is confirmed according to supervisor's instructions and enterprise requirements.</p>
2. Select and prepare tools, equipment and materials	<p>2.1. Tools, equipment and materials appropriate to the job requirements are selected and checked for serviceability according to manufacturer's specifications.</p> <p>2.2. Faulty or unsafe tools are identified and segregated for repair or replacement and reported according to enterprise requirements.</p> <p>2.3. Existing and potential hazards to health and safety are identified, assessed and reported according to Occupational Health and Safety (OHS) and enterprise requirements.</p>
3. Carry out routine maintenance	<p>3.1. Suitable personal protective equipment is selected, used, maintained and stored according to OHS requirements.</p> <p>3.2. Routine maintenance to structures and surroundings is carried out according to the maintenance plan and enterprise requirements.</p> <p>3.3. Minor repairs to building cladding, and treatments to structural finishes, are carried out as required to minimise deterioration.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Complete maintenance activities	<p>4.1. Worksite, tools and materials are cleaned, returned to operating order, and stored according to OHS and enterprise requirements.</p> <p>4.2. Unwanted materials and waste from maintenance activities is collected, treated and disposed or recycled according to enterprise, OHS and environmental requirements.</p> <p>4.3. Relevant information is documented according to industry, enterprise requirements and OHS requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work practices
- interpret and apply task instructions
- operate a broad range of tools and equipment
- carry out building and maintenance operations
- work in team environment
- observe and report on the condition of structures and equipment
- communicate with work team and supervisor
- estimate and calculate volumes and usage.

#### Required knowledge

- characteristics, capabilities and limitations of materials, equipment and tools
- operation of water taps and reticulation systems
- types of building cladding and finishes, purpose and use
- identification of defects and appropriate repair methods
- appropriate selection of repair materials
- OHS legislative requirements and Codes of Practice
- relevant Codes of Practice and procedures with regard to protection of the environment.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• demonstrate correct selection and safe use of tools</li> <li>• apply basic building or construction techniques</li> <li>• store or dispose of unused or waste materials.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Properties may include:	<ul style="list-style-type: none"> <li>• land areas</li> <li>• worksites</li> <li>• buildings and all components.</li> </ul>
Structures may include:	<ul style="list-style-type: none"> <li>• greenhouses</li> <li>• igloos</li> <li>• potting houses</li> <li>• poly-tunnels</li> <li>• glass houses</li> <li>• shade houses</li> <li>• sheds</li> <li>• work sheds</li> <li>• cool rooms</li> <li>• staff rooms</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• water tanks</li> <li>• yards</li> <li>• stock handling structures</li> <li>• silage pits</li> <li>• fodder and grain storages</li> <li>• park furniture</li> <li>• car parks, roads, pathways, pergolas</li> <li>• information boards, benches, landscape features and site furniture.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Infrastructure
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCINF204A Fabricate and repair metal or plastic structures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of undertaking minor fabrication and repair of metal or plastic structures where the services of a specialist trades person is not necessary, and defines the standard required to: identify job requirements and select materials, tools and equipment; apply safe work practices including use of Personal Protective Equipment (PPE); identify and use jointing methods and safe repair/fabrication techniques; clean up after operations.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the working autonomously and would be carried out unsupervised within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for fabrication and/or repair	<p>1.1.Items for repair or fabrication are identified against work plans using industry recognised techniques.</p> <p>1.2.Equipment appropriate to job requirements is selected and confirmed against work plan.</p> <p>1.3.Jointing/welding materials suitable to the job requirements are selected.</p> <p>1.4.Potential and existing hazards in the workplace are identified and reported to the supervisor.</p>
2. Assist with maintaining structures and facilities	<p>2.1.Suitable personal protective equipment is selected, used and maintained according to Occupational Health and Safety (OHS) and enterprise requirements.</p> <p>2.2.Equipment and structures are safely repaired or fabricated according to enterprise requirements and industry standards.</p> <p>2.3.Jointing methods used in the fabrication and/or repair structures and equipment are according to enterprise requirements and industry standards.</p>
3. Complete fabrication and repair	<p>3.1.Materials and equipment are cleaned and stored according to manufacturer's guidelines and enterprise policy.</p> <p>3.2.Work area is cleaned and maintained, and any hazardous materials removed in an environmentally responsible manner.</p> <p>3.3.Completed work is detailed and recorded according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- safely use welding and thermal cutting equipment
- demonstrate safe and environmentally responsible workplace practices
- read and interpret manufacturers specifications, work and maintenance plans, and MSDS
- effectively communicate information, interpret and apply task instructions, and maintain records and reports
- estimate and measure dimensions, and calculate volumes
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types of fabrication materials and their various applications
- range of metals and non-metal materials that may be used in fabrication and repair
- industry jointing/welding techniques and fabrication and repair methods
- OHS legislative requirements
- environmental codes of practice with regard to equipment operation and maintenance activities
- operating principles and operating methods for equipment
- various types of welders and respective functions
- environmental impacts and minimisation measures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy



<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify job requirements and select materials, tools and equipment</li> <li>• apply safe work practices including use of PPE</li> <li>• identify and use jointing methods and safe repair/fabrication techniques</li> <li>• clean up after operations.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Fabrication may include:	<ul style="list-style-type: none"> <li>• working with metal, fibreglass and plastic components in the manufacture, repair and/or installation of plant, equipment and structures.</li> </ul>
Equipment may include:	<ul style="list-style-type: none"> <li>• cutting tools</li> <li>• welding and thermal cutting equipment</li> <li>• soldering irons.</li> </ul>
Jointing methods may include:	<ul style="list-style-type: none"> <li>• silver soldering</li> <li>• soldering</li> <li>• solid rivets</li> <li>• pop rivets</li> <li>• folding</li> <li>• self tapping screws</li> <li>• glues</li> <li>• silicones.</li> </ul>
Materials may include:	<ul style="list-style-type: none"> <li>• iron and steel</li> <li>• copper or brass</li> <li>• aluminium</li> <li>• cast iron</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• high tensile steel</li> <li>• gun metal</li> <li>• plastics.</li> </ul>
Fabrication techniques may include:	<ul style="list-style-type: none"> <li>• cutting</li> <li>• forming</li> <li>• jointing</li> <li>• welding</li> <li>• brazing</li> <li>• soft soldering</li> <li>• thermal cutting</li> <li>• hot air welding</li> <li>• drilling</li> <li>• plastic welding and forming</li> <li>• brazing or welding cast iron including the use of pre-heating and controlled cooling</li> <li>• the use of the full range of jointing techniques</li> <li>• the use of masonry anchors and bolts</li> <li>• silver soldering of high tensile materials</li> <li>• gas welding or silver soldering copper piping</li> <li>• metal forming and wrought iron fabrication</li> <li>• hard facing techniques</li> <li>• thread cutting or tapping.</li> </ul>
Welding techniques may include:	<ul style="list-style-type: none"> <li>• manual metal arc welding (MMAW)</li> <li>• gas metal arc welding (MGAW)</li> <li>• gas tungsten arc welding (GTAW)</li> <li>• oxy acetylene (or fuel gas) welding (OAW).</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Infrastructure
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCINF301A Implement property improvement, construction and repair

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to carry out maintenance and construction of improvements to properties and defines the standard required to: prepare basic plans for the work; ensure any planning and permissions have been put in place, and planning or building requests or restrictions are complied with; carry out building or construction work efficiently and safely; confirm that the completed or repaired structure meets the standard specified in the contract; minimise environmental impacts and dispose of waste appropriately.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in rural enterprises or who work as contractors for rural industry. The work is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess property condition	<p>1.1. Property structures are assessed for soundness and recorded according to enterprise requirements.</p> <p>1.2. Property improvements and maintenance requirements are identified and determined according to enterprise objectives.</p> <p>1.3. Budgetary parameters are identified and maintained according to enterprise requirements.</p>
2. Prepare tools and equipment	<p>2.1. Tools, equipment and materials required to carry out property improvements are identified and arranged on site.</p> <p>2.2. Tools and equipment are checked for serviceability according to manufacturer's specifications.</p> <p>2.3. Faulty or unsafe tools and equipment are identified and segregated for repair or replacement according to enterprise requirements.</p> <p>2.4. Existing and potential hazards to health and safety are identified, assessed and reported according to Occupational Health and Safety (OHS) and enterprise requirements.</p>
3. Carry out property	3.1. Suitable personal protective equipment is selected,

ELEMENT	PERFORMANCE CRITERIA
improvements	<p>used, maintained and stored according to OHS and enterprise requirements.</p> <p>3.2. Property structures are constructed, repaired or dismantled as required according to manufacturer's specifications and/or work plan and regulations (e.g., demolition code).</p> <p>3.3. Basic concrete, masonry or metal repairs are carried out according to manufacturer's specifications and work plan.</p> <p>3.4. Maintenance to roads and tracks are determined and carried out according to work plan and enterprise requirements.</p>
4. Complete maintenance and improvement activities	<p>4.1. Property structures and surrounds are monitored, maintained and improved as required.</p> <p>4.2. Worksite, tools and equipment are cleaned, returned to operating order, and stored according to OHS and enterprise requirements.</p> <p>4.3. Unwanted materials and waste from maintenance activities is collected, treated and disposed of or recycled according to enterprise environmental and OHS requirements.</p> <p>4.4. Relevant information is documented and reported according to industry and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- operate a broad range of tools and equipment
- apply hand/eye coordination
- construct assemblies
- assess the nature and priority of required repairs and maintenance
- complete a range of earthworks to specification
- lay and tie reinforcing to specifications
- observe and report on the condition of structures and equipment
- interpret and apply task instructions

## REQUIRED SKILLS AND KNOWLEDGE

- communicate with work team and supervisor
- read and interpret maps, plans, site drawings and simple technical drawings
- record and report on damage and recommend repairs
- estimate and calculate volumes, usage and measurements
- identify and report hazards and demonstrate safe workplace practices
- minimise impacts to the environment
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- machinery and equipment required to carry out property improvements, construction and repairs
- types of building materials
- concreting procedures and techniques
- wood and steel fabrication procedures
- drainage requirements around structures, tracks and roads
- legislative requirements with regard to construction and structural improvements
- types of building cladding and finishes, purpose and use
- relevant Codes of Practice with regard to protection of the environment
- OHS and environmental legislative and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare basic plans for the work
- ensure any planning and permissions have been put

<b>EVIDENCE GUIDE</b>	
	<p>in place, and planning or building requests or restrictions are complied with</p> <ul style="list-style-type: none"> <li>• carry out building or construction work efficiently and safely</li> <li>• confirm that the completed or repaired structure meets the standard specified in the contract</li> <li>• minimise environmental impacts and dispose of waste appropriately.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Property improvement, construction and repair may include:	<ul style="list-style-type: none"> <li>• buildings</li> <li>• yards</li> <li>• livestock handling structures</li> <li>• fences</li> <li>• water supply systems</li> <li>• roads</li> <li>• tracks</li> <li>• soil conservation works</li> <li>• irrigation and drainage channels</li> <li>• silage pits</li> <li>• grain and fodder storage</li> <li>• trellises</li> <li>• shelters and shade cloth drying racks.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Farm infrastructure
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCINF302A Plan and construct an electric fence

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of planning, constructing and maintaining an electric fence in a rural enterprise and defines the standard required to: develop an electric fencing plan for the enterprise; calculate and measure fencing requirements and calculate costings off the fencing plan; construct an electric fence that meets specifications and the needs of the livestock enterprise; test and monitor the electric fence for earthing and current flow, resistance and leakage.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm workers and fencing contractors and is likely to be carried out under routine supervision within enterprise guidelines. It requires the application of skills and knowledge to identify and incorporate the topographical features of a property into an efficient and cost-effective fencing plan for construction.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine electric fencing requirements	<p>1.1.Fencing requirements are assessed according to property maps, legislative requirements and enterprise objectives.</p> <p>1.2.Equipment, materials and labour requirements are determined, and estimated costings are maintained within budgetary constrains.</p> <p>1.3.Alternative electric fencing options are determined and compared to ensure cost-effectiveness.</p> <p>1.4.Plan is prepared giving consideration to siting fences in relation to natural features and proposed uses.</p>
2. Prepare for construction	<p>2.1.Work plan is accessed and clarification sought where required.</p> <p>2.2.Tools and fencing equipment are arranged, and safely and efficiently transported to the work site.</p> <p>2.3.Labour requirements are arranged and confirmed according to enterprise requirements.</p> <p>2.4.Potential and existing hazards in the workplace are risk assessed and minimised according to Occupational Health and Safety (OHS) requirements.</p>
3. Construct electric fence	<p>3.1.Suitable personal protective equipment is selected, used and maintained according to OHS and enterprise requirements.</p> <p>3.2.Electric fence is constructed according to work plan, OHS and enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3.Gates are attached and appropriately positioned for correct operation and function according to work plan.</p> <p>3.4.Energiser is installed according to manufacturer's specifications, OHS and enterprise requirements.</p> <p>3.5.All work is carried out safely according to OHS and enterprise requirements.</p>
4. Complete fencing operations	<p>4.1.Fencing is checked for correct installation and performance.</p> <p>4.2.Electric fence faults are identified and rectified according to manufacturer's specifications, OHS and enterprise requirements, and level of complexity.</p> <p>4.3.Work site is cleared and tidied and all waste is disposed of in an environmentally responsible manner.</p> <p>4.4.Tools and fencing equipment are transported safely from the work site and checked and stored according to manufacturer's recommendations and enterprise requirements.</p> <p>4.5.Relevant information is recorded and maintained according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- draft fencing plans and specifications
- operate fencing tools and construction equipment
- mark fencing lines
- install strainer assemblies and posts
- tension and terminate line wires
- fit post insulators
- use effective knots for joining and tying off wires to avoid short circuits
- test electric fences for current and leakage
- minimise environmental impacts

## REQUIRED SKILLS AND KNOWLEDGE

- read and interpret plans
- read plans
- arrange and purchase materials
- calculate and measure fencing requirements and calculate costings of fencing plan
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- basic operation of electric fences including earthing and current flow, resistance and leakage
- difference between portable and mains power
- issues affecting electric fencing in relation to the whole property plan
- range of electric fencing designs, construction methods and materials
- dangers posed by electricity to personnel and livestock
- conditions under which electric fences may cause fire
- safe methods for diagnosing routine faults
- common electric fencing hazards and safety precautions
- relevant State/Territory legislation and regulations regarding electric fences
- OHS legislative requirements
- relevant codes of practice with regard to protection of the environment.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• develop an electric fencing plan for the enterprise</li> <li>• calculate and measure fencing requirements and calculate costings off the fencing plan</li> <li>• construct an electric fence that meets specifications and the needs of the livestock enterprise</li> <li>• test and monitor the electric fence for earthing and current flow, resistance and leakage.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Electric fencing may include:	<ul style="list-style-type: none"> <li>• all of the components and fence designs used for electric fencing.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Farm infrastructure
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCINF303A Plan and construct conventional fencing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to plan and construct conventional fencing and defines the standard required to: site the fence line according to property or land management plan; estimate, cost and source fencing materials and arrange delivery; carry out fencing operations safely and efficiently; construct a fence that meets specifications in plan or contract and is within tolerances for materials; minimise environmental impacts and dispose of waste appropriately.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in rural enterprises or who work as fencing contractors. It is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine fencing requirements	<p>1.1.Fencing requirements are assessed and clarified according to enterprise objectives.</p> <p>1.2.Equipment, materials and labour requirements are determined, and estimated costings are maintained within budgetary constraints.</p> <p>1.3.Plan is prepared giving consideration to siting fences in relation to natural features and proposed uses.</p> <p>1.4.Legal requirements associated with fencing construction are identified.</p>
2. Prepare for construction	<p>2.1.Proposed fencing is checked and verified against property maps and work plan.</p> <p>2.2.Services, structures and features, which may impact on the fencing work, are identified and incorporated into the fencing plan.</p> <p>2.3.Tools and fencing equipment (including safety equipment), are arranged and safely and efficiently transported to the work site.</p> <p>2.4.Labour requirements are arranged and confirmed according to enterprise requirements.</p> <p>2.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented.</p>
3. Construct conventional fence	<p>3.1.Suitable personal protective equipment is selected, used, maintained and stored according to enterprise requirements.</p> <p>3.2.Fence lines are marked out and checked against work plan and property maps.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3.Fence is constructed according to work plan and fence design.</p> <p>3.4.Gates are attached and appropriately positioned for correct operation and function according to work plan.</p> <p>3.5.All work is carried out safely according to enterprise requirements.</p>
4. Complete fencing operations	<p>4.1.Work site is cleared and tidied and all waste is disposed of in an environmentally responsible manner.</p> <p>4.2.Tools and fencing equipment are transported safely from the work site and stored according to manufacturer's recommendations and enterprise requirements.</p> <p>4.3.Tools and equipment faults or malfunctions are reported for repair or replacement according to enterprise requirements.</p> <p>4.4.Relevant information is recorded and maintained according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- construct end assemblies
- construct gate assemblies and swing gates
- string and strain wires to manufacturer's recommended tension
- tie fencing knots
- use and maintain fencing machinery and equipment
- select fencing materials
- arrange and purchase supplies
- demonstrate safe workplace practices
- consult with and report to management
- minimise environmental impacts
- use literacy skills to read, interpret and follow organisational policies and

**REQUIRED SKILLS AND KNOWLEDGE**

procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- issues affecting property fence planning and construction
- procedures for planning fencing in relation to the whole property plan
- range of fencing designs, construction methods and materials
- types of fencing construction tools and equipment
- fencing materials and costings
- common fencing hazards and safety precautions
- OHS legislative requirements and Codes of Practice
- relevant Codes of Practice with regard to the protection of the environment
- hazard identification, assessment and control.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- site the fence line according to property or land management plan
- estimate, cost and source fencing materials and arrange delivery
- carry out fencing operations safely and efficiently

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>construct a fence that meets specifications in plan or contract and is within tolerances for materials</li> <li>minimise environmental impacts and dispose of waste appropriately.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Fencing construction may include:	<ul style="list-style-type: none"> <li>conventional fencing constructed with post and wire/wire netting under tension.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Farm infrastructure
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCIRG101A Support irrigation work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting irrigation work and defines the standard required to: apply safe irrigation work practices; support installation and maintenance activities; handle materials and equipment and clean up following work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking a range of irrigation activities in agricultural, horticultural, commercial and domestic situations.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for irrigation work	<p>1.1. The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2. Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3. Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4. Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5. Irrigation support is provided according to Occupational Health and Safety (OHS) requirements and according to workplace information.</p> <p>1.6. OHS hazards are identified and reported to the supervisor.</p>
2. Undertake irrigation work as directed	<p>2.1. Instructions and directions provided by supervisor are followed, and clarification sought when necessary.</p> <p>2.2. Irrigation work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3. Interactions with other staff and customers are carried out in a positive and professional manner.</p> <p>2.4. Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.</p> <p>2.5. Problems or difficulties in completing work to</p>

ELEMENT	PERFORMANCE CRITERIA
	required standards or timelines are reported to supervisor.
3. Handle materials and equipment	3.1. Waste material and debris produced during irrigation work is stored in a designated area according to supervisor's instructions. 3.2. Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines. 3.3. A clean and safe work site is maintained while undertaking irrigation activities.
4. Clean up on completion of irrigation activities	4.1. Materials are returned to store or disposed of according to supervisor's instructions. 4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions. 4.3. Site is made good according to supervisor's instructions and good environmental practices. 4.4. Work outcomes are reported to the supervisor.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safe work procedures
- prepare materials, tools and equipment for irrigation work
- undertake irrigation work as directed
- handle materials and equipment
- clean up on completion of work
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge



**REQUIRED SKILLS AND KNOWLEDGE**

- safe work practices
- preparing for irrigation work and cleaning up on completion
- basic construction techniques
- irrigation tools and equipment
- maintenance practices for planted areas
- basic repair and maintenance of irrigation components and systems
- OHS legislation and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- apply safe irrigation work practices
- support installation and maintenance activities
- handle materials and equipment
- clean up following work activities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Work tasks may include:

- assisting with installation of irrigation and/or drainage pipes and components for gravity fed or pressurised systems, including digging trenches, back filling of trenches and completing other basic tasks as instructed.
- assisting with maintenance of irrigation and/or drainage systems including clearing blockages, and completing other basic tasks as instructed.
- work with a range of materials including plastic and metal pipes and components using hand tools commonly used in irrigation work.
- associated irrigation activities including:
  - assisting in establishing work base
  - clearing site
  - erecting barriers and signs
  - unloading and loading of materials
  - setting out of works
  - cleaning up site
  - disposal of debris and materials.
- make site good including:
  - paths are swept and cleaned
  - work area is left in a good state
  - disturbed areas are repaired
  - all materials, debris, tools and equipment are removed from site
  - other signs of disturbance or damage are corrected.

Tools and equipment may include:

- levelling equipment
- wheelbarrow
- string lines
- tape measures
- marking gauges
- spades
- shovels
- crow bars
- rakes
- brooms
- sanding blocks
- hacksaws.

**RANGE STATEMENT**

Hazards may include	<ul style="list-style-type: none"> <li>• solar radiation</li> <li>• dust</li> <li>• noise</li> <li>• air- and soil-borne micro-organisms</li> <li>• chemicals and hazardous substances</li> <li>• sharp hand tools and equipment</li> <li>• manual handling</li> <li>• holes</li> <li>• slippery and uneven surfaces.</li> </ul>
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**Unit Sector(s)**

Unit sector	Irrigation
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**Co-requisite units**

Co-requisite units		

**Competency field**

Competency field	
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## AHCIRG201A Assist with the operation of gravity fed irrigation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assisting with the operation of gravity fed irrigation systems under routine supervision and defines the standard required to: handle and shift loads; operate, check, clean and store irrigation equipment; set up field for gravity fed irrigation; estimate and monitor water levels and volumes/flow; identify adverse environmental impacts of gravity fed irrigation system and take appropriate action.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision, within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Set up field for gravity fed irrigation	<p>1.1.Irrigation equipment is handled safely in accordance with Occupational Health and Safety (OHS) practices.</p> <p>1.2.Irrigation equipment is positioned in accordance with enterprise requirements.</p> <p>1.3.Rotobuck area is checked for irrigation set up and action taken as required in accordance with enterprise policy and procedures.</p> <p>1.4.Pumps, bores and other water delivery mechanisms are checked for irrigation set up and action taken as required in accordance with enterprise policy and procedures.</p> <p>1.5.Tarpaulins or other water control devices are positioned and secured as required in accordance with enterprise procedures.</p>
2. Carry out irrigation operations	<p>2.1.Gates and/or valves are opened and shut as necessary in accordance with enterprise procedures.</p> <p>2.2.Required head and water levels in head ditch are achieved and maintained to ensure sufficient water flow and availability to crops.</p> <p>2.3.Required number of siphons are started/opened in accordance with enterprise procedures.</p> <p>2.4.Progress of water flow in furrows is monitored in accordance with enterprise procedures.</p> <p>2.5.Siphons are lifted where irrigation is complete in accordance with enterprise procedures.</p> <p>2.6.Irrigation change is carried out and marked as</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>required.</p> <p>2.7.Irrigation equipment is shifted, as required, for irrigation changes in accordance with OHS guidelines.</p>
3. Clean and store irrigation equipment as require	<p>3.1.Equipment is cleaned and prepared for storage, as necessary, in accordance with enterprise policy and procedures.</p> <p>3.2.Equipment is loaded for transport safely, if necessary, in accordance with OHS practices.</p> <p>3.3.Equipment is stored as required, in accordance with enterprise policy and procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices for using gravity fed irrigation systems.
- start up and close down the system
- monitor progress of water flow
- handle and shift loads
- clean and store system components
- follow enterprise policy and procedures relating to irrigation duties
- estimate water levels and volumes/flow
- identify adverse environmental impacts and take appropriate remedial action
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic operation of gravity fed irrigation system

**REQUIRED SKILLS AND KNOWLEDGE**

- irrigation times for enterprise fields to deliver sufficient volume without over watering
- components of a gravity fed irrigation system including cleaning and storage requirements
- manual handling procedures
- required head and water levels in head ditch
- OHS procedures relating to general activities involved in irrigating field crops using gravity fed irrigation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- handle and shift loads
- operate, check, clean and store irrigation equipment
- set up field for gravity fed irrigation
- estimate and monitor water levels and volumes/flow
- identify adverse environmental impacts of gravity fed irrigation system and take appropriate action.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Gravity fed irrigation may include:	<ul style="list-style-type: none"> <li>• border check systems</li> <li>• contour irrigation</li> <li>• furrow irrigation</li> <li>• hillside flooding</li> <li>• basin irrigation</li> <li>• ebb and flow</li> <li>• flood systems.</li> </ul>
Border check systems may include:	<ul style="list-style-type: none"> <li>• either permanent or temporary earth, plastic or concrete devices for insertion in a drain for reticulating water</li> <li>• contour banks used to collect and distribute water along the perimeter of an irrigation plot</li> <li>• contour banks within a plot to collect/distribute water</li> <li>• larger scale systems to stop water exiting one area to another.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCIRG202A Assist with the operation of pressurised irrigation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assisting with the operation of pressurised irrigation systems under routine supervision and defines the standard required to: assemble and join irrigation system components; monitor irrigation times to deliver sufficient volume without over watering; operate and monitor irrigation systems; estimate water flow and regulate system to achieve and maintain correct operating pressures and water flows.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working with limited supervision, within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assist with setting up of irrigation components	<p>1.1. Irrigation equipment is handled safely in accordance with Occupational Health and Safety (OHS) practices.</p> <p>1.2. Irrigation equipment is positioned, if necessary, in accordance with enterprise requirements.</p> <p>1.3. Irrigation components are checked and action taken, as required, in accordance with enterprise policy and procedures.</p> <p>1.4. Assemble and join irrigation system components where required.</p> <p>1.5. Water outlets are checked in accordance with enterprise practices.</p>
2. Carry out irrigation operations	<p>2.1. Valves are opened and shut, as necessary, in accordance with enterprise procedures.</p> <p>2.2. Required pressures and water flows are achieved and maintained to ensure sufficient water availability.</p> <p>2.3. Equipment is relocated, if necessary, in accordance with enterprise procedures and OHS guidelines.</p>
3. Clean and store irrigation equipment as require	<p>3.1. Equipment is cleaned and prepared for storage, as necessary, in accordance with enterprise policy and procedures.</p> <p>3.2. Equipment is loaded for transport safely, if necessary, in accordance with OHS practices.</p> <p>3.3. Equipment is stored, as required, in accordance with enterprise policy and procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work practices
- shift and transfer loads
- follow enterprise policy and procedures relating to irrigation duties
- assemble and join irrigation system components
- operate irrigation systems (i.e., turn on and off)
- regulate system to achieve and maintain correct operating pressures and water flows
- estimate water flow
- monitor the environmental impacts of pressurised irrigation
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic operation of pressurised irrigation system
- irrigation times to deliver sufficient volume without over watering
- manual handling procedures
- OHS and environmental procedures relating to using pressurised irrigation systems.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assemble and join irrigation system components</li> <li>• monitor irrigation times to deliver sufficient volume without over watering</li> <li>• operate and monitor irrigation systems</li> <li>• estimate water flow</li> <li>• regulate system to achieve and maintain correct operating pressures and water flows.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pressurised irrigation may include:	<ul style="list-style-type: none"> <li>• micro-irrigation systems</li> <li>• spray irrigation systems.</li> </ul>
Micro-irrigation systems may include:	<ul style="list-style-type: none"> <li>• mains pressure</li> <li>• low pressure</li> <li>• below or above ground</li> <li>• sprays systems</li> <li>• drip emitter trickle</li> <li>• t-tape</li> <li>• mini-sprinklers</li> <li>• capillary pop ups</li> <li>• gear driven sprinklers.</li> </ul>
Spray irrigation systems may include:	<ul style="list-style-type: none"> <li>• travelling irrigators (soft hose, hard hose boom type)</li> <li>• centre pivot</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• linear move</li> <li>• powered side roll hand shift permanent (installed)</li> <li>• bike shift/easy shift.</li> </ul>
Irrigation systems may include:	<ul style="list-style-type: none"> <li>• a range from manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Irrigation
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCIRG203A Install micro-irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing micro-irrigation systems under routine supervision and defines the standard required to: organise equipment and materials for installation work; set out and prepare site; install and test the irrigation system; monitor effectiveness and environmental impacts of the micro-irrigation system.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in production or amenity horticulture enterprises that operate under limited supervision and within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare tools and materials for installation work	<p>1.1. Materials, tools, equipment and machinery are selected according to irrigation design requirements and supervisors instructions.</p> <p>1.2. The site for installation of the micro-irrigation system is identified according to enterprise plans and work procedures.</p> <p>1.3. Parts and equipment delivered to the site are checked according to system drawings and specifications.</p> <p>1.4. Water supply is checked to ensure that it is compatible with system specifications.</p>
2. Set out and prepare site	<p>2.1. Measurement and marking out of irrigation lines is undertaken as directed by supervisor.</p> <p>2.2. Equipment operation and work practices conform to enterprise and legislative Occupational Health and Safety (OHS) requirements.</p> <p>2.3. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer's specifications and enterprise work procedures.</p> <p>2.4. OHS hazards are identified, risks assessed and risk controls are implemented.</p> <p>2.5. Personal Protective Equipment (PPE) is selected, used and maintained according to procedures</p>
3. Install irrigation components	<p>3.1. Work is undertaken according to plan and supervisor's instructions.</p> <p>3.2. Components are assembled and connected according to plan, with joints completed and tested.</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. A clean and safe work area is maintained while installation work is carried out.</p> <p>3.4. Tools are chosen appropriate to the task being undertaken, and used according to guidelines and safe working practices.</p>
4. Complete installation work	<p>4.1. Earthworks are finished off to plan specifications and enterprise work procedures.</p> <p>4.2. The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p> <p>4.3. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p> <p>4.4. System is flushed and commissioned as directed.</p> <p>4.5. Operating faults are identified and reported to supervisor and/or corrective actions taken.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- organise equipment and materials for installation work
- set out and prepare site
- install irrigation components
- complete installation work
- communicate with work team members, supervisors, contractors and consultants
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- methods and techniques of micro-irrigation

**REQUIRED SKILLS AND KNOWLEDGE**

- components of an micro-irrigation system
- characteristics and operation of joints, valves and sprinkler components
- operation of pumps and water flow rates
- behaviour of water on varying terrain and soil types
- soil moisture testing techniques
- OHS and environmental legislation and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- organise equipment and materials for installation work
- set out and prepare site
- install and test the irrigation system
- monitor effectiveness and environmental impacts of the micro-irrigation system.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Micro-irrigation systems include:	<ul style="list-style-type: none"> <li>• low pressure micro-sprays</li> <li>• drippers.</li> </ul>
Irrigation equipment may include:	<ul style="list-style-type: none"> <li>• pumps</li> <li>• delivery equipment</li> <li>• system controllers.</li> </ul>
Water supplies may include:	<ul style="list-style-type: none"> <li>• underground</li> <li>• mains</li> <li>• surface storage</li> </ul> <p>including fixtures such as:</p> <ul style="list-style-type: none"> <li>• dams</li> <li>• bores</li> <li>• windmills</li> <li>• tanks</li> <li>• channels.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Irrigation
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCIRG204A Lay irrigation and/or drainage pipes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of laying irrigation and/or drainage pipes and defines the standard required to: set out and excavate trenches using manual equipment and a machine operator; check trench depth and grade; lay bedding materials; position irrigation and/or drainage of varying types and sizes; install pipe joints and fittings to job specification.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in irrigation enterprises or contracting businesses. The work is normally carried out with limited supervision and within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and prepare job	<p>1.1. Materials required for the job are transported to the location and stacked in a safe position.</p> <p>1.2. Tools, equipment and machinery are selected consistent with the requirements of the job.</p> <p>1.3. Quality Assurance requirements are recognised and adhered to.</p> <p>1.4. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p>
2. Set out and excavate trenches	<p>2.1. Location and depths of trenches is determined from job drawings.</p> <p>2.2. Trench location is set out with pegs and string line and clearly marked with appropriate marking material.</p> <p>2.3. Manual support is provided to machine operator with excavation of trenches, shoring or battering in accordance with OHS requirements.</p> <p>2.4. Trenches are cleaned out by hand and corners left square.</p> <p>2.5. Trench depths and grades are checked for conformity to job requirements.</p>
3. Lower and position pipes	<p>3.1. Bedding materials are laid and consolidated to specified depths and grades.</p> <p>3.2. Pipes are installed/lowered into position with appropriate mechanical equipment according to</p>

ELEMENT	PERFORMANCE CRITERIA
	specifications. 3.3.Pipe joints and fittings are installed to job specification. 3.4.Pipes are back filled to specifications and cover left level with surrounding ground.
4. Clean up	4.1.Site is cleared and excess soil, debris and unwanted materials removed in accordance with organisational procedures and environmental requirements. 4.2.Tools and equipment are cleaned, maintained and stored.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- read and interpret scale drawings and specifications
- use hand signals for communicating with machine operator
- measure trench width, depth, grade and location
- lay and join irrigation pipe
- level cover with existing ground
- use power tools and hand tools
- handle materials safely
- work safely to instructions
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- OHS requirements for excavating, filling trenches and laying pipes, including relevant legislation regulations and codes
- irrigation and/or drainage pipes, types and sizes
- hand and power tools and equipment
- bedding and backfill materials and handling methods

**REQUIRED SKILLS AND KNOWLEDGE**

- scale drawings for laying irrigation and/or drainage pipes
- hand signals for communication
- OHS issues and procedures related to trenching and pipe laying
- Quality Assurance procedures for excavating, filling trenches and laying pipes
- environmental impacts and procedures for laying pipe.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- set out and excavate trenches using manual equipment and a machine operator
- check trench depth and grade
- lay bedding materials
- position irrigation and/or drainage of varying types and sizes
- install pipe joints and fittings to job specification.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**



**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Irrigation and drainage pipes may include:	<ul style="list-style-type: none"> <li>• concrete</li> <li>• metal</li> <li>• polythene</li> <li>• polyvinylchloride (PVC)</li> <li>• the type and size of pipe will vary with the terrain, soil type and traffic load.</li> </ul>
Fittings may include:	<ul style="list-style-type: none"> <li>• valves</li> <li>• outlets</li> <li>• thrust blocks and connecting surfaces such as O-rings.</li> </ul>
Mechanical equipment may include:	<ul style="list-style-type: none"> <li>• equipment for lowering irrigation and/or drainage pipes but does not include operating excavation machinery such as trench diggers or ditch witches.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Irrigation
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCIRG205A Maintain gravity-fed irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining gravity fed irrigation systems under routine supervision and defines the standard required to: check for problems and return the system to smooth running; build or repair banks; control weeds and silt build-up; carry out maintenance activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working with limited supervision, within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out pre and post season maintenance	<p>1.1. Equipment is prepared pre-season for effective operation in accordance with design specifications and enterprise standards.</p> <p>1.2. System is closed and made resistant to damage post-season in accordance with design specifications and enterprise standards.</p> <p>1.3. Equipment is stored post-season according to enterprise standards.</p>
2. Carry out routine maintenance activities on gravity fed irrigation delivery systems	<p>2.1. All maintenance activities are carried out according to the maintenance program, Occupational Health and Safety (OHS) requirements and the manufacturer's specifications.</p> <p>2.2. Mechanical equipment is serviced in accordance with the operator's manual or as directed.</p> <p>2.3. Supply and distribution system is flushed and cleaned as directed.</p> <p>2.4. System inlets, outlets, structures and fittings are maintained as directed.</p> <p>2.5. System is checked for smooth running and is free of damage, leaks and blockages in channels, drains and outlets, as necessary, in accordance with design specifications and enterprise procedures.</p> <p>2.6. Silt is cleared from channels, drains, sumps and crossings with no disruption to gradients and levels, as necessary.</p> <p>2.7. Adverse environmental impacts of the irrigation system are identified and reported.</p> <p>2.8. Appropriate materials are used for backfilling and</p>

ELEMENT	PERFORMANCE CRITERIA
	building/repairing banks in accordance with enterprise standards.
3. Clear system of weeds using mechanical or chemical methods	3.1. Weeds are removed/controlled in accordance with enterprise standards, OHS and environmental requirements. 3.2. Crops and plants are protected from damage in accordance with enterprise standards. 3.3. Water flow from outlets is checked, as necessary, to verify freedom from blockage.
4. Record and report maintenance activities	4.1. All damage and blockage caused by pests and vermin are recorded by damage type, location and the section of the system affected. 4.2. Damage or faulty pumps, valves, electrical components and computer systems are recorded and reported, and action taken to effect repairs. 4.3. All routine maintenance activities are recorded and reported in accordance with enterprise standards.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- read and follow operational procedures for gravity fed irrigation system maintenance
- identify adverse environmental impacts of gravity fed irrigation system and take appropriate remedial action
- read instructions and safely use chemicals for weed control
- use mechanical equipment to build/repair banks and for weed removal
- record and report maintenance observations and activities
- follow OHS procedures relating to gravity fed irrigation maintenance
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor

**REQUIRED SKILLS AND KNOWLEDGE**

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- OHS and environmental legislative and enterprise procedures relating to gravity fed irrigation maintenance
- types of channels, furrows, borders, fittings and outlets
- system cleaning procedures
- damage and problems that can occur with gravity-fed irrigation systems
- weed types encountered in gravity fed irrigation systems and their control
- environmentally safe disposal procedures for chemical containers and residues, oils/grease and used parts.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- check for problems and return the system to smooth running
- build or repair banks
- control weeds and silt build-up
- carry out maintenance activities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Gravity-fed irrigation systems may include:	<ul style="list-style-type: none"> <li>• border check systems</li> <li>• contour irrigation</li> <li>• furrow irrigation</li> <li>• hillside flooding</li> <li>• basin irrigation.</li> </ul>
Border check systems may include:	<ul style="list-style-type: none"> <li>• permanent or temporary earth</li> <li>• plastic or concrete devices for insertion in a drain for reticulating water</li> <li>• contour banks used to collect and distribute water along the perimeter of an irrigation plot</li> <li>• contour banks within a plot to collect/distribute water</li> <li>• larger scale systems to stop water exiting one area to another</li> </ul>
Gravity fed systems may include:	<ul style="list-style-type: none"> <li>• manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

## Unit Sector(s)

Unit sector	Irrigation
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## Co-requisite units

Co-requisite units	

## Competency field

Competency field	
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## AHCIRG206A Maintain pressurised irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining pressurised irrigation systems, including the repair and replacement of basic, simple components under routine supervision, and defines the standard required to: read and follow an operator's manual and manufacturer's specifications for pressurised irrigation systems; maintain irrigation system components including supply and distribution systems, outlets, strainers, pump screens and filters; inspect for dry areas and leaks; clear or replace worn or blocked parts and outlets; record and report maintenance observations and activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working with limited supervision, within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Carry out pre- and post-season maintenance	<p>1.1. Equipment is prepared pre-season for effective operation in accordance with design specifications and enterprise standards.</p> <p>1.2. System is flushed, cleaned, closed down and maintained post-season in accordance with design specifications and enterprise standards.</p> <p>1.3. Equipment requiring storage is dismantled, loaded, transported and stored without damage according to enterprise standards and safe working practices.</p>
2. Carry out routine maintenance activities on pressurised irrigation delivery systems	<p>2.1. All maintenance activities are carried out according to the maintenance program and the manufacturer's specifications.</p> <p>2.2. Mechanical equipment is serviced in accordance with the operator's manual or as directed.</p> <p>2.3. Supply and distribution systems are flushed and cleaned with sprinklers, emitters and/or drip line tapes replaced as directed.</p> <p>2.4. Outlets, strainers, pump screens and filters are cleaned and replaced as directed.</p> <p>2.5. System is visually inspected for leaks, operating faults and dry areas, and observations recorded in the maintenance book.</p> <p>2.6. Operation area is maintained in a clean and safe condition, and Occupational Health and Safety (OHS) procedures are followed.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Maintain system components	<p>3.1. System maintenance is carried out at scheduled times using equipment and materials in accordance with enterprise standards and manufacturer's specifications.</p> <p>3.2. Parts are inspected for wear or blockage and reported or replaced according to enterprise guidelines.</p> <p>3.3. Outlets are removed and cleaned and damaged ones are reassembled and replaced according to manufacturer's specifications.</p> <p>3.4. Operation area is maintained in a clean and safe condition, and OHS procedures are followed.</p>
4. Record and report maintenance activities	<p>4.1. All damage and blockage caused by pests and vermin is recorded by damage type, location and the section of the system affected.</p> <p>4.2. Damage or faulty pumps, valves, electrical components and computer systems are recorded and reported, and action taken to effect repairs.</p> <p>4.3. All routine maintenance activities are recorded and reported in accordance with enterprise standards.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- read and follow an operator's manual and manufacturer's specifications for pressurised irrigation systems
- maintain selected irrigation system components
- rectify damage caused by weeds or pests
- record and report maintenance observations and activities
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures

**REQUIRED SKILLS AND KNOWLEDGE**

- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- OHS and environmental legislative and enterprise procedures relating to pressurised irrigation system maintenance
- major components of a pressurised irrigation delivery system
- maintenance requirements and procedures for system components
- environmentally safe disposal procedures for chemical containers and residues, oils/grease and used parts.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- read and follow an operators manual and manufacturers specifications for pressurised irrigation systems
- maintain irrigation system components including supply and distribution systems, outlets, strainers, pump screens and filters
- inspect for dry areas and leaks
- clear or replace worn or blocked parts and outlets
- record and report maintenance observations and activities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pressurised irrigation systems include:	<ul style="list-style-type: none"> <li>• micro-irrigation systems and spray irrigation systems ranging from manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>
Micro-irrigation systems may include:	<ul style="list-style-type: none"> <li>• mains pressure</li> <li>• low pressure</li> <li>• below or above ground</li> <li>• sprays systems</li> <li>• drip emitter trickle</li> <li>• t-tape</li> <li>• mini-sprinklers</li> <li>• capillary.</li> </ul>
Spray irrigation systems may include:	<ul style="list-style-type: none"> <li>• travelling irrigators (soft hose, hard hose boom type)</li> <li>• centre pivot</li> <li>• linear move</li> <li>• powered side roll hand shift permanent (installed)</li> <li>• bike shift/easy shift.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCIRG207A Carry out irrigation site preparation tasks

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of carrying out site preparation tasks under routine supervision and defines the standard required to: assemble work materials and unload safely; identify hazards and follow OHS procedures; assist in marking out site boundaries and clearing the site; and assist in checking layout and levels against the site plan.

### Application of the Unit

This Unit applies to workers in irrigation servicing, food or fibre production or amenity horticulture enterprises that operate under supervision and within enterprise guidelines.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare for work on an installation site	<p>1.1 The required materials, <i>tools and equipment</i> are identified according to lists provided and/or supervisor's instructions</p> <p>1.2 Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle</p> <p>1.3 Suitable <i>personal protective equipment (PPE)</i> is selected and checked prior to use</p> <p>1.4 <i>OHS hazards</i> are identified and reported to the supervisor</p>
2 Clear and clean a site for work	<p>2.1 Assistance is provided in marking out the boundaries of the site</p> <p>2.2 Existing infrastructure is identified and removed or reported on</p> <p>2.3 Vegetation is cleared from the site in accordance with the irrigation plan and procedures</p> <p>2.4 Assistance is provided with <i>site preparation tasks</i></p>
3 Apply work procedures to prepare the site	<p>3.1 Soil characteristics and environmental hazards are noted to apply sustainable work practices</p> <p>3.2 Features on the site are aligned to symbols and terminology on the site plan</p> <p>3.3 Assistance is provided to check layout of services and checking of depths and levels</p> <p>3.4 Marking out of the site is carried out as directed</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- prepare materials, tools and equipment for irrigation work
- handle materials and equipment
- undertake site preparation tasks as directed
- peg out a site boundary
- identify soil texture and risk of erosion
- assist in site preparation tasks
- identify adverse environmental impacts and take appropriate remedial action
- use literacy skills to follow sequenced written instructions and record information



accurately and legibly

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

#### Knowledge of:

- interpretation of symbols and use of a legend on site plans and specifications, particularly in relation to the location of existing features
- understanding of compass directions and how to locate North from a site plan
- an awareness of other plans that may be referred to when setting out a site for irrigation
- recognition of site features and actions that can be taken to either clear the site or adjust the system to fit
- hazard identification and safe work procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assemble work materials and unload safely</li> <li>• identify hazards and follow OHS procedures</li> <li>• assist in marking out site boundaries and clearing the site</li> <li>• assist in checking layout and levels against the site plan.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Tools and equipment</i></b> may include:</p>	<p>levelling equipment, wheelbarrow, string lines, tape measures, marking gauges, spades, shovels, crow bars, rakes, brooms, sanding blocks and hacksaws.</p>
<p><b><i>Personal protective clothing and equipment (PPE)</i></b> may include:</p>	<p>steel capped boots/shoes, overalls, gloves, sun hat, sunscreen lotion, safety goggles, face mask and hearing protection, and any protection required for the use of equipment.</p>
<p><b><i>OHS hazards</i></b> should be identified through site risk assessment and organisational procedures and may include:</p>	<p>solar radiation, dust, noise, air- and soil-borne micro-organisms, chemicals and hazardous substances, sharp hand tools and equipment, manual handling, holes, and slippery and uneven surfaces.</p>
<p><b><i>Site preparation tasks</i></b> may include:</p>	<p>assisting with taking levels and marking out boundaries or key features from a site plan.</p>

## Unit Sector(s)

Irrigation

# **AHCIRG208A Assist with the installation and maintenance of pumps and flow control devices for irrigation**

## **Modification History**

Not applicable.

## **Unit Descriptor**

This Unit describes the outcomes required to assist with the installation and maintenance of pumps and flow control devices for irrigation systems and defines the standard required to: assemble equipment and materials for installation work; assist with the installation of pumps and flow control devices; assist with maintenance tasks for pumps and flow-control devices; and identify basic faults related to pumping and flow control and fix or report.

## **Application of the Unit**

This Unit applies to workers in irrigation servicing, food or fibre production or amenity horticulture enterprises that operate under supervision and within enterprise guidelines.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This Unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Plan and prepare for work on <i>pumping and flow control systems</i>	<p>1.1 Apply work requirements for installation of <i>pumps</i> and <i>flow control devices</i> in irrigation systems from plans, specifications and instructions</p> <p>1.2 Prepare work plans and identify <i>OHS hazards</i> to ensure safety within the workplace</p> <p>1.3 Select and check equipment and tools to meet safety requirements of the task and site</p> <p>1.4 Select, fit and use personal protective equipment (<i>PPE</i>)</p>
2 Carry out installation tasks for pumps and flow control devices.	<p>2.1 Carry out installation tasks as directed for pumps according to manufacturer guidelines and legislative requirements</p> <p>2.2 Carry out installation tasks as directed for flow control devices according to manufacturer guidelines</p>
3 Carry out maintenance tasks for pumps and flow control devices.	<p>3.1 Carry out routine inspections of flow control and metering facilities in irrigation systems according to organisational procedures</p> <p>3.2 Carry out preventative maintenance and service of equipment and facilities according to manufacturer guidelines and organisational requirements</p>
4 Review, record and report activities.	<p>4.1 Check, maintain and store equipment, tools and materials according to manufacturer guidelines and organisational procedures</p> <p>4.2 Restore work site to meet environmental and organisational requirements</p> <p>4.3 Record and report activities according to organisational procedures</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- follow plans, charts and instructions
- perform work-related calculations
- organise equipment and materials for installation work
- use power tools and hand tools
- handle materials safely

- install irrigation components
- identify hazards and adopt safe work practices
- identify and respond to operational problems
- communicate with work team members, supervisors, contractors and consultants
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge includes:**

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**Knowledge of:**

- types of pumps and their function and use
- types of flow control devices and their purpose
- basic principles of hydraulics and the operation of flows
- system layout
- principles of electricity and safe work procedures
- lock-out procedures for mechanical and electrical installations
- organisational communication systems
- effective workplace communication processes
- materials handling
- environmental, landscape and ground structure of work area
- risk factors and potential hazards
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of system, site and plant
- flow measurement principles and procedures
- layout and performance of pipes and fittings
- function of control systems.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and

	<p>knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assemble equipment and materials for installation work</li> <li>• assist with the installation of pumps and flow-control devices</li> <li>• assist with maintenance tasks for pumps and flow-control devices</li> <li>• identify basic faults related to pumping and flow control and fix or report.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Pumping and flow control systems</i></b> may include:	all types of pumps and pumping systems (including filters and valves) used to move water to or through an irrigation system
<b><i>Pumps</i></b> may include:	<ul style="list-style-type: none"> <li>• centrifugal</li> <li>• Archimedes screw type</li> <li>• submersible</li> <li>• positive displacement</li> <li>• maintenance pumps and flow-control devices.</li> </ul>
<b><i>Flow control devices</i></b> may include:	<ul style="list-style-type: none"> <li>• flow directional gates</li> <li>• regulators</li> <li>• valves: <ul style="list-style-type: none"> <li>• sluice</li> <li>• gate</li> <li>• blade</li> <li>• non-return</li> <li>• doors, drop structures and bars.</li> </ul> </li> </ul>
<b><i>OHS hazards</i></b> should be identified through site risk assessment and	solar radiation, dust, noise, air- and soil-borne micro-organisms, chemicals and hazardous

organisational procedures and may include:	substances, sharp hand tools and equipment, manual handling, holes, and slippery and uneven surfaces.
Personal protective clothing and equipment ( <i>PPE</i> ) may include:	steel capped boots/shoes, overalls, gloves, sun hat, sunscreen lotion, safety goggles, face mask and hearing protection, and any protection required for the use of equipment.

## Unit Sector(s)

Irrigation

## **AHCIRG209A Carry out installation tasks for low volume irrigation**

### **Modification History**

Not applicable.

### **Unit Descriptor**

This Unit covers the process of assisting with the installation of low volume irrigation systems under supervision and defines the standard required to: assemble equipment and materials for installation work; assemble components and flush the irrigation system; identify faults and fix or report.

### **Application of the Unit**

This Unit applies to workers in irrigation servicing, food or fibre production or amenity horticulture enterprises that operate under supervision and within enterprise guidelines.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

This Unit contains employability skills.

### **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare for work on a <i>low volume irrigation</i> installation site	1.1 The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions 1.2 Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle 1.3 Suitable <i>personal protective equipment (PPE)</i> is selected and checked prior to use 1.4 <i>OHS hazards</i> are identified and reported to the supervisor
2 Prepare the site	2.1 Irrigation lines are measured and marked out 2.2 Irrigation components are laid out 2.3 Trenches are dug or tidied up
3 Install irrigation components	3.1 Work is undertaken according to plan and supervisor's instructions 3.2 <i>System components</i> are assembled and connected according to plan, with joints completed and tested 3.3 A clean and safe work area is maintained while installation work is carried out 3.4 Tools are chosen appropriate to the task being undertaken, and used according to guidelines and safe working practices
4 Complete installation tasks	4.1 The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures 4.2 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures 4.3 System is connected to water supply 4.4 System is flushed and commissioned as directed 4.5 Operating faults are identified and reported to supervisor and/or corrective actions taken

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- identify hazards and adopt safe work practices
- organise equipment and materials for installation work

- install irrigation components
- complete installation work
- communicate with work team members, supervisors, contractors and consultants
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

#### Knowledge of:

- methods and techniques of low volume irrigation
- components of low volume irrigation systems
- characteristics and operation of joints, valves and drip and low volume sprinkler components, including controllers
- use of recycled water and colour coding of pipes
- basic energy efficiency and water efficiency factors
- safe work procedures and PPE
- OHS and environmental legislation and enterprise procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assemble equipment and materials for installation work</li> <li>• assemble components and flush the irrigation system</li> <li>• identify faults and fix or report.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances. This unit may be assessed in

	the context of installing domestic micro-irrigation.
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## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Low volume irrigation</i></b> may include:</p>	<p>systems that operate under comparatively low volume and pressure including micro irrigation, pop-ups at less than 0.1 litres/second, and drippers.</p>
<p><b><i>Personal protective clothing and equipment (PPE)</i></b> may include:</p>	<p>steel capped boots/shoes, overalls, gloves, sun hat, sunscreen lotion, safety goggles, face mask and hearing protection, and any protection required for the use of equipment.</p>
<p><b><i>OHS hazards</i></b> should be identified through site risk assessment and organisational procedures and may include:</p>	<p>solar radiation, dust, noise, air- and soil-borne micro-organisms, chemicals and hazardous substances, sharp hand tools and equipment, manual handling, holes, and slippery and uneven surfaces.</p>
<p><b><i>System components</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• pumps</li> <li>• delivery equipment</li> <li>• system controllers.</li> </ul>

## Unit Sector(s)

Irrigation

# **AHCIRG210A Carry out installation tasks for sprinkler irrigation**

## **Modification History**

Not applicable.

## **Unit Descriptor**

This Unit covers the process of assisting with the installation of sprinkler irrigation systems under supervision and defines the standard required to: assemble equipment and materials for installation work; assemble components; and identify faults and fix or report.

## **Application of the Unit**

This Unit applies to workers in irrigation servicing, food or fibre production or amenity horticulture enterprises that operate under supervision and within enterprise guidelines.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This Unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare for work on installing <i>sprinkler irrigation systems</i>	1.1 The required materials, tools and equipment are identified according to lists provided and/or supervisor's instruction 1.2 Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle 1.3 Suitable <i>personal protective equipment (PPE)</i> is selected and checked prior to use 1.4 <i>OHS hazards</i> are identified and reported to the supervisor
2 Assemble and lay out components	2.1 Equipment is checked to confirm readiness for use 2.2 Materials are selected according to instructions 2.3 Irrigation components are laid out in accordance with instructions 2.4 Trenches are dug or tidied up in accordance with instructions where required
3 Install irrigation components	3.1 Pipeline is joined or finished according to instructions 3.2 <i>System components</i> are added or inserted according to instructions 3.3 Lines are positioned and secured according to instructions 3.4 Pumps and valves are fitted according to instructions
4 Complete installation activities	4.1 The irrigation system is commissioned and observed 4.2 Problems and anomalies are recognised and reported 4.3 Equipment is cleaned and stored according to instructions 4.4 Materials are stored according to instructions 4.5 Waste is collected and disposed of or recycled according to workplace procedures 4.6 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- organise equipment and materials for installation work
- use power tools and hand tools
- handle materials safely

- use hand signals for communicating with machine operator
- identify hazards and adopt safe work practices
- install irrigation components
- complete installation work
- communicate with work team members, supervisors, contractors and consultants
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

#### Knowledge of:

- sprinkler irrigation components and their function
- types of sprinklers and where they are used
- sprinkler spacing, coverage and pressure
- irrigation and/or drainage pipes, types and sizes
- bedding and backfill materials and handling methods
- set out procedures
- installation techniques and procedures
- safe use of hand and power tools and equipment
- working around machinery and hand signals for communication work safely to instructions
- OHS issues and procedures related to installation.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assemble equipment and materials for installation work</li> <li>• assemble components</li> <li>• identify faults and fix or report.</li> </ul>

Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
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## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b><i>Sprinkler irrigation systems</i></b> may include:	systems that use spray or rotor type sprinklers to distribute irrigation water at higher volume including pop-up sprinklers, fixed, and movable sprinklers (e.g. K Line and Ezy Shift).
<b><i>Personal protective clothing and equipment (PPE)</i></b> may include:	PPE may include steel capped boots/shoes, overalls, gloves, sun hat, sunscreen lotion, safety goggles, face mask and hearing protection, and any protection required for the use of equipment.
<b><i>OHS</i></b> should be identified through site risk assessment and organisational procedures and hazards may include:	solar radiation, dust, noise, air- and soil-borne micro-organisms, chemicals and hazardous substances, sharp hand tools and equipment, manual handling, holes, and slippery and uneven surfaces.
<b>System components</b> may include:	<ul style="list-style-type: none"> <li>• sprinklers</li> <li>• lines</li> <li>• filters and valves</li> <li>• pumps</li> <li>• delivery equipment</li> <li>• system controllers.</li> </ul>

## Unit Sector(s)

Irrigation

## AHCIRG211A Assist with low volume irrigation operations

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of assisting with the operation of low volume irrigation systems under routine supervision and defines the standard required to: identify the purpose of low volume irrigation system components; monitor irrigation times and plant response; maintain low volume irrigation systems; store and maintain equipment; and regulate a low volume irrigation system to achieve and maintain correct emitter output.

### Application of the Unit

This Unit applies to working under supervision, within enterprise guidelines.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare materials, tools and equipment for low volume irrigation work	1.1 Irrigation equipment is handled safely in accordance with Occupational Health and Safety (OHS) practices 1.2 Irrigation components are checked and action taken, as required, in accordance with enterprise policy and procedures 1.3 Water outlets are checked in accordance with enterprise practices
2 Undertake low volume irrigation work as directed	2.1 Valves are opened and shut, as necessary, in accordance with enterprise procedures 2.2 Required pressures and water flows are achieved and maintained to ensure sufficient water availability 2.3 Equipment is relocated, if necessary, in accordance with enterprise procedures and OHS guidelines
3 Observe and report on soil moisture and plant growth response	3.1 Soil moisture levels are assessed to determine watering requirement 3.2 Plant moisture requirements and signs of stress are established 3.3 Plant growth and condition is monitored to indicate over or under watering 3.4 Inadequate plant response to watering is recorded and reported
4 Maintain a low volume irrigation system	4.1 Flushing procedures are followed for clearing the system 4.2 Emitters are checked for serviceability and output 4.3 Lines are maintained 4.4 Water supply and pumping system is checked periodically 4.5 Maintenance records are kept up to date

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

**Required skills include:****Ability to:**

- prepare materials, tools and equipment for irrigation work
- assemble and join low volume irrigation system components
- operate and adjust low volume irrigation components
- operate a simple irrigation controller
- operate the water delivery system, including pumps
- estimate water output
- observe for leaks and faulty emitters
- report faults
- record and report maintenance activities clean up on completion of work.

**Required knowledge includes:****Knowledge of:**

- purpose and principles of low volume irrigation
- identification, characteristics and operation of replaceable components of low volume irrigation systems
- basic operational procedures for low volume irrigation systems
- principles of pumps and pumping systems
- the range of emitters and their output and purpose
- system malfunctions and their likely causes
- environmental impacts of irrigation, using water from any ground or underground source
- OHS requirements and safe work procedures.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify the purpose of low volume irrigation system components</li> <li>• monitor irrigation times and plant response</li> </ul>

	<ul style="list-style-type: none"> <li>• maintain low volume irrigation systems</li> <li>• store and maintain equipment</li> <li>• regulate a low volume irrigation system to achieve and maintain correct emitter output.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Low volume irrigation systems include:	systems that operate under comparatively low volume and pressure including micro irrigation, pop-ups at less than 0.1 litres/second, and drippers.

## Unit Sector(s)

Irrigation

## AHCIRG212A Assist with sprinkler irrigation operations

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of assisting with the operation of sprinkler irrigation systems under routine supervision and defines the standard required to: identify the purpose of irrigation system components; monitor irrigation times and plant response; start up and shut down irrigation systems; store and maintain equipment; and regulate a sprinkler irrigation system to achieve and maintain correct operating pressures and water flows.

### Application of the Unit

This Unit applies to working under supervision, within enterprise guidelines.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare materials, tools and equipment for <i>sprinkler irrigation systems</i>	1.1 Irrigation equipment is handled safely in accordance with Occupational Health and Safety (OHS) practices 1.2 Irrigation equipment is positioned, if necessary, in accordance with enterprise requirements 1.3 Irrigation components are checked and action taken, as required, in accordance with enterprise policy and procedures 1.4 Irrigation system components are assembled and joined where required 1.5 Water outlets are checked in accordance with enterprise practices
2 Undertake sprinkler irrigation work as directed	2.1 Valves are opened and shut, as necessary, in accordance with enterprise procedures 2.2 Required pressures and water flows are achieved and maintained to ensure sufficient water availability 2.3 Equipment is relocated, if necessary, in accordance with enterprise procedures and OHS guidelines
3 Observe and report on soil moisture and plant growth response	3.1 Soil moisture levels are assessed to determine watering requirement 3.2 Environmental hazards from surface irrigation are identified and reported where necessary 3.3 Plant moisture requirements and signs of stress are established 3.4 Plant growth and condition is monitored to indicate over or under watering 3.5 Inadequate plant response to watering is recorded and reported
4 Carry out start up and shutdown procedures as directed	4.1 Start-up sequence is followed 4.2 System components are shut down in sequence 4.3 System is drained 4.4 Irrigation activity is recorded
5 Assist with sprinkler system maintenance	5.1 Sprinklers are checked for serviceability and output 5.2 Delivery components are maintained 5.3 Water supply and pumping system is checked periodically 5.4 Maintenance records are kept up to date
6 Store irrigation equipment and materials	6.1 Equipment is cleaned and prepared for storage, as necessary, in accordance with enterprise policy and procedures. 6.2 Equipment is loaded for transport safely, if necessary, in

- accordance with OHS procedures
- 6.3 Equipment is stored, as required, in accordance with enterprise policy and procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- prepare materials, tools and equipment for sprinkler irrigation work
- handle materials and equipment
- carry out sprinkler irrigation operating tasks as directed
- follow directions to operate pumps, filters and valves
- observe for leaks and faulty sprinklers
- carry out basic maintenance tasks
- use tools and equipment
- report faults
- record and report maintenance activities
- clean up on completion of work
- follow safe work procedures.

### Required knowledge includes:

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#### Knowledge of:

- purpose and principles of sprinkler irrigation
- identification, characteristics and operation of replaceable components of sprinkler irrigation systems
- sprinkler spacing and coverage
- sprinkler volume and pressure
- use of simple irrigation controllers
- system malfunctions and their likely causes
- environmental impacts of irrigation, using water from any ground or underground source.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment</p>
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Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify the purpose of irrigation system components</li> <li>• monitor irrigation times and plant response</li> <li>• start up and shut down irrigation systems</li> <li>• store and maintain equipment</li> <li>• regulate a sprinkler irrigation system to achieve and maintain correct operating pressures and water flows.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Sprinkler irrigation systems</i></b> may include:</p>	<p>systems that use spray or rotor type sprinklers to distribute irrigation water at higher volume including pop-up sprinklers, fixed, and movable sprinklers (e.g. K Line and Ezy Shift).</p>

## Unit Sector(s)

Irrigation

## AHCIRG213A Assist with surface irrigation operations

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of assisting with the operation of surface irrigation systems under routine supervision and defines the standard required to: handle and shift loads; operate, check, clean and store surface irrigation equipment; set up field for surface irrigation; estimate and monitor water levels and volumes/flow; identify adverse environmental impacts of surface irrigation system and take appropriate action.

### Application of the Unit

This Unit applies to working under routine supervision, within enterprise guidelines.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Set up field for surface irrigation systems	1.1 Irrigation equipment is handled safely in accordance with Occupational Health and Safety (OHS) practices 1.2 Irrigation equipment is positioned in accordance with enterprise requirements 1.3 Rotobuck area is checked for irrigation set up and action taken as required in accordance with enterprise procedures 1.4 Pumps, bores and other water delivery mechanisms are checked for irrigation set up and action taken as required in accordance with enterprise procedures 1.5 Tarpaulins or other water control devices are positioned and secured as required in accordance with enterprise procedures
2 Undertake surface irrigation work as directed	2.1 Gates and/or valves are opened and shut as necessary in accordance with enterprise procedures 2.2 Required head and water levels in head ditch are achieved and maintained to ensure sufficient water flow and availability to crops 2.3 Required number of siphons are started/opened in accordance with enterprise procedures 2.4 Progress of water flow in furrows is monitored in accordance with enterprise procedures 2.5 Siphons are lifted where irrigation is complete in accordance with enterprise procedures 2.6 Irrigation change is carried out and marked as required 2.7 Irrigation equipment is shifted, as required, for irrigation changes in accordance with OHS guidelines 2.8 <b>Basic maintenance tasks</b> are carried out as directed
3 Monitor soil moisture and drainage	3.1 Soil moisture levels are assessed to determine watering requirement 3.2 Soil drainage and recycling of tailwater is observed and problems reported 3.3 Environmental hazards from surface irrigation are identified and reported where necessary
4 Observe and report on plant response	4.1 Plant moisture requirements and signs of stress are established 4.2 Plant growth and condition is monitored to indicate over or under watering 4.3 Inadequate plant response to watering is recorded and reported
5 Clean and store surface	5.1 Equipment is cleaned and prepared for storage, as

- irrigation equipment necessary, in accordance with enterprise policy and procedures
- 5.2 Equipment is loaded for transport safely, if necessary, in accordance with OHS practices
- 5.3 Equipment is stored as required, in accordance with enterprise policy and procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- prepare materials, tools and equipment for surface irrigation work
- handle materials and equipment
- observe required head and water levels in head ditch
- monitor irrigation times for enterprise fields to deliver sufficient volume
- open and close check valves
- carry out surface irrigation operating tasks as directed
- follow directions to operate pumps and valves
- start and pull siphons
- check siphons for even water flow
- observe for uneven water distribution or drainage
- record and report maintenance activities
- report faults
- follow safe work procedures including manual handling.

### Required knowledge includes:

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#### Knowledge of:

- purpose and principles of surface irrigation
- identification, characteristics and operation of surface irrigation structures and components
- system malfunctions and their likely causes
- environmental impacts of irrigation, using water from any ground or underground source
- OHS procedures relating to general activities involved in irrigating field crops using surface irrigation.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• handle and shift loads</li> <li>• operate, check, clean and store irrigation equipment</li> <li>• set up field for gravity fed irrigation</li> <li>• estimate and monitor water levels and volumes/flow</li> <li>• identify adverse environmental impacts of gravity fed irrigation system and take appropriate action.</li> </ul>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Surface <i>irrigation systems</i> may include:</p>	<p>any systems that apply water across the surface of a levelled or contoured area. These include furrow, border and basin irrigation.</p>
<p><i>Basic maintenance tasks</i> may include:</p>	<p>performing basic maintenance tasks under supervision to maintain structures such as banks, head walls and canals, and to maintain equipment such as pumps, gates and siphons.</p>

## Unit Sector(s)

Irrigation

# AHCIRG214A Install micro-irrigation systems for landscaping

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of installing domestic micro-irrigation systems under routine supervision and defines the standard required to: organise equipment and materials for installation work; set out and prepare site; install and test the irrigation system; monitor effectiveness and environmental impacts of the micro-irrigation system.

## Application of the Unit

This Unit applies to workers in amenity horticulture enterprises that operate under limited supervision and within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare tools and materials for installation work	1.1 Materials, tools, equipment and machinery are selected according to irrigation design requirements and supervisor's instructions 1.2 The site for installation of the <i>micro-irrigation system</i> is identified according to enterprise plans and work procedures 1.3 Parts and <i>equipment</i> delivered to the site are checked according to system drawings and specifications 1.4 <i>Water supply</i> is checked to ensure that it is compatible with system specifications
2 Set out and prepare site	2.1 Measurement and marking out of irrigation lines is undertaken as directed by supervisor 2.2 Equipment operation and work practices conform to enterprise and legislative Occupational Health and Safety (OHS) requirements 2.3 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer's specifications and enterprise work procedures 2.4 OHS hazards are identified, risks assessed and risk controls are implemented 2.5 Personal Protective Equipment (PPE) is selected, used and maintained according to procedures
3 Install irrigation components	3.1 Work is undertaken according to plan and supervisor's instructions 3.2 Components are assembled and connected according to plan, with joints completed and tested 3.3 A clean and safe work area is maintained while installation work is carried out 3.4 Tools are chosen appropriate to the task being undertaken, and used according to guidelines and safe working practices
4 Complete installation work	4.1 Earthworks are finished off to plan specifications and enterprise work procedures 4.2 The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures 4.3 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures 4.4 System is flushed and commissioned as directed 4.5 Operating faults are identified and reported to supervisor and/or corrective actions taken

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- identify hazards and adopt safe work practices
- organise equipment and materials for installation work
- set out and prepare site
- install irrigation components
- complete installation work
- communicate with work team members, supervisors, contractors and consultants
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

#### Knowledge of:

- methods and techniques of micro-irrigation
- components of an micro-irrigation system
- characteristics and operation of joints, valves and sprinkler components
- basic calculations for water delivery
- indicators of over and under watering
- water requirements of relevant plants
- OHS and environmental legislation and enterprise procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this Unit

The evidence required to demonstrate competency in this Unit must be relevant to commercial landscaping operations and satisfy holistically all of the

	<p>requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• organise equipment and materials for installation work</li> <li>• set out and prepare site</li> <li>• install and test the irrigation system</li> <li>• monitor effectiveness and environmental impacts of the micro-irrigation system.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Micro-irrigation systems</i></b> include:	<ul style="list-style-type: none"> <li>• low pressure micro-sprays</li> <li>• drippers.</li> </ul>
Irrigation <b><i>equipment</i></b> may include:	<ul style="list-style-type: none"> <li>• pumps</li> <li>• delivery equipment</li> <li>• system controllers.</li> </ul>
<b><i>Water supplies</i></b> may include:	<ul style="list-style-type: none"> <li>• underground</li> <li>• mains</li> <li>• surface storage</li> </ul> <p>including fixtures such as:</p> <ul style="list-style-type: none"> <li>• dams</li> <li>• bores</li> <li>• windmills</li> <li>• tanks</li> <li>• channels.</li> </ul>



## Unit Sector(s)

Irrigation

## AHCIRG301A Implement a maintenance program for an irrigation system

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a maintenance program for an irrigation system and defines the standard required to: inspect irrigation systems; test irrigation equipment; undertake minor repairs of equipment; record and report maintenance activities; dispose of unused or waste materials from site.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Interpret an irrigation maintenance program	<p>1.1.Scope of maintenance works is determined according to the irrigation maintenance program.</p> <p>1.2.Frequency of maintenance works is determined and implemented according to the irrigation maintenance program.</p> <p>1.3.Irrigation maintenance standards are established in line with the irrigation maintenance program.</p> <p>1.4.Maintenance works are planned and prepared.</p> <p>1.5.Occupational Health and Safety (OHS) requirements are identified, associated hazards and risks assessed, and suitable controls implemented.</p> <p>1.6.Environmental considerations of irrigation maintenance activities are identified.</p>
2. Inspect irrigation system	<p>2.1.An inspection checklist is established according to the irrigation maintenance program.</p> <p>2.2.System is regularly inspected according to the checklist.</p> <p>2.3.Remedial action and repairs are identified and undertaken to restore system to full effectiveness.</p> <p>2.4.Servicing of mechanical equipment is undertaken according to the irrigation maintenance program.</p> <p>2.5.Results of maintenance works are assessed and recorded to ensure repairs or maintenance standards have been achieved according to the irrigation maintenance program.</p> <p>2.6.Surroundings are tidied and materials and equipment cleared from the site on completion of maintenance</p>

ELEMENT	PERFORMANCE CRITERIA
	works.
3. Record and report maintenance activities	3.1. Damage and blockage caused by pests and animals are recorded by damage type, location and the section of the system affected. 3.2. Damage or faulty pumps, valves, electrical components and computer systems are recorded and reported, and action taken to effect repairs. 3.3. Routine and preventative maintenance activities are recorded and reported in accordance with enterprise standards.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- inspect irrigation system
- test irrigation equipment
- record all test results clearly and concisely with attention to detail
- undertake minor repairs of equipment
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- soil/plant/water relationships
- environmental impacts of irrigation
- irrigation system components

**REQUIRED SKILLS AND KNOWLEDGE**

- common operational and maintenance problems
- enterprise, OHS and environmental policies and procedures
- environmentally safe disposal procedures for chemical containers and residues, oils/grease and used parts.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- inspect irrigation systems
- test irrigation equipment
- undertake minor repairs of equipment
- record and report maintenance activities
- dispose of unused or waste materials from site.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

System may include:

- pressurised irrigation systems such as

**RANGE STATEMENT**

	micro-irrigation and spray irrigation systems, or gravity-fed systems. They may range from manual operation and monitoring to fully automated with computer control and monitoring.
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**Unit Sector(s)**

<b>Unit sector</b>	Irrigation
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCIRG302A Install irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing pressurised irrigation systems and defines the standard required to: organise resources for installation work; set out and prepare site; install irrigation components; complete installation work, and commission irrigation systems; and communicate with work team members, supervisors, contractors and consultants.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Organise resources for installation work	<p>1.1. Materials, tools, equipment and machinery are selected according to the irrigation system design requirements and enterprise work procedures.</p> <p>1.2. The construction site for the irrigation system and construction method is identified according to the site and irrigation system plans and enterprise work procedures.</p> <p>1.3. Parts and equipment delivered to site are checked according to system drawings and specifications.</p> <p>1.4. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer specifications and enterprise work procedures.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p> <p>1.6. Suitable safety and personal protective equipment (PPE) are selected, used and maintained.</p> <p>1.7. Water supply is checked to ensure that it is compatible with system specifications.</p>
2. Set out and prepare site	<p>2.1. Measurement and marking out of irrigation lines are consistent with the plan.</p> <p>2.2. Trenches, where constructed, are at the specified depth without damage to services, facilities, features and established plants.</p> <p>2.3. Equipment operation and work practices conform to enterprise and legislative OHS requirements.</p> <p>2.4. Regulations and legislation relevant to the situation</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>are observed.</p> <p>2.5. Work practices reflect sustainable horticulture principles and respond to local community requirements.</p>
3. Install irrigation components	<p>3.1. Plan is interpreted and, where applicable, contractors are supervised and work is monitored to conform to the plan.</p> <p>3.2. Components are assembled and connected according to the plan, and joints are completed and tested according to manufacturer specifications.</p> <p>3.3. Fittings and valves are fitted and adjusted to the requirements of the installation plan, and all joints are secured according to enterprise guidelines.</p> <p>3.4. A clean and safe work area is maintained while installation work is carried out.</p> <p>3.5. Tools appropriate to the task being undertaken are chosen and used according to guidelines and safe working practices are employed.</p>
4. Complete installation work	<p>4.1. Earthworks are finished off to plan specifications and enterprise work procedures.</p> <p>4.2. The system configuration and capacity matches the installation plan.</p> <p>4.3. The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p> <p>4.4. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p>
5. Commission irrigation system	<p>5.1. Start-up sequence is in accordance with operations manual.</p> <p>5.2. System is flushed as required.</p> <p>5.3. Operating faults are identified and corrective actions taken according to the operations manual.</p> <p>5.4. Testing and monitoring equipment are calibrated to manufacturer specifications.</p> <p>5.5. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- organise resources for installation work
- set out and prepare site
- install irrigation components
- complete installation work
- commission irrigation system
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- methods and techniques of irrigation
- components of an irrigation system
- characteristics and operation of joints, valves and sprinkler components
- operation of pumps and water flow rates
- behaviour of water on varying terrain and soil types
- soil water retention testing techniques
- water quality and water filtration techniques
- calculations for installing irrigation systems
- soil characteristics
- environmental impacts of installing irrigation systems
- enterprise OHS procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• organise resources for installation work</li> <li>• set out and prepare site</li> <li>• install irrigation components</li> <li>• complete installation work</li> <li>• commission irrigation systems and communicate with work team members, supervisors, contractors and consultants.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
System may include:	<ul style="list-style-type: none"> <li>• irrigation systems, such as mains pressure, low pressure, below ground, above ground, spray systems, dripper and capillary systems.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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# AHCIRG303A Measure irrigation delivery system performance

## Modification History

June 2012: minor edits to Range Statement to improve clarity and consistency with other AHCIRG Units.

## Unit Descriptor

This Unit covers the process of measuring pressures, flows and distribution uniformity of an irrigation system and defines the standard required to: apply measuring and testing techniques; measure pressures; flows and distribution uniformity of an irrigation system; calculate pressure differentials; flow rates and water usage; record and report system performance.

## Application of the Unit

This Unit is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Measure <i>irrigation system</i> performance	1.1 System pressures are measured and recorded in accordance with Occupational Health and Safety (OHS) and enterprise policy and procedures 1.2 Variations in pressures are identified and recorded in accordance with enterprise policy and procedures 1.3 Water flow rates are measured and recorded in accordance with enterprise policy and procedures 1.4 Variations in water flow and distribution are identified and recorded in accordance with enterprise policy and procedures 1.5 Pump performance parameters are measured as necessary and recorded in accordance with enterprise policy and procedures 1.6 Variations in pump performance parameters are measured where relevant and recorded in accordance with enterprise policy and procedures 1.7 Distribution and delivery systems are inspected and malfunctions in system are identified, fixed and actions recorded in accordance with enterprise policy and procedures 1.8 Factors external to the system that may cause interference are identified and recorded in accordance with enterprise policy and procedures
2 Monitor supply of equipment and spare parts	2.1 Supply and part usage are recorded in accordance with enterprise policy and procedures 2.2 Spare parts meet demand 2.3 Purchases are within budget constraints 2.4 Parts requirements outside of budget constraints are reported 2.5 Purchases and orders are recorded in accordance with enterprise procedures and systems
3 Record and report system performance status	3.1 System pressures and variations are recorded in accordance with enterprise policy and procedures 3.2 System flow rates and variations are recorded in accordance with enterprise policy and procedures 3.3 Distribution uniformity and mean application rates are calculated and recorded in accordance with enterprise policy and procedures 3.4 Watering depth is determined and recorded in accordance with enterprise policy and procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- access and prepare data records for both print-based and computer-based data
- use computers for recording and reporting data
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- calculate pressure differentials, flow rates, crop yields, estimated water usage/actual water usage
- apply measuring and testing techniques
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes

#### Knowledge of:

- OHS guidelines
- soil water retention testing techniques
- measuring and monitoring procedures for factors contributing to irrigation system delivery
- water authority standards and procedures
- environmental impacts of irrigation, using water from any ground or underground source
- enterprise policies and procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate	The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy

competency in this Unit	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• apply measuring and testing techniques</li> <li>• measure pressures, flows and distribution uniformity of an irrigation system</li> <li>• calculate pressure differentials, flow rates and water usage</li> <li>• record and report system performance.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b>Irrigation systems</b> may include:</p>	<ul style="list-style-type: none"> <li>• low volume irrigation systems such as micro-irrigation</li> <li>• sprinkler irrigation</li> <li>• moving sprinkler irrigation</li> <li>• surface irrigation.</li> </ul>

## Unit Sector(s)

Irrigation



## AHCIRG304A Operate gravity fed irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating gravity fed (flood) irrigation systems and defines the standard required to: read and follow operations manual and irrigation schedules; use pre-start checks; operate and inspect the system; check pressure at the headworks and control valves; carry out running repairs on irrigation delivery and drainage systems; shut down in response to irrigation indicators.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on irrigation farms and is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Perform pre-start checks for gravity fed irrigation system	<p>1.1. Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational.</p> <p>1.2. Pumps are primed, if necessary, and gates and controls are open or closed in accordance with enterprise procedures.</p> <p>1.3. Pipes, system equipment and outlets are positioned and set up in accordance with enterprise standards and OHS requirements.</p>
2. Start up and inspect system	<p>2.1. Syphons and other delivery mechanisms are primed and started in accordance with enterprise procedures.</p> <p>2.2. Start up sequence is implemented in accordance with operations manual and water levels, and pressure built up slowly as directed.</p> <p>2.3. Pressure at the headworks and control valves is within design specifications indicating efficient filter operation, and water is distributed evenly to the targeted areas with minimal wastage and run-off.</p> <p>2.4. All malfunctions, leaks, damage to water courses and blockages are corrected or repaired immediately and reported in accordance with Occupational Health and Safety (OHS) and enterprise procedures.</p> <p>2.5. Head water levels are monitored and maintained.</p> <p>2.6. If used, pumps are monitored during operation, rubbish is cleared from outlets, and pump is backflushed in accordance with enterprise procedures.</p> <p>2.7. Irrigation changes are implemented in accordance</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>with enterprise procedures.</p> <p>2.8. Water reuse systems are checked for clearance and freedom from weeds.</p>
3. Shut down system based upon irrigation indicators	<p>3.1. Area is irrigated in accordance with enterprise procedures, and time lag between shut down and end of watering is observed to minimise run-off and deep percolation.</p> <p>3.2. System components are shut down in sequence in accordance with manufacturer's and enterprise procedures.</p> <p>3.3. Drainage and treatment systems are checked in accordance with enterprise procedures.</p> <p>3.4. Tailwater control systems are implemented in accordance with statutory requirements and enterprise standards.</p> <p>3.5. Irrigation activities are reported and recorded in accordance with regulatory requirements and enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- set up pipes, system equipment and outlets
- start up the system
- use syphons
- check pressure at the headworks and control valves
- carry out running repairs on irrigation delivery and drainage systems
- carry out shut down procedures
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement OHS and environmental policies and procedures relating to the operation of gravity fed irrigation systems
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible

## REQUIRED SKILLS AND KNOWLEDGE

information collected and select and apply procedures for a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- general irrigation methods for gravity fed irrigation systems
- main components of gravity fed irrigation systems
- pump types used in gravity fed irrigation systems and their operation
- environmental impacts of irrigation, using water from any ground or underground source
- inspection procedures
- soil/plant/water relationships
- water requirements of plants/crops consistent with sound environmental management
- shutdown sequence
- OHS, environmental and enterprise policies and procedures relating to the operation of gravity fed irrigation systems.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence is required in the process of operating gravity fed irrigation systems. The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- read and follow operations manual and irrigation

<b>EVIDENCE GUIDE</b>	
	schedules <ul style="list-style-type: none"> <li>• use pre-start checks</li> <li>• operate and inspect the system</li> <li>• check pressure at the headworks and control valves</li> <li>• carry out running repairs on irrigation delivery and drainage systems</li> <li>• shut down in response to irrigation indicators.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Systems may require:	<ul style="list-style-type: none"> <li>• gravity fed irrigation systems such as border check, contour irrigation, furrow irrigation, hillside flooding, and basin irrigation. Gravity fed systems may range from manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCIRG305A Operate pressurised irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating pressurised irrigation systems and defines the standard required to: read and follow operations manual and irrigation schedules; carry out pre-start checks; operate and inspect the system; measure and interpret flow rates and pressures; identify adverse environmental impacts of irrigation activities and take appropriate remedial action; shut down in response to irrigation indicators.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in irrigated farming systems and is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Perform pre-start checks for pressurised irrigation system	<p>1.1. Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational.</p> <p>1.2. Pumps are primed, if necessary, and valves and controls are open or closed as directed.</p> <p>1.3. Pressure and flow testing equipment are calibrated and available as required.</p> <p>1.4. Other pre-start system checks are carried out in accordance with manufacturer's requirements and enterprise procedures.</p>
2. Start up and inspect system	<p>2.1. Start up sequence is implemented in accordance with operations manual.</p> <p>2.2. All malfunctions, leaks and blockages are corrected or repaired immediately and reported in accordance with enterprise procedures.</p> <p>2.3. Pressure at the headworks and control valves is checked against design specifications</p> <p>2.4. Water distributed is checked for even coverage over the targeted areas with minimal wastage and run-off.</p>
3. Shut down system based upon irrigation indicators	<p>3.1. Water is applied for sufficient time to achieve required soil moisture levels in accordance with irrigation schedule, environmental considerations and allowing for weather conditions.</p> <p>3.2. System components are shut down and drained in sequence in accordance with manufacturer's specifications and enterprise procedures.</p> <p>3.3. Drainage and treatment systems are checked in</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with enterprise procedures.</p> <p>3.4. Irrigation activities are recorded and in reported accordance with regulatory requirements and enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- read and follow operations manual and irrigation schedules
- calibrate pressure and flow testing equipment
- carry out pre-start checks and prime pumps
- start up system and carry out operational checks
- measure and interpret flow rates and pressures
- perform shut down procedures
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant OHS and environmental policies and procedures relating to the operation of pressurised irrigation systems
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- general irrigation methods for pressurised systems
- main components of pressurised irrigation systems
- pump types used in pressurised irrigation systems and their operation
- environmental impacts of irrigation using water from any ground or underground source
- soil/plant/water relationships

**REQUIRED SKILLS AND KNOWLEDGE**

- water requirements of plants/crops consistent with sound environmental management
- shutdown sequence
- OHS, environmental and enterprise policies and procedures relating to the operation of pressurised irrigation systems.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- read and follow operations manual and irrigation schedules
- carry out pre-start checks
- operate and inspect the system
- measure and interpret flow rates and pressures
- identify adverse environmental impacts of irrigation activities and take appropriate remedial action
- shut down in response to irrigation indicators.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
System may require:	<ul style="list-style-type: none"> <li>pressurised irrigation systems such as micro-irrigation systems and spray irrigation systems.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCIRG306A Troubleshoot irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of troubleshooting faults and blockages in irrigation systems and defines the standard required to: read and apply system specifications, technical manuals and supply/spare parts inventories; locate and identify faulty components and blockages; apply shutdown sequence and isolation procedures; remove faulty components from the system and install replacements; clear blockages or replace blocked sections; and return isolated or shutdown components to service.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on irrigation farms or to irrigation contractors. The work is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Locate and identify faulty components and blockages	<p>1.1.Irrigation system and component function is determined by reference to system specifications and technical manuals.</p> <p>1.2.Monitoring and maintenance records are checked and reviewed.</p> <p>1.3.Operational tests are carried out according to system specifications, technical manuals and Occupational Health and Safety (OHS) requirements.</p> <p>1.4.Faulty components and blockages are identified and documented according to enterprise policy and procedures.</p>
2. Shut down/isolate component	<p>2.1.Shut own sequence and isolation procedures are applied as required according to system specifications and technical manuals.</p> <p>2.2.Safe shutdown or isolation is verified.</p> <p>2.3.Safety/security lock off devices and signage is installed according to enterprise policy and procedures.</p>
3. Replace faulty components and clear blockages	<p>3.1.Access to faulty components and blockages is arranged.</p> <p>3.2.Faulty components are removed from the system, according to system specifications and technical manuals, and repaired or disposed of in an environmentally responsible way.</p> <p>3.3.Replaceable components are selected from</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>manufacturer catalogues and procured using enterprise procedures.</p> <p>3.4.Replacement components are installed to meet system specifications according to technical manuals.</p> <p>3.5.Replace faulty components and clear blockages are carried out without unnecessary damage to surrounding site and structures.</p> <p>3.6.Blockages are cleared or blocked sections replaced according to enterprise procedures.</p>
4. Return system to normal operating status	<p>4.1.Isolated or shutdown components are returned to service.</p> <p>4.2.Operational tests are carried out according to system specifications, technical manuals and OHS requirements.</p> <p>4.3.System is returned to normal operational set-up.</p> <p>4.4.Repair activities are reported and recorded according to enterprise policy and procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- operate, maintain and repair irrigation systems
- shut down and isolate components
- replace components
- carry out operational tests
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required

**REQUIRED SKILLS AND KNOWLEDGE**

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- identification, characteristics and operation of replaceable components of irrigation systems
- system malfunctions and their likely causes
- environmental impacts of irrigation, using water from any ground or underground source
- purchasing procedures
- isolation procedures
- enterprise policies and procedures
- irrigation, OHS and environmental guidelines.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- read and apply system specifications, technical manuals and supply/spare parts inventories
- locate and identify faulty components and blockages
- apply shutdown sequence and isolation procedures
- remove faulty components from the system and install replacements
- clear blockages or replace blocked sections
- return isolated or shutdown components to service.

**Context of and specific resources for**

Competency requires the application of work practices

**EVIDENCE GUIDE****assessment**

under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

System may include:

- pressurised irrigation systems, such as micro-irrigation, spray irrigation or gravity-fed irrigation systems.

**Unit Sector(s)**

<b>Unit sector</b>	Irrigation
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCIRG307A Recommend irrigation products and services

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of recommending irrigation products and services and defines the standard required to: identify and interpret customer needs; recommend appropriate products including pumps; estimate quantities and negotiate price; provide advice on warranty, payment, service and repair.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires the application of knowledge and skills to interact with customers, address customer needs. The work in this standard will be carried out with limited supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Research store product range	<p>1.1.Product knowledge developed by accessing relevant sources of information.</p> <p>1.2.Products correctly identified according to relevant product information.</p> <p>1.3.Operation of store products, machinery and equipment safely and accurately demonstrated according to store policy and legislative requirements.</p> <p>1.4.Knowledge of irrigation product range accurately demonstrated.</p>
2. Recommend irrigation products	<p>2.1.Customer's needs accurately identified.</p> <p>2.2.Detailed manufacturer's product specifications provided, when applicable, and explained to customers to assist buying decisions according to legislative requirements.</p> <p>2.3.Features and benefits of products demonstrated to customers to create a buying environment.</p>
3. Estimate quantities	<p>3.1.Quantities of irrigation products required accurately estimated from measurements/information provided by customer according to product requirements and store procedures.</p> <p>3.2.Measuring tools accurately applied using imperial or metric measures relevant to specific products.</p> <p>3.3.Customer provided with accurate quotation for quantities estimated.</p>
4. Advise on irrigation product warranties	<p>4.1.Comparisons between product/manufacturers warranties clearly explained to customer.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.2. Individual product warranty terms and conditions confirmed from relevant sources of information and accurately conveyed to customer.</p> <p>4.3. Customer provided with written information regarding individual product warranty terms and conditions, especially extended or promotional warranties, according to store policies and procedures.</p>
5. Negotiate price and payment options	<p>5.1. Payment options including store recommended retail pricing for various brand options accurately conveyed to customers according to legislative requirements.</p> <p>5.2. Individual product prices negotiated where necessary according to store policy to achieve sales.</p> <p>5.3. Store payment options accurately conveyed to customers and a preferred option negotiated following store procedures.</p>
6. Advise on and arrange product service and repairs	<p>6.1. Customer questioned to determine nature of problem.</p> <p>6.2. Problem diagnosed by accessing manufacturer's information.</p> <p>6.3. Solutions offered according to nature of problem, available product information and store policy.</p> <p>6.4. Service/repair process identified and accurately described to customer as required, according to store policy.</p> <p>6.5. Price and timeline for basic service/repairs identified and quoted to customer where applicable.</p> <p>6.6. Customer details identified and accurately transcribed to repair form, according to store policy and legal requirements.</p> <p>6.7. Item for repair labelled and securely stored according to store policy.</p> <p>6.8. Customer notified without undue delay on arrival/completion of service/repair.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- identify hazards and inform customers of Occupational Health and Safety (OHS) issues
- determination of pump capacities in relation to proposed application
- demonstration and assembly of irrigation products and components
- basic diagnostic techniques
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- store irrigation products and pump range
- interpretation of manufacturers specifications
- price negotiation and payment options
- store product and service and repair policy
- pump and irrigation equipment characteristics, technical capabilities and limitations
- pump and irrigation equipment components, controls, features and functions.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include

<b>EVIDENCE GUIDE</b>	
	achievement of the following: <ul style="list-style-type: none"> <li>• identify and interpret customer needs</li> <li>• recommend appropriate products including pumps</li> <li>• estimate quantities and negotiate price</li> <li>• provide advice on warranty, payment, service and repair.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Products and services may include:	<ul style="list-style-type: none"> <li>• the range of commercially available irrigation products and services used in the reticulation of water for the purpose of irrigation such as:                             <ul style="list-style-type: none"> <li>• pipe</li> <li>• fittings</li> <li>• pumps</li> </ul> </li> <li>• advice to customers regarding the design, technical features and uses of irrigation products including pumps size and type.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCIRG308A Monitor soils under irrigation

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the skills and knowledge required to monitor the impact of irrigation on the soil plant growing environment, and to provide for the needs of irrigated plants. The Unit requires the ability to assess the physical and chemical properties of irrigated soils; assess the capacity of the soil to hold plant available moisture; monitor and adjust soil moisture levels; estimate plant watering requirements; and report on irrigated plant growth issues.

### Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Assess the physical properties of an irrigated soil	1.1 The profile of an irrigated soil is described 1.2 Soil texture and structure within the soil layers is determined 1.3 Tests for organic matter level in a soil are interpreted 1.4 Test for slaking and dispersion in an irrigated soil is undertaken 1.5 The infiltration rate for an irrigated soil is assessed 1.6 Soil moisture levels are measured 1.7 The impacts of cultivation and watering practices on the physical properties of a soil are described
2 Define soil moisture properties using industry terms	2.1 Soil moisture tension and its role in determining water availability to plants is described 2.2 The field capacity of an irrigated soil is assessed 2.3 The wilting point for a plant species in an irrigated soil is observed 2.4 Readily available water (RAW) in an irrigated soil is calculated
3 Monitor soil chemical properties	3.1 Soil test results for salinity and sodicity levels in an irrigated soil is interpreted 3.2 pH tests and the potential impact of pH on soil structure and nutrient availability is interpreted
4 Assess soil health and plant growth under irrigation	4.1 The risk of erosion in an irrigated soil is assessed 4.2 An assessment of soil biology in an irrigated soil is carried out 4.3 The growing requirements for a plant species is established
5 Implement strategies to optimise the irrigation growing environment for plants	5.1 Soil husbandry practices to reduce risks of compaction and erosion are undertaken 5.2 Watering schedule is implemented and monitored 5.3 Frequency of watering is adjusted if necessary, based on available moisture, soil properties and plant response 5.4 Soil and plant moisture status and irrigation requirement is reported to supervisor

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.



**Required skills include:**

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**Ability to:**

- conduct soil structure and texture assessment
- apply the results of soil testing to assessing soil properties
- use soil moisture monitoring equipment
- calculate moisture holding capacity of plants, including RAW
- assess the erosion potential of an irrigated soil
- assess the health of an irrigated soil
- adjust watering practices to meet plant needs
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge includes:**

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**Knowledge of:**

- soil moisture monitoring procedures
- soil moisture definitions and calculations
- interpreting salinity, sodicity and pH tests
- soil structure and texture
- critical measures for moisture availability
  - readily available water
  - wilting point
  - field capacity
- effect of dispersible soils under irrigation
- signs moisture stress & nutrient deficiency in plants
- soil biology
- types of erosion
- adverse environmental impacts of irrigated plant production.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess the physical and chemical properties of irrigated soils</li> <li>• assess the capacity of the soil to hold plant available moisture</li> <li>• monitor and adjust soil moisture levels</li> <li>• estimate plant watering requirements</li> </ul> <p>report on irrigated plant production issues.</p>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Irrigation systems may include:	<ul style="list-style-type: none"> <li>• low volume irrigation systems such as micro-irrigation</li> <li>• sprinkler irrigation</li> <li>• moving sprinkler irrigation</li> <li>• surface irrigation.</li> </ul>
Interpretation of soil tests may include:	field measurements of moisture levels, infiltration rate and organic matter levels.
Soil assessment may include:	physical tests for soil structure and texture, slaking and dispersion.
Soil moisture measuring equipment	<ul style="list-style-type: none"> <li>• tensiometers</li> <li>• gypsum blocks</li> </ul>

may include:	<ul style="list-style-type: none"><li>• watermark</li><li>• capacitance probes</li><li>• neutron probes.</li></ul>
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## Unit Sector(s)

Irrigation

# AHCIRG309A Interpret and apply instructions to install pumps

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of interpreting instructions to install pumps and defines the standard required to: organise resources for installation work; set out and prepare site; site the pump and place it on a base; connect suction and discharge lines; and commission the pumping system.

## Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Source irrigation system requirements	1.1 Location of pump is determined following site inspection 1.2 Pump base requirements are identified from drawings and specifications using relevant information 1.3 Required materials and equipment are identified, ordered and collected in accordance with workplace procedures 1.4 Materials and equipment are checked for compliance with relevant Australian standards, docket and order form, and for acceptable condition 1.5 Sustainability principles and concepts are applied to work preparation and application
2 Plan and sequence installation tasks from instructions	2.1 Drawings and specifications are obtained 2.2 <b>OHS requirements</b> associated with installing water pump sets, and workplace environmental requirements, are adhered to throughout the work 2.3 Workplace instructions are identified and adhered to 2.4 Tasks are planned and sequenced in conjunction with others involved in or affected by the work and statutory and regulatory authority requirements 2.5 Work area is prepared to support efficient installation of <b>water pump sets</b>
3 Select and check tools and equipment for serviceability	3.1 Tools and equipment for installing water pumps are selected and checked for serviceability 3.2 <b>PPE</b> is selected and used to meet workplace OHS requirements
4 Install and commission <b>pumping and flow control components</b>	4.1 Pump base is set out to comply with drawings and specifications 4.2 Pump base is constructed in accordance with drawings and specifications 4.3 Pump and <b>pump controls</b> are installed in accordance with relevant Australian standards, drawings, specifications and manufacturer instructions 4.4 Suction and discharge lines and <b>flow control devices</b> are connected 4.5 Delivery and distribution components connected to pump comply with relevant specifications and manufacturer instructions 4.6 Pressure testing of pumping system is conducted in accordance with specifications 4.7 Pump is tested in accordance with specifications and test data is recorded in required format

- |   |   |
|---|---|
| 5 Clean up after installation           | 5.1 Work area is cleared and materials disposed of, reused or recycled according to legislation, regulations, codes of practice and job specification |
|   | 5.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and workplace procedures          |
|   | 5.3 Documentation is completed in accordance with workplace requirements  |
| 6 Review, record and report activities. | 6.1 Equipment, tools and materials are checked, maintained and stored according to manufacturer guidelines and organisational procedures              |
|   | 6.2 Work site is restored to meet environmental and organisational requirements   |
|   | 6.3 Activities are recorded and reported according to organisational procedures   |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- match pump output and flow rate to pipe diameter
- position pumps and valves
- prime and operate pumps
- open and close valves
- monitor performance of valves
- follow plans, charts and instructions
- perform work-related calculations
- organise equipment and materials for installation work
- use power tools and hand tools
- handle materials safely
- install irrigation components
- identify hazards and adopt safe work practices
- identify and respond to operational problems
- communicate with work team members, supervisors, contractors and consultants
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge includes:**

**Knowledge of:**

- properties of water including pressure and flow rates
- basic principles of hydraulics (flow vs. pressure), energy loss due to friction
- types of pumps and application in irrigation
  - centrifugal
  - vertical turbine
  - submersible
  - propeller
- advantages and disadvantages of each pump type
- types suitable as booster and floating pumps
- discharge and flow rates
- pump components and their principles of operation
- pump gauges and controls
- types of valves
- automatic pump switches
  - timers
  - pressure switches
  - irrigation controllers
  - flow switches
- impellers, rotors, stators
- pump performance and pressure testing
- the SI system of measurement
- characteristics and application of different valves, pipes and fittings including fixing and joining techniques and methods
- JSA's/Safe work method statements
- electrical licensing requirements
- installation procedures for irrigation pumps
- welding skills (poly and steel)
- servicing requirements
- workplace and equipment safety requirements.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
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Critical aspects for assessment and evidence required to demonstrate competency in this Unit	The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• organise resources for installation work</li> <li>• set out and prepare site</li> <li>• site the pump and place it on a base</li> <li>• connect suction and discharge lines</li> <li>• commission the pumping system.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b><i>OHS requirements</i></b> may include:	solar radiation, dust, noise, air- and soil-borne micro-organisms, chemicals and hazardous substances, sharp hand tools and equipment, manual handling, holes, and slippery and uneven surfaces.
<b><i>Water pump sets</i></b> may include:	<ul style="list-style-type: none"> <li>• centrifugal</li> <li>• Archimedes screw type</li> <li>• submersible</li> <li>• positive displacement.</li> </ul>
Personal protective clothing and equipment ( <b><i>PPE</i></b> ) may include:	steel capped boots/shoes, overalls, gloves, sun hat, sunscreen lotion, safety goggles, face mask and hearing protection, and any protection required for the use of equipment.
<b><i>Pumping and flow control components</i></b> may include:	all types of pumps and pumping systems (including filters and valves) used to move water to or through an irrigation system.



<i>Flow control devices</i> may include:	<ul style="list-style-type: none"><li>• flow directional gates</li><li>• regulators</li><li>• valves<ul style="list-style-type: none"><li>• sluice</li><li>• gate</li><li>• blade</li><li>• non-return</li></ul></li><li>• doors, drop structures and bars.</li></ul>
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## Unit Sector(s)

Irrigation

# AHCIRG310A Operate and maintain irrigation pumping systems

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of operating and maintaining irrigation pumping systems and defines the standard required to: maintain pumps and pumping equipment; operate an irrigation pumping system; monitor pumping operations; isolate the pumping system; carry out basic repairs and replacement of parts; and dispose of waste.

## Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare to maintain pumps	<p>1.1 Work requirements for the satisfactory completion of operations are obtained and interpreted</p> <p>1.2 Site, manufacturer's and legislative requirements and procedures necessary to complete the allocated work are accessed and interpreted</p> <p>1.3 Items and tools required for the safe, effective and efficient conduct of servicing and maintenance tasks are identified</p> <p>1.4 Support required for the safe completion of the servicing and maintenance tasks are identified and arranged</p> <p>1.5 Isolation and lock-out of all equipment necessary for the safe execution of tasks is carried out in accordance with site requirements and procedures</p>
2 Carry out pump <i>maintenance</i>	<p>2.1 Pumps are inspected and any faults reported in accordance with site and manufacturer's requirements and procedure</p> <p>2.2 Maintenance tools and equipment are selected and used safely</p> <p>2.3 <i>Servicing</i> and maintenance of pumps is carried out in accordance with the work requirements, manufacturer's current specifications and site requirement</p> <p>2.4 <i>Hazardous and emergency situations</i> are recognised and responded to in accordance with legislative, site and manufacturer's requirements and procedures</p> <p>2.5 Used oil, lubricant and other waste is disposed of in accordance with legislative and site requirements</p> <p>2.6 Servicing and maintenance records are maintained in accordance with site requirements</p>
3 Prepare the pumping system	<p>3.1 Operation and function of pump and driver is checked by applying principles of operation and procedures</p> <p>3.2 The operational area is checked to ensure that any potential hazards which may affect the operation of the equipment are removed</p> <p>3.3 Pre-start-up checks are conducted on <i>the pumping system</i> to ensure valves are correctly sequenced and filters are clear before commencing pumping operations, and that all safety requirements are met</p>
4 Start up and shutdown pumping system	<p>4.1 <i>Ancillary equipment</i> is operated in accordance with procedures.</p> <p>4.2 Pump is started up and shutdown in line with procedures</p> <p>4.3 Emergency shutdown procedures are implemented when required</p>

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|---|---|
| 5 Operate and monitor pumping and ancillary systems | 5.1 Flanges, gaskets and seals are checked and maintained within stated operational tolerances and to avoid any environmental damage  |
|   | 5.2 Pump pressures and flows are monitored for conformance  |
|   | 5.3 Amperage testing equipment is used to monitor and identify variations in the operating conditions of the pumping systems/equipment  |
|   | 5.4 Pumping systems/equipment performance and all components are monitored and regularly checked to identify any signs of excessive wear and diminution of performance  |
|   | 5.5 Operational valves and valve assemblies are checked for possible leakages   |
|   | 5.6 Filter systems are periodically checked and cleaned to remove any potential blockages or impurities entering the pumping system/equipment and causing it to cavitate or malfunction during operation                |
|   | 5.7 Lubrication oil is inspected and sampled to check that operating levels are correct and to determine if any contamination has taken place which may affect the operational capacity of the pumping system/equipment |
|   | 5.8 Appropriate action is taken resulting from checks and monitoring  |
| 6 Shut down the pumping system                      | 6.1 Injection equipment is shut down according to workplace procedures  |
|   | 6.2 The pump is shut down according to workplace procedures   |
|   | 6.3 Pumping equipment is cleaned according to workplace procedures  |
|   | 6.4 Waste generated by both the pumping process and cleaning procedures is collected, treated, disposed of or recycled according to workplace procedures  |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- inspect and clean pumps
- clear blockages
- lubricate pumps
- check and top-up fluids, including:

- coolants
- lubricants
- hydraulic oils
- replace wear components, including pump seals, liners and impellers
- replace v belts
- tension fasteners and y-belts
- adjust pump settings
- set valves and check for wear and leakages
- monitor pressures and flows
- use amperage testing equipment
- check and clear or replace filters
- check oil quality and levels
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

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**Required knowledge includes:**

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**Knowledge of:**

- properties of water including pressure and flow rates
- types of pumps and application in irrigation
  - centrifugal
  - vertical turbine
  - submersible
  - propeller
- advantages and disadvantages of each pump type
- pumps suitable as booster and floating pumps
- basic principles of hydraulics (flow vs. pressure)
- discharge and flow rates
- pump components and their principles of operation
- automatic pump switches
  - timers
  - pressure switches
  - irrigation controllers
  - flow switches
- impellers, rotors, stators

- pump gauges and controls
- pump performance and fault finding
- types of valves
- opening and closing valves
- monitoring performance of valves
- priming and operating pumps
- servicing requirements
- workplace and equipment safety requirements.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• maintain pumps and pumping equipment</li> <li>• operate an irrigation pumping system</li> <li>• monitor pumping operations</li> <li>• isolate the pumping system</li> <li>• carry out basic repairs and replacement of parts</li> <li>• dispose of waste.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be

included.	
<b>Maintenance</b> of pumps may include:	<ul style="list-style-type: none"> <li>• replacing wear components, including pump seals, liners and impellers</li> <li>• replacing v-belts</li> <li>• tensioning fasteners and v-belts</li> <li>• adjust pump settings.</li> </ul>
<b>Servicing</b> of pumps may include:	<ul style="list-style-type: none"> <li>• inspection</li> <li>• cleaning</li> <li>• clearing blockages</li> <li>• greasing</li> <li>• check and top-up fluids, including: <ul style="list-style-type: none"> <li>• coolants</li> <li>• lubricants</li> <li>• hydraulic oils.</li> </ul> </li> </ul>
<b>Hazardous and emergency situations</b> may include:	<ul style="list-style-type: none"> <li>• confined spaces</li> <li>• working alone</li> <li>• personal injury</li> <li>• electrical</li> <li>• dust</li> <li>• noise</li> <li>• environmental</li> <li>• chemical</li> <li>• fire.</li> </ul>
<b>Pumping systems</b> may include:	all types of pumps and components (including filters and valves) used to move water to or through an irrigation system.
<b>Ancillary equipment</b> may include:	any systems that are part of the irrigation system (such as computerised scheduling) or work with the irrigation system (such as fertigation).

## Unit Sector(s)

Irrigation

# AHCIRG311A Install low volume irrigation components

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of installing low volume irrigation systems and defines the standard required to: organise resources for installation work; set out and prepare site; install irrigation components; complete installation work; and assist in commissioning irrigation systems.

## Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Organise resources for installation of a <i>low volume irrigation system</i>	1.1 Materials, tools, equipment and machinery are selected according to the irrigation system design requirements and enterprise work procedures 1.2 The construction site for the irrigation system and construction method is identified according to the site and irrigation system plans and enterprise work procedures 1.3 Parts and equipment delivered to site are checked according to system drawings and specifications 1.4 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer specifications and enterprise work procedures 1.5 Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor 1.6 Suitable safety and personal protective equipment (PPE) are selected, used and maintained 1.7 Water supply is checked to ensure that it is compatible with system specifications
2 Set out and prepare site	2.1 Measurement and marking out of irrigation lines are consistent with the plan 2.2 Trenches, where constructed, are at the specified depth without damage to services, facilities, features and established plants 2.3 Equipment operation and work practices conform to enterprise and legislative OHS requirements 2.4 Regulations and legislation relevant to the situation are observed 2.5 Work practices reflect sustainable horticulture principles and respond to local community requirements
3 Install <i>low volume irrigation components</i>	3.1 Plan is interpreted and, where applicable, contractors are supervised and work is monitored to conform to the plan 3.2 Components are assembled and connected according to the plan, and joints are completed and tested according to manufacturer specifications 3.3 Fittings and valves are fitted and adjusted to the requirements of the installation plan, and all joints are secured according to enterprise guidelines 3.4 A clean and safe work area is maintained while installation work is carried out 3.5 Tools appropriate to the task being undertaken are chosen

- and used according to guidelines and safe working practices are employed.
- 4 Complete installation work
    - 4.1 The system configuration and capacity matches the installation plan
    - 4.2 The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures
    - 4.3 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures
  - 5 Assist in commissioning a low volume irrigation system
    - 5.1 Pumping system is connected
    - 5.2 Start-up sequence is in accordance with operations manual
    - 5.3 System is flushed as required
    - 5.4 Operating faults are identified and corrective actions taken according to the operations manual
    - 5.5 Work outcomes are recorded or reported to the supervisor according to enterprise work procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- identify hazards and implement safe work procedures
- organise resources for installation work
- set out and prepare site
- install low volume irrigation components
- complete installation work
- perform start up and commissioning tasks
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge includes:****Knowledge of:**

- methods and techniques of low volume irrigation
- components of a low volume irrigation system
- characteristics and operation of pipes, joints, valves, micro jets and drippers
- operation of pumps and water flow rates
- soil characteristics
- behaviour of water on varying terrain and soil types
- soil water retention testing techniques
- water quality and water filtration techniques
- calculations for installing irrigation systems
- environmental impacts of installing irrigation systems
- OHS legislation and enterprise OHS procedures.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• organise resources for installation work</li> <li>• set out and prepare site</li> <li>• install irrigation components</li> <li>• complete installation work</li> <li>• assist in commissioning irrigation systems.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Low volume irrigation systems</i></b> may include:	systems that operate under comparatively low volume and pressure including micro irrigation, pop-ups at less than 0.1 litres/second, and drippers.
<b><i>Low volume irrigation components</i></b> may include:	<ul style="list-style-type: none"> <li>• pump (flow rate and head requirement)</li> <li>• filter system</li> <li>• pressure gauges</li> <li>• backflow preventer</li> <li>• pressure regulator valves</li> <li>• fertiliser injector</li> <li>• flowmeter</li> <li>• block valve</li> <li>• air and vacuum release valves</li> <li>• main and sub-main lines</li> <li>• flushing manifold</li> <li>• connectors</li> <li>• lateral lines or tapes</li> <li>• emitters</li> <li>• controllers.</li> </ul>

## Unit Sector(s)

Irrigation

# AHCIRG312A Install sprinkler irrigation components

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of installing sprinkler irrigation systems and defines the standard required to: organise resources for installation work; set out and prepare site; install irrigation components; complete installation work; and commission sprinkler irrigation systems.

## Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Organise resources for installation of <i>sprinkler irrigation systems</i>	1.1 Materials, tools, equipment and machinery are selected according to the irrigation system design requirements and enterprise work procedures 1.2 The construction site for the irrigation system and construction method is identified according to the site and irrigation system plans and enterprise work procedures 1.3 Parts and equipment delivered to site are checked according to system drawings and specifications 1.4 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer specifications and enterprise work procedures 1.5 Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor 1.6 Suitable safety and personal protective equipment (PPE) are selected, used and maintained 1.7 Water supply is checked to ensure that it is compatible with system specifications
2 Set out and prepare site	2.1 Measurement and marking out of irrigation lines are consistent with the plan 2.2 Trenches, where constructed, are at the specified depth without damage to services, facilities, features and established plants 2.3 Equipment operation and work practices conform to enterprise and legislative OHS requirement 2.4 Regulations and legislation relevant to the situation are observed 2.5 Work practices reflect sustainable principles and respond to local community requirements
3 Install <i>sprinkler irrigation components</i>	3.1 Components are assembled and connected according to the plan, and joints are completed and tested according to manufacturer specifications 3.2 Fittings and valves are fitted and adjusted to the requirements of the installation plan, and all joints are secured according to enterprise guidelines 3.3 A clean and safe work area is maintained while installation work is carried out 3.4 Tools appropriate to the task being undertaken are chosen and used according to guidelines and safe working practices are employed

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|---|--|
| 4 Complete installation work                            | 4.1 The work site is levelled off to plan specifications and enterprise work procedures  |
|   | 4.2 The system configuration and capacity matches the installation plan  |
|   | 4.3 The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures |
|   | 4.4 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures  |
| 5 Assist in commissioning a sprinkler irrigation system | 5.1 Pumping system is connected  |
|   | 5.2 Start-up sequence is in accordance with operations manual  |
|   | 5.3 System is flushed as required  |
|   | 5.4 Operating faults are identified and corrective actions taken according to the operations manual  |
|   | 5.5 Testing and monitoring equipment are calibrated to manufacturer specifications   |
|   | 5.6 Work outcomes are recorded or reported to the supervisor according to enterprise work procedures   |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- identify hazards and implement safe work procedures
- organise resources for installation work
- set out and prepare site
- install sprinkler irrigation components
- complete installation work
- perform system commissioning tasks
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social

and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

#### Knowledge of:

- methods and techniques of sprinkler irrigation
- components of a sprinkler irrigation system
- characteristics and operation of pipes, joints, valves, sprinklers
- operation of pumps and water flow rates
- soil characteristics
- behaviour of water on varying terrain and soil types
- soil water retention testing techniques
- water quality and water filtration techniques
- calculations for installing irrigation systems
- environmental impacts of installing irrigation systems
- OHS legislation and enterprise OHS procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• organise resources for installation work</li> <li>• set out and prepare site</li> <li>• install irrigation components</li> <li>• complete installation work</li> <li>• commission irrigation systems.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><b><i>Sprinkler irrigation systems</i></b> may include:</p>	<p>any systems that use spray or rotor type sprinklers to distribute irrigation water at higher volume including pop-up sprinklers, fixed, and movable sprinklers (e.g. K Line and Ezy Shift).</p>
<p><b><i>Sprinkler irrigation components</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• pumps</li> <li>• sprinklers</li> <li>• nozzles</li> <li>• risers</li> <li>• pipe or tubing</li> <li>• valves</li> <li>• regulators and gauges</li> <li>• laterals.</li> </ul>

## Unit Sector(s)

Irrigation

# AHCIRG313A Install moving sprinkler irrigation components

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of installing movable sprinkler irrigation systems and defines the standard required to: organise resources for installation work; set out and prepare site; assemble water distribution, pumping, and locomotion components; complete installation work; and commission sprinkler irrigation systems.

## Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Organise resources for installation of <i>moving sprinkler irrigation systems</i>	1.1 Materials, tools, equipment and machinery are selected according to the irrigation system design requirements and enterprise work procedures 1.2 The construction site for the irrigation system and construction method is identified according to the site and irrigation system plans and enterprise work procedures 1.3 Parts and equipment delivered to site are checked according to system drawings and specifications 1.4 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer specifications and enterprise work procedures 1.5 Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor 1.6 Suitable safety and personal protective equipment (PPE) are selected, used and maintained 1.7 Water supply is checked to ensure that it is compatible with system specifications
2 Set out and prepare site	2.1 Measurement and marking out of irrigation lines are consistent with the plan 2.2 Trenches, where constructed, are at the specified depth without damage to services, facilities, features and established plants 2.3 Equipment operation and work practices conform to enterprise and legislative OHS requirements 2.4 Regulations and legislation relevant to the situation are observed 2.5 Work practices reflect sustainable principles and respond to local community requirements
3 Assemble spans	3.1 Span pipes with correctly tensioned bolts are joined 3.2 Vjack trusses in sequence to bow the span are connected 3.3 Goose necks and hose connectors are connected 3.4 Pre-cut drop hoses and connect sprinklers are fitted
4 Complete assembly of <i>moving sprinkler components</i>	4.1 Sprinklers, pressure regulators and hose directors are assembled 4.2 Gear box and control panel are fitted 4.3 Wheels are fitted and tensioned
5 Complete installation work	5.1 Earthworks are finished off to plan specifications and enterprise work procedures

- 5.2 The system configuration and capacity matches the installation plan
- 5.3 The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures
- 5.4 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures
- 6 Assist in commissioning a moving sprinkler irrigation system
  - 6.1 Pumping system is connected
  - 6.2 Start-up sequence is in accordance with operations manual
  - 6.3 System is flushed as required
  - 6.4 Operating faults are identified and corrective actions taken according to the operations manual
  - 6.5 Testing and monitoring equipment are calibrated to manufacturer specifications
  - 6.6 Work outcomes are recorded or reported to the supervisor according to enterprise work procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- identify hazards and implement safe work procedures
- organise resources for installation work
- set out and prepare site
- install movable sprinkler irrigation components
- tension span pipes with Vjack trusses
- fit control panel and wheels
- complete installation work
- perform system commissioning tasks
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social

and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

#### Knowledge of:

- methods and techniques of moving sprinkler irrigation
- components of a moving sprinkler irrigation system
- characteristics and operation of each component
- operation of pumps and water flow rates
- soil characteristics
- behaviour of water on varying terrain and soil types
- soil water retention testing techniques
- water quality and water filtration techniques
- calculations for installing irrigation systems
- environmental impacts of installing irrigation systems
- OHS legislation and enterprise OHS procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• organise resources for installation work</li> <li>• set out and prepare site</li> <li>• install spans and tension correctly</li> <li>• assemble water distribution, pumping, and locomotion components</li> <li>• complete installation work</li> <li>• commission a moving sprinkler irrigation system.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Moving sprinkler irrigation systems</i></b> may include:</p>	<p>any systems that use specifically hard and soft reel self-travelling irrigators, lateral move systems and centre pivots. Moving sprinkler systems do not include movable sprinkler systems such as K-Line.</p>
<p><b><i>Moving sprinkler system components</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• pipes</li> <li>• joints</li> <li>• valves</li> <li>• sprinklers</li> <li>• Vjack trusses</li> <li>• span pipes</li> <li>• pressure regulators</li> <li>• hose directors</li> <li>• gear box</li> <li>• control panel</li> <li>• wheels.</li> </ul>

## Unit Sector(s)

Irrigation

# AHCIRG314A Install surface irrigation structures and components

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of installing surface irrigation structures and components and defines the standard required to: organise resources for installation work; set out and prepare site; construct earthworks and install structures; prepare beds and water distribution equipment; and assist in commissioning surface irrigation systems.

## Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, and food and fibre production industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Organise resources for installation of <i>surface irrigation systems</i>	1.1 Materials, tools, equipment and machinery are selected according to the irrigation system design requirements and enterprise work procedures 1.2 The construction site for the irrigation system and construction method is identified according to the site and irrigation system plans and enterprise work procedures 1.3 Parts and equipment delivered to site are checked according to system drawings and specifications 1.4 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer specifications and enterprise work procedures 1.5 Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor 1.6 Suitable safety and personal protective equipment (PPE) are selected, used and maintained 1.7 Water supply is checked to ensure that it is compatible with system specifications
2 Interpret the surface irrigation plan and mark up	2.1 Plan is interpreted and levels are taken 2.2 Structures are marked out and earthworks pegged 2.3 A clean and safe work area is maintained while installation work is carried out 2.4 Tools appropriate to the task being undertaken are chosen and used according to guidelines and safe working practices are employed
3 Prepare and maintain diversion and conveyancing structures	3.1 Excavations are completed according to plan specifications and enterprise work procedures 3.2 Channels are installed according to the irrigation plan and enterprise work procedures 3.3 <i>Diversion and conveyancing structures</i> are installed 3.4 Structures are tested for configuration, flow rates and capacity consistent with the system plan and according to enterprise work procedures
4 Prepare beds	4.1 Excavations are completed according to plan specifications and enterprise work procedures 4.2 Beds are installed according to the irrigation plan and enterprise work procedures 4.3 Bed surface is prepared with use of roto-buck 4.4 <i>Field distribution structures</i> are installed or prepared 4.5 The supervisor is consulted and remedial action is taken



- when beds do not meet the plan specifications
- 5 Complete water measurement and tailwater works
    - 5.1 Excavations are completed according to plan specifications and enterprise work procedures
    - 5.2 *Water measurement structures* are installed according to the irrigation plan and enterprise work procedures
    - 5.3 Channels and tailwater storages are installed according to the irrigation plan and enterprise work procedures
    - 5.4 Pumping equipment, lines and filters are installed for recycling
  - 6 Complete installation work
    - 6.1 Earthworks and structures are finished off to plan specifications and enterprise work procedures
    - 6.2 The system configuration and capacity matches the installation plan
    - 6.3 The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures
    - 6.4 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures
  - 7 Assist in commissioning a surface irrigation system
    - 7.1 Water is supplied from channels or head ditches
    - 7.2 Watering sequence is in accordance with organisational procedures
    - 7.3 Testing and monitoring equipment are calibrated to manufacturer specifications
    - 7.4 System is monitored for watering efficiency, deep percolation and tailwater
    - 7.5 Operating faults are identified and corrective actions taken.
    - 7.6 Work outcomes are recorded or reported to the supervisor according to enterprise work procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- read, interpret and follow organisational policies and procedures
- use roto-buck for bed preparation
- construct earthworks
- build irrigation structures
- prepare irrigation beds

- install pumps and pipelines
- complete installation work
- perform system commissioning tasks
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

#### Knowledge of:

- water quality and water filtration techniques
- calculations for installing surface irrigation systems
- components of a surface irrigation system
- characteristics and operation of components
- behaviour of water on varying terrain and soil types
- soil water retention testing techniques
- water quality and water filtration techniques
- basic calculations for installing surface irrigation systems
- soil characteristics
- environmental impacts of surface irrigation installation
- enterprise OHS procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

	<ul style="list-style-type: none"> <li>organise resources for installation work</li> <li>set out and prepare site</li> <li>construct earthworks and install structures</li> <li>prepare beds and water distribution equipment</li> <li>assist in commissioning surface irrigation systems.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Surface irrigation systems</i> may include:	any systems that apply water across the surface of a levelled or contoured area. These include furrow, border and basin irrigation.
<i>Diversion and conveyancing structures</i> may include:	<ul style="list-style-type: none"> <li>intake structures</li> <li>diversion weirs and gates.</li> </ul>
<i>Field distribution structures</i> may include:	<ul style="list-style-type: none"> <li>canals</li> <li>pipelines</li> <li>drop structures and chutes</li> <li>division boxes and turnouts</li> <li>checks</li> <li>crossing structures</li> <li>flumes</li> <li>culverts</li> <li>inverted siphons.</li> </ul>
<i>Water measurement structures</i> may include:	<ul style="list-style-type: none"> <li>weirs</li> <li>parshall flumes</li> <li>cut-throat flumes.</li> </ul>

## Unit Sector(s)

Irrigation

# AHCIRG315A Interpret irrigation plans and drawings

## Modification History

Not applicable.

## Unit Descriptor

This Unit of Competency specifies the outcomes required to read and interpret plans and drawings applicable to installing irrigation systems and defines the standard required to: interpret symbols and abbreviations on plans, and technical drawings; orientate a site plan; mark out boundaries and features on a site from a plan; and list the irrigation components required for installation from a plan.

## Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit has employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Apply commonly used symbols and abbreviations	1.1 Commonly used symbols and abbreviations on plans are identified, understood and applied 1.2 Common irrigation terms used on plans are identified, understood and applied 1.3 Key features of irrigation plans, elevations and sections are identified 1.4 Scale, elevations and sections are identified from drawings
2 Locate and identify key features on a site plan	2.1 Irrigation site is identified from location drawings 2.2 True north and system orientation are identified from details provided on site plan 2.3 Key features of site plan are identified
3 Mark out and peg the site from a plan	3.1 Boundaries of the site are marked 3.2 Existing irrigation infrastructure on the site is identified 3.3 Electricity and communications infrastructure is identified on the site plan, marked out and safety procedures implemented 3.4 Pipelines identified on the plan are pegged out 3.5 Earthworks identified on the plan are pegged out
4 Identify required components for installation	4.1 Pipeline components required are annotated from plans and drawings 4.2 Water supply, distribution and delivery components are annotated from plans and drawings 4.3 Provision is made for receipt and storage of materials on site 4.4 Installation requirements and details of plans and drawings are confirmed with supervisor

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- interpret symbols and abbreviations used on plans
- interpret scale and specifications from plans and drawings
- recognise and mark out features on a site from a plan

- mark out boundaries and infrastructure position from a plan
- translate documented requirements into on-site activities and site and structural features from two-dimensional to three-dimensional formats
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

#### Knowledge of:

- identify types of drawings and their functions
- recognise commonly used scales, symbols and abbreviations
- a range of drawings and specifications relevant to the irrigation industry
- tools, equipment and materials relative to drawings/specifications
- measurements, calculations and quantities
- workplace safety requirements
- relevant acts, regulations and Codes of Practice
- basic industry calculations.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret symbols and abbreviations on plans</li> <li>• orientate a site plan for an irrigation system</li> <li>• mark out boundaries and features on a site from irrigation installation plans and drawings</li> <li>• list the irrigation components required for</li> </ul>

	installation from a plan.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Irrigation plans may include:	plans for low volume, sprinkler and surface irrigation systems that may cover water supply, distribution, conveyancing and drainage.
Irrigation drawings	drawings may be part of the irrigation plan and cover the range of irrigation components (hardware) and structures (earthworks) used in commercial irrigation.

## Unit Sector(s)

Irrigation



# **AHCIRG316A Implement a low volume irrigation maintenance program**

## **Modification History**

Not applicable.

## **Unit Descriptor**

This Unit covers the process of implementing a maintenance program for a low volume irrigation system and defines the standard required to: inspect irrigation systems; maintain irrigation equipment; troubleshoot and undertake minor repairs of equipment; record and report maintenance activities; dispose of unused or waste materials from site.

## **Application of the Unit**

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This Unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Interpret a low volume irrigation maintenance program	1.1 Scope of maintenance works is determined according to the irrigation maintenance program 1.2 Frequency of maintenance works is determined and implemented according to the irrigation maintenance program 1.3 Irrigation maintenance standards are established in line with the irrigation maintenance program 1.4 Maintenance works are planned and prepared 1.5 Occupational Health and Safety (OHS) requirements are identified, associated hazards and risks assessed, and suitable controls implemented 1.6 Environmental considerations of irrigation maintenance activities are identified
2 Inspect a <i>low volume irrigation system</i>	2.1 An inspection checklist is established according to the irrigation maintenance program 2.2 System is regularly inspected according to the checklist 2.3 Remedial action and repairs are identified and undertaken to restore system to full effectiveness 2.4 Servicing of mechanical equipment is undertaken according to the irrigation maintenance program 2.5 Results of maintenance works are assessed and recorded to ensure repairs or maintenance standards have been achieved according to the irrigation maintenance program 2.6 Surroundings are tidied and materials and equipment cleared from the site on completion of maintenance works
3 Carry out periodic system maintenance	3.1 Damage and blockages with contaminants are recorded by damage type, location and the section of the system affected 3.2 Damaged or faulty <i>components</i> and computer control systems are recorded and reported, and action taken to effect repairs 3.3 The system is chlorinated as per procedures 3.4 Filters are checked, cleaned and backflushed 3.5 Submains and laterals are flushed
4 Record and report maintenance activities	4.1 Maintenance and servicing records are completed 4.2 Parts removed and/or replaced are recorded 4.3 Faults and breakages are recorded or reported

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret and apply enterprise maintenance procedures
- inspect irrigation system
- test irrigation equipment
- test emitter output and function
- check connections
- service filter strainer periodically
- ensure proper operation of automatic flush valves
- confirm operational pressures
- record all test results clearly and concisely with attention to detail
- undertake minor repairs of equipment
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- identify hazards and implement safe work procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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#### Knowledge of:

- methods and techniques of sprinkler irrigation
- components of a sprinkler irrigation system
- characteristics and operation of pipes, joints, valves, emitters
- operation of pumps and water flow rates
- low volume irrigation system components
- common operational and maintenance problems
- environmental impacts of irrigation maintenance
- OHS legislation and safe work procedures.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• inspect low volume irrigation systems</li> <li>• maintain irrigation equipment</li> <li>• troubleshoot and undertake minor repairs of equipment</li> <li>• record and report maintenance activities</li> <li>• dispose of unused or waste materials from site.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Low volume irrigation systems</i></b> may include:	<p>systems that operate under comparatively low volume and pressure including micro irrigation, pop-ups at less than 0.1 litres/second, and drippers.</p>
System <b><i>components</i></b> may include:	<ul style="list-style-type: none"> <li>• pump (flow rate and head requirement)</li> <li>• filter system</li> <li>• pressure gauges</li> <li>• backflow preventer</li> <li>• pressure regulator valves</li> <li>• fertiliser injector</li> <li>• flowmeter</li> </ul>

	<ul style="list-style-type: none"><li>• block valve</li><li>• air and vacuum release valves</li><li>• main and sub-main lines</li><li>• flushing manifold</li><li>• connectors</li><li>• lateral lines or tapes</li><li>• emitters</li><li>• controllers.</li></ul>
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## Unit Sector(s)

Irrigation

# **AHCIRG317A Implement a sprinkler irrigation maintenance program**

## **Modification History**

Not applicable.

## **Unit Descriptor**

This Unit covers the process of implementing a maintenance program for an irrigation system and defines the standard required to: inspect irrigation systems; maintain irrigation equipment; troubleshoot and undertake minor repairs of equipment; record and report maintenance activities; dispose of unused or waste materials from site.

## **Application of the Unit**

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This Unit has employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Interpret an irrigation maintenance program	1.1 Scope of maintenance works is determined according to the irrigation maintenance program 1.2 Frequency of maintenance works is determined and implemented according to the irrigation maintenance program 1.3 Irrigation maintenance standards are established in line with the irrigation maintenance program 1.4 Maintenance works are planned and prepared 1.5 Occupational Health and Safety (OHS) requirements are identified, associated hazards and risks assessed, and suitable controls implemented 1.6 Environmental considerations of irrigation maintenance activities are identified
2 Inspect a sprinkler irrigation system	2.1 An inspection checklist is established according to the irrigation maintenance program 2.2 System is regularly inspected according to the checklist 2.3 Remedial action and repairs are identified and undertaken to restore system to full effectiveness 2.4 Servicing of mechanical equipment is undertaken according to the irrigation maintenance program 2.5 Results of maintenance works are assessed and recorded to ensure repairs or maintenance standards have been achieved according to the irrigation maintenance program 2.6 Surroundings are tidied and materials and equipment cleared from the site on completion of maintenance works
3 Carry out system maintenance	3.1 Damage and blockage caused by pests and animals are recorded by damage type, location and the section of the system affected 3.2 Damage or faulty pumps, valves, electrical components and computer control systems are recorded and reported, and action taken to effect repairs 3.3 End of season maintenance procedures are implemented in accordance with enterprise standards 3.4 Routine and preventative maintenance procedures are implemented in accordance with enterprise standards 3.5 Storage procedures for irrigation components are implemented
4 Record and report maintenance activities	4.1 Maintenance and servicing records are completed 4.2 Parts removed and/or replaced are recorded

### 4.3 Faults and breakages are recorded or reported

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret and apply enterprise maintenance procedures
- inspect irrigation system
- service irrigation equipment
- check sprinkler output and function
- remove and replace valves and filters
- check controllers
- record all test results clearly and concisely with attention to detail
- undertake minor repairs of equipment
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- identify hazards and implement safe work procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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#### Knowledge of:

- methods and techniques of sprinkler irrigation
- components of a sprinkler irrigation system
- characteristics and operation of pipes, joints, valves, sprinklers
- operation of pumps and water flow rates
- sprinkler irrigation system components
- common operational and maintenance problems
- environmental impacts of irrigation maintenance
- OHS legislation and safe work procedures.



## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• inspect irrigation systems</li> <li>• service irrigation equipment</li> <li>• troubleshoot and undertake minor repairs of equipment</li> <li>• record and report maintenance activities</li> <li>• dispose of unused or waste materials from site.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
System components may include:	<ul style="list-style-type: none"> <li>• pumps</li> <li>• sprinklers</li> <li>• nozzles</li> <li>• risers</li> <li>• pipe or tubing</li> <li>• valves</li> <li>• regulators and gauges</li> <li>• laterals</li> <li>• controllers.</li> </ul>
Sprinkler irrigation systems may	any systems that use spray or rotor type sprinklers to

include:	distribute irrigation water at higher volume including pop-up sprinklers, fixed, and movable sprinklers (e.g. K Line and Ezy Shift).
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## Unit Sector(s)

Irrigation

# **AHCIRG318A Implement a moving sprinkler irrigation maintenance program**

## **Modification History**

Not applicable.

## **Unit Descriptor**

This Unit covers the process of implementing a maintenance program for a moving sprinkler irrigation system and defines the standard required to: inspect irrigation systems; maintain irrigation equipment; troubleshoot and undertake minor repairs of equipment; record and report maintenance activities; dispose of unused or waste materials from site.

## **Application of the Unit**

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This Unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Interpret an irrigation maintenance program	1.1 Scope of maintenance works is determined according to the irrigation maintenance program 1.2 Frequency of maintenance works is determined and implemented according to the irrigation maintenance program 1.3 Irrigation maintenance standards are established in line with the irrigation maintenance program 1.4 Maintenance works are planned and prepared 1.5 Occupational Health and Safety (OHS) requirements are identified, associated hazards and risks assessed, and suitable controls implemented 1.6 Environmental considerations of irrigation maintenance activities are identified
2 Inspect a <i>moving sprinkler irrigation system</i>	2.1 An inspection checklist is established according to the irrigation maintenance program 2.2 System is regularly inspected according to the checklist 2.3 Remedial action and repairs are identified and undertaken to restore system to full effectiveness 2.4 Servicing of mechanical equipment is undertaken according to the irrigation maintenance program 2.5 Results of maintenance works are assessed and recorded to ensure repairs or maintenance standards have been achieved according to the irrigation maintenance program 2.6 Surroundings are tidied and materials and equipment cleared from the site on completion of maintenance works
3 Carry out system maintenance	3.1 Damage and blockage caused by pests and animals are recorded by damage type, location and the section of the system affected 3.2 Outlet pressure, flow rate and energy use is measured and recorded on a regular basis 3.3 Damaged or faulty pumps, valves, sprinklers electrical components and computer systems are recorded and reported, and action taken to effect repairs 3.4 Drive mechanism, frames and trusses are inspected and maintained 3.5 End of season maintenance procedures are implemented in accordance with enterprise standards 3.6 Routine and preventative maintenance procedures are implemented in accordance with enterprise standards 3.7 Storage procedures for irrigation components are

implemented

- |  |  |
|--|--|
| 4 Record and report maintenance activities | 4.1 Maintenance and servicing records are completed<br>4.2 Parts removed and/or replaced are recorded<br>4.3 Faults and breakages are recorded or reported |
|--|--|

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret and apply enterprise maintenance procedures
- complete regular and end of season maintenance tasks
  - change the engine oil and filter
  - replace the air and fuel filters
  - grease drive shafts on pump, and motor
  - check spark plugs on gas, propane or natural gas motors
  - drain, flush and refill the cooling system
  - refill the drip oil reservoir and allow oil to drain into the drip line based on pump column length
  - ensure that the right-angle gear head is free moving and clean and lubricate non-reverse pins
  - check for malfunctioning sprinklers
  - check injection pump and safety equipment operation
  - inspect lift base and arms for any stress marks or cracks
  - check all bolts for correct torques
- record all test results clearly and concisely with attention to detail
- undertake minor repairs of equipment
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- identify hazards and implement safe work procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge includes:****Knowledge of:**

- methods and techniques of moving sprinkler irrigation
- components of a moving sprinkler irrigation system and their maintenance requirements
- routine and end of season maintenance requirements for moving sprinkler systems
- common operational and maintenance problems
- environmental impacts of irrigation maintenance
- OHS legislation and safe work procedures.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• inspect moving sprinkler irrigation systems</li> <li>• maintain irrigation equipment</li> <li>• troubleshoot and undertake minor repairs of equipment</li> <li>• record and report maintenance activities</li> <li>• dispose of unused or waste materials from site.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement**

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the

candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b><i>Moving sprinkler irrigation systems</i></b> may include:	any systems that use specifically hard and soft reel self-travelling irrigators, lateral move systems and centre pivots. Moving sprinkler systems do not include movable sprinkler systems such as K-Line.
System components may include:	<ul style="list-style-type: none"> <li>• pipes</li> <li>• joints</li> <li>• valves</li> <li>• sprinklers</li> <li>• Vjack trusses</li> <li>• span pipes</li> <li>• pressure regulators</li> <li>• hose directors</li> <li>• gear box</li> <li>• control panel</li> <li>• wheels.</li> </ul>

## Unit Sector(s)

Irrigation

# AHCIRG319A Implement a surface irrigation maintenance program

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of implementing a maintenance program for a surface irrigation system and defines the standard required to: inspect irrigation systems; control unwanted vegetation within the irrigation system; carry out regular and end of season maintenance; troubleshoot and undertake minor repairs of equipment; record and report maintenance activities; and dispose of unused or waste materials from site.

## Application of the Unit

This Unit applies to skilled workers in the irrigation servicing and food and fibre production industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Interpret an irrigation maintenance program	1.1 Scope of maintenance works is determined according to the irrigation maintenance program 1.2 Frequency of maintenance works is determined and implemented according to the irrigation maintenance program 1.3 Irrigation maintenance procedures are followed in line with the irrigation maintenance program 1.4 Maintenance works are planned and prepared 1.5 Occupational Health and Safety (OHS) requirements are identified, associated hazards and risks assessed, and suitable controls implemented 1.6 Environmental considerations of irrigation maintenance activities are identified
2 Inspect a surface irrigation system	2.1 An inspection checklist is established according to the irrigation maintenance program 2.2 System is regularly inspected according to the checklist 2.3 Remedial action and repairs are identified and undertaken to restore system to full effectiveness 2.4 Servicing of mechanical equipment is undertaken according to the irrigation maintenance program 2.5 Results of maintenance works are assessed and recorded to ensure repairs or maintenance standards have been achieved according to the irrigation maintenance program 2.6 Surroundings are tidied and materials and equipment cleared from the site on completion of maintenance works
3 Carry out system maintenance	3.1 Damage and blockage caused by pests and animals are recorded by damage type, location and the section of the system affected 3.2 Damage or faulty pumps, valves, electrical components and computer systems are recorded and reported, and action taken to effect repairs 3.3 Vegetation control is carried out to keep all system components clear 3.4 <b><i>Water measuring, diversion and conveyancing, and distribution structures</i></b> are serviced as directed 3.5 End of season maintenance procedures are implemented in accordance with enterprise standards 3.6 Routine and preventative maintenance procedures are implemented in accordance with enterprise standards
4 Record and report	4.1 Herbicide records are maintained to meet legislative and

- maintenance activities      quality assurance requirements
- 4.2 Maintenance and servicing records are completed
  - 4.3 Parts removed and/or replaced are recorded
  - 4.4 Faults and breakages are recorded or reported

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret and apply enterprise maintenance procedures
- inspect irrigation system
- test irrigation equipment
- undertake minor repairs of equipment
- carry out earthworks maintenance on irrigation channels and beds
- remove and replace valves and filters
- check serviceability of siphons
- remove and replace gates/slides/doors
- control weeds and unwanted vegetation
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- record all test results clearly and concisely with attention to detail
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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- surface irrigation system components
- common operational problems
- maintenance requirements – routine and end of season
- weed control methods
- common operational and maintenance problems
- environmental impacts of irrigation maintenance
- OHS legislation and safe work procedures.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• inspect irrigation systems</li> <li>• control unwanted vegetation within the irrigation system</li> <li>• carry out regular and end of season maintenance</li> <li>• troubleshoot and undertake minor repairs of equipment</li> <li>• record and report maintenance activities</li> <li>• dispose of unused or waste materials from site.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Water measurement structures</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• weirs</li> <li>• parshall flumes</li> <li>• cut-throat flumes.</li> </ul>
<p><b><i>Diversion and conveyancing structures</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• intake structures</li> <li>• diversion weirs and gates.</li> </ul>

Field <i>distribution structures</i> may include:	<ul style="list-style-type: none"><li>• canals</li><li>• pipelines</li><li>• drop structures and chutes</li><li>• division boxes and turnouts</li><li>• checks</li><li>• crossing structures</li><li>• flumes</li><li>• culverts</li><li>• inverted siphons.</li></ul>
Surface irrigation systems may include:	any systems that apply water across the surface of a levelled or contoured area. These include furrow, border and basin irrigation.

## Unit Sector(s)

Irrigation

# AHCIRG320A Maintain and repair irrigation drainage systems

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of maintaining and repairing irrigation drainage systems and defines the standard required to: plan and prepare for the work; inspect the site to determine access to drainage lines; use mechanical drain clearing equipment; troubleshoot drainage problems and implement repair/replacement strategies; maintain drainage infrastructure and vegetative cover.

## Application of the Unit

This Unit applies to skilled workers in irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare to carry out <b>irrigation drainage system</b> maintenance	1.1 Equipment is selected and checked for safe operation 1.2 Appropriate personal protective equipment and tools are selected and used according to Occupational Health and Safety (OHS) requirements 1.3 Site is inspected and drainage is assessed 1.4 Necessity for repair is established and authorities/persons notified of the intention to commence work 1.5 Work requirements are determined from plans, drawings, specifications or instructions 1.6 Appropriate drainage and inflow diversion arrangements are made without damage to environment 1.7 Equipment and excavation methods are selected and checked to meet safety requirements of task and site
2 Determine access to drainage lines	2.1 Plan of irrigation system is determined and access points located 2.2 Access to drainage lines is obtained to allow blockage to be cleared 2.3 Digging is carried out without unnecessary damage to buildings, site, environment or existing fixtures/fittings
3 Carry out repairs on an irrigation drainage system	3.1 Routine inspections of designated work areas are conducted according to maintenance schedules 3.2 System faults are identified and corrective actions are taken according to structure type, location, specification and legislative and organisational requirements 3.3 Mechanical equipment is used to open and close drains 3.4 Components and associated fittings are repaired or replaced according to manufacturer specifications and organisational requirements 3.5 Cast in situ components are constructed according to specifications and organisational requirements
4 Clear blockages in an irrigation drainage system	4.1 Blockages are cleared 4.2 Drainage lines are tested to confirm blockages have been cleared from pipe system 4.3 Drainage lines are repaired/resealed to permit normal use 4.4 Work area is cleaned and aligned, with debris/waste disposed of according to enterprise, environmental and OHS procedures
5 Maintain drainage earthworks and	5.1 <b>Earthworks and embankments</b> are checked to meet system requirements

- equipment
- 5.2 Drainage area vegetation is managed and maintained
  - 5.3 Weeds are controlled on drainage areas
  - 5.4 A maintenance program for drainage equipment is implemented and recorded

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- isolate appliances/fixtures/fittings and related assemblies
- repair or remove blockages
- use manual and mechanical drain clearing equipment
- level and align site
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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#### Knowledge of:

- types and operational parameters of irrigation drains
- components used in irrigation drainage systems
- isolation processes and procedures
- levelling and alignment processes
- regulatory requirements, codes of practice and relevant enterprise service standards relating to blockage removal, disconnection and reconnection activities
- environmental impacts of drainage systems
- application of OHS procedures when locating and clearing line blockages, use of personal protective equipment and materials handling.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• plan and prepare for the work</li> <li>• inspect the site to determine access to drainage lines</li> <li>• isolate appliances/fixtures/fittings and related assemblies</li> <li>• use manual and mechanical drain clearing equipment</li> <li>• troubleshoot drainage problems and implement repair/replacement strategies</li> <li>• maintain drainage infrastructure and vegetative cover.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Irrigation drainage systems</b> may include:	both surface and sub-surface drainage installed to handle water which is excess to plant requirements in an irrigated area.
<b>Drainage earthworks and embankments</b> may include:	<ul style="list-style-type: none"> <li>• surface drains</li> <li>• culverts</li> </ul>



	<ul style="list-style-type: none"><li>• mole drains</li><li>• sand slit</li><li>• sub-surface traps</li><li>• pit and trap systems</li><li>• dune and swale systems</li><li>• reed beds</li><li>• water-recycling pumps and baffles.</li></ul>
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## Unit Sector(s)

Irrigation

# AHCIRG321A Operate low volume irrigation systems

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of operating low volume irrigation systems and defines the standard required to: carry out pre-start checks; operate and monitor the system; measure and interpret flow rates and pressures; identify environmental hazards; and shut down in response to irrigation indicators.

## Application of the Unit

This Unit applies to skilled workers in the food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Carry out pre-start checks	1.1 Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational 1.2 Pumps are primed, if necessary, and valves and controls are open or closed as directed 1.3 Pressure and flow testing equipment are calibrated and available as required 1.4 Other pre-start system checks are carried out in accordance with manufacturer's requirements and enterprise procedures
2 Inspect and operate the system	2.1 Start up sequence is implemented in accordance with enterprise procedures 2.2 Emitter spacing is checked against the irrigation plan 2.3 Water pressure is adjusted as required 2.4 Filters are kept clear and replaced as required 2.5 All malfunctions, leaks and blockages are corrected or repaired immediately and reported in accordance with enterprise procedures
3 Monitor <i>low volume irrigation system</i> performance	3.1 Emitters are checked for output 3.2 Application rate of water is calculated 3.3 The water distribution pattern in the irrigated area is checked 3.4 Moisture levels in the root zone are monitored 3.5 Environmental impacts of the operation are minimised
4 Shut down irrigation system	4.1 Water is applied for sufficient time to achieve required soil moisture levels in accordance with irrigation schedule, environmental considerations and allowing for weather conditions 4.2 <i>System components</i> are shut down and drained in accordance with manufacturer's specifications and enterprise procedures 4.3 Irrigation activities are recorded and reported in accordance with regulatory requirements and enterprise procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

**Required skills include:**

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**Ability to:**

- read and follow operations manual and procedures
- start up system and carry out operational checks
- monitor system effectiveness
  - application rates
  - irrigation times
  - emitter output
  - pressure variations and blockages
  - salinity levels and water quality
  - depth of irrigation
- measure and interpret flow rates and pressures
- perform shut down procedures
- assess soil moisture levels
- carry out measurements for output and distribution
- record data.

**Required knowledge includes:**

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**Knowledge of:**

- principles of irrigation and the water cycle
- general irrigation methods for low volume systems
- main components of low volume irrigation systems
- pump types used in low volume irrigation systems and their operation
- shutdown sequence and flushing procedures
- energy efficiency indicators/ benchmarks for low volume irrigation
- soil characteristics
- soil/plant/water relationships
- water requirements of plants/crops consistent with sound environmental management
- critical measures for moisture availability
  - readily available water
  - water holding capacity
  - wilting point
  - field capacity
  - infiltration rates
  - evapotranspiration
- environmental impacts of irrigation using water from any ground or underground source.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• carry out pre-start checks</li> <li>• operate and monitor the system</li> <li>• measure and interpret flow rates and pressures</li> <li>• identify environmental hazards</li> <li>• shut down in response to irrigation indicators.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Low volume irrigation systems</i></b> may include:	<p>systems that operate under comparatively low volume and pressure including micro irrigation, pop-ups at less than 0.1 litres/second, and drippers.</p>
<b><i>System components</i></b> may include:	<ul style="list-style-type: none"> <li>• pump (flow rate and head requirement)</li> <li>• filter system</li> <li>• pressure gauges</li> <li>• backflow preventer</li> <li>• pressure regulator valves</li> <li>• fertiliser injector</li> <li>• flowmeter</li> </ul>

	<ul style="list-style-type: none"><li>• block valve</li><li>• air and vacuum release valves</li><li>• main and sub-main lines</li><li>• flushing manifold</li><li>• connectors</li><li>• lateral lines or tapes</li><li>• emitters</li><li>• controllers.</li></ul>
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## Unit Sector(s)

Irrigation

## AHCIRG322A Operate sprinkler irrigation systems

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of operating sprinkler irrigation systems and defines the standard required to: read and follow operations manual and irrigation schedules; carry out pre-start checks; operate and inspect the system; measure and interpret flow rates and pressures; identify environmental hazards; and shut down in response to irrigation indicators.

### Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Carry out pre-start checks	1.1 Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational 1.2 Pumps are primed, if necessary, and valves and controls are open or closed as directed 1.3 Pressure and flow testing equipment are calibrated and available as required 1.4 Other pre-start system checks are carried out in accordance with manufacturer's requirements and enterprise procedures
2 Inspect and operate the system	2.1 Start up sequence is implemented in accordance with operations manual 2.2 Sprinkler spacing is checked against the irrigation plan 2.3 Water pressure and volume is adjusted as required 2.4 Water is delivered as per irrigation schedule 2.5 All malfunctions, leaks and blockages are corrected or repaired immediately and reported in accordance with enterprise procedures
3 Monitor <i>sprinkler irrigation system</i> performance	3.1 Pressure at sprinkler nozzles and on main and lateral pipelines is checked against specifications 3.2 Application rate of water is calculated 3.3 The water distribution pattern in the irrigated area is checked 3.4 Moisture levels in the root zone are checked 3.5 Identify and report any environmental hazards identified
4 Shut down sprinklers in response to irrigation indicators	4.1 Water is applied for sufficient time to achieve required soil moisture levels in accordance with irrigation schedule, environmental considerations and allowing for weather conditions 4.2 <b>System components</b> are shut down and drained in sequence in accordance with manufacturer's specifications and enterprise procedures 4.3 Drainage and treatment systems are checked in accordance with enterprise procedures 4.4 Irrigation activities are recorded and in reported accordance with regulatory requirements and enterprise procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.



**Required skills include:**

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**Ability to:**

- read and follow operations manual and irrigation schedules
- operate pressure and flow testing equipment
- carry out pre-start checks and prime pumps
- start up system and carry out operational checks
- measure and interpret flow rates and pressures
- monitor system effectiveness
  - application rates
  - irrigation times
  - sprinkler output
  - pressure variations
  - salinity levels and water quality
  - depth of irrigation
  - energy efficiency
- connect, calibrate and operate the equipment, and monitor and adjust the delivery of fertilisers
- shut down, clean equipment and dispose of waste
- use personal protective equipment
- perform shut down procedures
- carry out measurements for output and efficiency
- take and record measurements of output and efficiency
- record data.

**Required knowledge includes:**

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**Knowledge of:**

- general irrigation methods for sprinkler systems
- main components of sprinkler irrigation systems
- pump types used in sprinkler irrigation systems and their operation
- energy efficiency indicators/ benchmarks for sprinkler irrigation
- shutdown sequence
- environmental impacts of irrigation using water from any ground or underground source
- soil characteristics
- soil/plant/water relationships
- water requirements of plants/crops consistent with sound environmental management
- critical measures for moisture availability
  - readily available water
  - water holding capacity
  - wilting point
  - field capacity

- infiltration rates
- evapotranspiration
- OHS legislation and procedures
- electrical hazards
  - contact with pumps, motors, other live components
  - short circuits
  - standing laterals to remove blockages
  - water spray onto powerlines.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• read and follow operations manual and irrigation schedules</li> <li>• carry out pre-start checks</li> <li>• operate and inspect the system</li> <li>• measure and interpret flow rates and pressures</li> <li>• identify environmental hazards</li> <li>• shut down in response to irrigation indicators.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the

candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Sprinkler irrigation systems</i> may include:	any systems that use spray or rotor type sprinklers to distribute irrigation water at higher volume including pop-up sprinklers, fixed, and movable sprinklers (e.g. K Line and Ezy Shift).
<i>System components</i> may include:	<ul style="list-style-type: none"> <li>• pumps</li> <li>• sprinklers</li> <li>• nozzles</li> <li>• risers</li> <li>• pipe or tubing</li> <li>• valves</li> <li>• regulators and gauges</li> <li>• laterals</li> <li>• controllers.</li> </ul>

## Unit Sector(s)

Irrigation

# AHCIRG323A Operate moving sprinkler irrigation systems

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of operating moving sprinkler irrigation systems and defines the standard required to: read and follow operations manual and irrigation schedules; carry out pre-start checks; operate and inspect the system; measure and interpret flow rates and pressures; identify adverse environmental impacts of irrigation activities and take appropriate remedial action; shut down in response to irrigation indicators.

## Application of the Unit

This Unit applies to skilled workers in the irrigation servicing, and food and fibre production industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Carry out pre-start checks	1.1 Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational 1.2 Pumps are primed, if necessary, and valves and controls are open or closed as directed 1.3 Pressure and flow testing equipment are calibrated and available as required 1.4 Regular maintenance is carried out 1.5 Other pre-start system checks are carried out in accordance with manufacturer's requirements and enterprise procedures
2 Inspect and operate the system	2.1 Start up sequence is implemented in accordance with operations manual 2.2 Emitter spacing is checked against the irrigation plan 2.3 The transport mechanism is monitored and serviced 2.4 The irrigation controller is checked for programming and efficiency 2.5 All malfunctions, leaks and blockages are corrected or repaired immediately and reported in accordance with enterprise procedures
3 Monitor the irrigation operation	3.1 The irrigation schedule is applied and soil profile monitored for wetting 3.2 Sprinkler performance is measured using catch cans 3.3 Flow rates are measured using containers of known volume 3.4 Operating pressures are measured using pressure gauges 3.5 The irrigated area is checked for wheel ruts and other signs of waterlogging
4 Shut down the system in response to irrigation indicators	4.1 Water is applied for sufficient time to achieve required soil moisture levels in accordance with irrigation schedule, environmental considerations and allowing for weather conditions 4.2 System components are shut down and drained in sequence in accordance with manufacturer's specifications and enterprise procedures 4.3 Drainage and treatment systems are checked in accordance with enterprise procedures 4.4 Irrigation activities are recorded and reported in accordance with regulatory requirements and enterprise procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- read and follow operations manual and irrigation schedules
- operate pressure and flow testing equipment
- carry out pre-start checks and prime pumps
- start up system and carry out operational checks
- measure and interpret flow rates and pressures
- monitor system effectiveness
  - application rates
  - irrigation times
  - sprinkler output
  - pressure variations
  - salinity levels and water quality
  - depth of irrigation
  - energy efficiency
- use control systems
- shut down, clean equipment and dispose of waste
- use personal protective equipment
- perform shut down procedures
- take and record measurements of output and efficiency
- record data.

### Required knowledge includes:

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#### Knowledge of:

- general irrigation methods for moving sprinkler systems
- main components of moving sprinkler irrigation systems
- pump types used in moving sprinkler irrigation systems and their operation
- energy efficiency indicators/ benchmarks for moving sprinkler irrigation
  - Application Efficiency
  - Average Application Rate
  - Instantaneous Application Rate
- shutdown sequence
- environmental impacts of irrigation using water from any ground or underground source
- soil characteristics
- soil/plant/water relationships
- water requirements of plants/crops consistent with sound environmental management
- critical measures for moisture availability

- readily available water
- wilting point
- field capacity
- monitoring soil compaction and drainage
- environmental hazards of moving sprinkler systems including soil compaction and guttering
- OHS legislation and safe work procedures.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• read and follow operations manual and irrigation schedules</li> <li>• carry out pre-start checks</li> <li>• operate and inspect the system</li> <li>• measure and interpret flow rates and pressures</li> <li>• identify environmental hazards</li> <li>• shut down in response to irrigation indicators.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be

included.	
Moving sprinkler systems may include:	specifically hard and soft reel self-travelling irrigators, lateral move systems and centre pivots.
Moving sprinkler system components include:	spans tower tower wheels outlets emitters droppers pressure regulator irrigation controller.

## Unit Sector(s)

Irrigation



# AHCIRG324A Operate surface irrigation systems

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of operating surface irrigation systems and defines the standard required to: read and follow operations manual and irrigation schedules; use pre-start checks; operate and inspect the system; check pressure at the headworks and control valves; carry out running repairs on irrigation delivery and drainage systems; shut down in response to irrigation indicators.

## Application of the Unit

This Unit applies to skilled workers in the irrigated food and fibre production industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Carry out pre-start checks	1.1 Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational 1.2 Pumps are primed, if necessary, and gates and controls are open or closed in accordance with enterprise procedures 1.3 Pipes, system equipment and outlets are positioned and set up in accordance with enterprise standards and OHS requirements
2 Operate and monitor the <i>surface irrigation system</i>	2.1 Syphons and other delivery mechanisms are primed and started in accordance with enterprise procedures 2.2 Start up sequence is implemented in accordance with operations manual and water levels, and pressure built up slowly as directed 2.3 Pressure at the headworks and control valves is checked 2.4 Water is distributed evenly to the targeted areas with minimal wastage and run-off 2.5 Area is irrigated in accordance with enterprise procedures, and time lag between shut down and end of watering is observed to minimise run-off and deep percolation 2.6 All malfunctions, leaks, damage to water courses and blockages are corrected or repaired immediately and reported in accordance with enterprise procedures
3 Measure and interpret water levels, flow rates and volume of water used	3.1 Head water levels are monitored and maintained 3.2 All water outlets are operating in accordance with operating procedures 3.3 Blocked inlets and outlets are replaced or cleared 3.4 Flow rates and water usage are measured and recorded 3.5 Irrigation changes are implemented in accordance with enterprise procedures
4 Monitor drainage and tailwater systems	4.1 Water intake, conveyance and distribution, drainage and tailwater is monitored 4.2 Water reuse systems are checked for clearance and freedom from weeds 4.3 If used, pumps are monitored during operation, rubbish is cleared from outlets, and pump is backflushed in accordance with enterprise procedures
5 Shut down surface irrigation in response to irrigation indicators	5.1 System <i>components</i> are shut down in sequence in accordance with manufacturer's and enterprise procedures 5.2 Irrigation activities are reported and recorded in accordance with regulatory requirements and enterprise procedures

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- carry out running repairs on irrigation delivery and drainage systems
- inspection procedures
- start up the system
- start and move syphons and spiles and check flow
- operate surface irrigation equipment
- check pressure at the head works and control valves
- carry out running repairs on irrigation delivery and drainage systems
- adjust and monitor check valves
- carry out shut down procedures, clean equipment and dispose of waste
- measure water usage
- identify variations in water flow and distribution.

### Required knowledge includes:

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#### Knowledge of:

- general irrigation methods for surface irrigation systems
- main components of surface irrigation systems
- possible environmental impacts of fertigation activities
- energy efficiency indicators/ benchmarks for surface irrigation
- soil characteristics
- soil/plant/water relationships
- water requirements of plants/crops consistent with sound environmental management
- critical measures for moisture availability
  - readily available water
  - water holding capacity
  - wilting point
  - field capacity
  - infiltration rates
  - evapotranspiration
- environmental impacts of irrigation, using water from any ground or underground source
- OHS, environmental and enterprise policies and procedures relating to the operation of gravity fed irrigation systems.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>Evidence is required in the process of operating gravity fed irrigation systems. The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• read and follow operations manual and irrigation schedules</li> <li>• use pre-start checks</li> <li>• operate and inspect the system</li> <li>• check pressure at the headworks and control valves</li> <li>• carry out running repairs on irrigation delivery and drainage systems</li> <li>• shut down in response to irrigation indicators.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Surface irrigation systems</i></b> may include:</p>	<p>any systems that apply water across the surface of a levelled or contoured area. These include furrow, border and basin irrigation.</p>

<i>System components</i> may include:	diversion and conveyancing structures: <ul style="list-style-type: none"><li>• intake structures</li><li>• diversion weirs and gates</li></ul> field distribution structures: <ul style="list-style-type: none"><li>• canals</li><li>• pipelines</li><li>• drop structures and chutes</li><li>• division boxes and turnouts</li><li>• checks</li></ul> crossing structures: <ul style="list-style-type: none"><li>• flumes</li><li>• culverts</li><li>• inverted siphons</li><li>• water measurement structures</li><li>• weirs</li><li>• parshall flumes</li><li>• cut-throat flumes.</li></ul>
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## Unit Sector(s)

Irrigation

## AHCIRG325A Operate irrigation technology

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers operating irrigation technology as part of irrigation installation and construction and/or irrigation operations and defines the standard required to: maintain and check irrigation equipment for accuracy; take representative samples for measurement; operate technology to measure and monitor the irrigation system or the growing environment; and record the results of testing.

### Application of the Unit

This Unit applies to skilled workers in the food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Operate <i>water metering equipment</i>	1.1 Equipment is maintained and checked for accuracy according to established procedures 1.2 Samples are collected according to established procedures 1.3 Readings and observations are recorded and interpreted 1.4 Equipment is transported and stored correctly
2 Operate <i>pressure testing equipment</i>	2.1 Equipment is maintained and checked for accuracy according to established procedures 2.2 Sampling points are identified 2.3 Readings and observations are recorded and interpreted 2.4 Equipment is transported and stored correctly
3 Operate water testing equipment	3.1 Equipment is maintained and checked for accuracy as per procedures 3.2 Samples are collected according to established procedures 3.3 Readings and observations are recorded and interpreted 3.4 Equipment is transported and stored correctly
4 Operate <i>soil moisture testing equipment</i>	4.1 Equipment is maintained and checked for accuracy according to established procedures 4.2 Samples are collected according to established procedures 4.3 Readings and observations are recorded and interpreted 4.4 Equipment is transported and stored correctly
5 Operate <i>irrigation controllers and sensors</i>	5.1 Sensors are linked to controllers by wiring or radio signals 5.2 Controllers are programmed 5.3 Accuracy and reliability of electronic flow control equipment is monitored 5.4 Discrepancies or malfunctions are reported to management

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- operate water metering equipment
- operate pressure testing equipment
- operate water testing equipment

- operate soil moisture testing equipment
- operate irrigation controllers and sensors
- check accuracy and calibrate equipment if necessary
- take samples for testing
- record observations and data.

### Required knowledge includes:

#### Knowledge of:

- sampling techniques
- equipment maintenance and operation
- measurement procedures
- operational procedures
- data recording procedures
- safe work practices including working with low voltage wiring
- environmental procedures for use, storage and recycling of electronic equipment and batteries.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• maintain and check irrigation equipment for accuracy</li> <li>• take representative samples for measurement</li> <li>• operate technology to measure and monitor the irrigation system or the growing environment</li> <li>• record the results of testing.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Water metering equipment</i></b> may include:</p>	<ul style="list-style-type: none"> <li>the range of meters that are commercially available for measuring irrigation water.</li> </ul>
<p><b><i>Pressure testing equipment</i></b> may include:</p>	<ul style="list-style-type: none"> <li>the range of pressure gauges.</li> </ul>
<p><b><i>Soil moisture testing equipment</i></b> may include:</p>	<ul style="list-style-type: none"> <li>tensiometers</li> <li>electrical resistance blocks</li> <li>capacitance probe</li> <li>neutron probes.</li> </ul>
<p>Electronic componentry may include:</p>	<ul style="list-style-type: none"> <li>remote control valves</li> <li>sensing equipment.</li> </ul>
<p><b><i>Irrigation controllers</i></b> may include:</p>	<p>the range from a simple time switch connected to one valve to programmable computers operating multiple valves to a schedule.</p>

## Unit Sector(s)

Irrigation

# AHCIRG326A Operate irrigation injection equipment

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of operating injection equipment as part of an irrigation system and defines the standard required to: carry out pre-start checks; identify OHS and environmental hazards; operate and monitor the injection system; shut down the injection system; and keep records.

## Application of the Unit

This Unit applies to skilled workers in the food and fibre production and amenity horticulture industries, and is likely to be carried out under routine supervision within enterprise guidelines.

## Licensing/Regulatory Information

Workers are required by legislation to have completed training in chemical handling and use before using agricultural chemicals.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare equipment for <i>injection operation</i>	1.1 Materials and services are confirmed as available and ready for operation 1.2 Materials are prepared to meet injection requirements 1.3 Equipment is checked to confirm readiness for use 1.4 Equipment is set to meet injection requirements
2 Operate the injection process	2.1 Safety procedures are put in place including the use of PPE 2.2 The injection process is started up according to workplace procedures 2.3 Control points are monitored to confirm performance is maintained within specification 2.4 Out-of-specification equipment performance is identified, rectified and/or reported 2.5 Injection requirements are delivered according to instructions 2.6 Equipment is maintained in good working order 2.7 Emergency procedures are put in place for spillage or chemical accidents
3 Shut down injection equipment	3.1 Injection equipment is shut down according to workplace procedures 3.2 Injection equipment is cleaned according to workplace procedures 3.3 Waste generated by both the process and cleaning procedures is collected, treated, disposed of or recycled according to workplace procedures
4 Monitor plant response and environmental impacts of injection	4.1 Plant response to injection is monitored 4.2 Environmental hazards of injection are recorded and reported 4.3 Withholding periods for chemical application on food crops are maintained 4.4 Access is restricted to areas where chemicals have been applied through injection if required
5 Record information	5.1 Workplace information is recorded in the appropriate format 5.2 Chemical application and storage details are recorded as per legislative requirements

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- access workplace information to identify injection requirements
- select, fit and use personal protective clothing and/or equipment
- select and prepare injection materials as required
- complete relevant calculations such as dilution rates
- monitor usage and dilution rates
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record corrective action as required
- shut down equipment in response to an emergency situation
- shut down equipment in response to routine shutdown requirements
- demonstrate safe handling of hazardous chemicals
- implement routine maintenance and minor repairs of the system
- implement routine system cleaning requirements
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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#### Knowledge of:

- chemicals, cleaning agents and fertilisers used for injection and their purpose
- label and MSDS information for substances to be injected
- purpose and operation of equipment and instrumentation components
- basic operating principles and process control systems where relevant
- services required
- control points and significance and methods of monitoring
- common causes of variation and corrective action required
- process specifications, procedures and operating parameters
- correct chemical handling techniques
- backflow prevention

- OHS hazards and controls
- lock-out and tag-out procedures
- environmental issues and controls
- procedures for prevention of backflow
- cleaning requirements of system
- maintenance requirements of system
- shutdown sequence
- recording requirements and procedures
- cleaning procedures.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• carry out pre-start checks</li> <li>• identify OHS and environmental hazards</li> <li>• operate and monitor the system</li> <li>• shut down the injection system</li> <li>• keep records.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the

candidate, accessibility of the item, and local industry and regional contexts) may also be included.

*Injection operations* may include:

- fertilisers
- chlorine
- acids
- cleaning agents.

## Unit Sector(s)

Irrigation

## AHCIRG327A Implement an irrigation schedule

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the skills and knowledge required to monitor available soil moisture and implement a documented irrigation schedule, including consultation with the manager. The Unit requires the ability to: estimate water availability for plants/crops; determine irrigation shifts and rates from the irrigation schedule; test soil moisture levels; monitor and record irrigation data; and evaluate effectiveness of irrigation.

### Application of the Unit

This Unit applies to skilled workers in the food and fibre production and amenity horticulture industries. Supervision of others and assessment of the impact of the irrigation program on the irrigated area and surrounding areas are likely to be required.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Interpret the <i>irrigation schedule</i>	1.1 Information on plant growing requirements is obtained 1.2 Moisture requirement throughout the growing season is interpreted 1.3 Predicted seasonal moisture deficit and watering requirements are read and checked with management 1.4 Parameters for the irrigation system are recorded
2 Determine irrigation shifts	2.1 The irrigated area is subdivided into the smallest units capable of individual irrigation and area, and irrigation equipment characteristics are noted for each 2.2 Each unit is defined for its soil irrigation capability 2.3 The crop/plant water requirement is defined for each unit 2.4 Units requiring similar irrigation are combined to form a shift that does not exceed the water delivery capacity of the property irrigation infrastructure 2.5 Water volume required to meet irrigation needs over specified period is determined
3 Implement irrigation schedule	3.1 Resources are coordinated and personnel briefed to deliver requirements 3.2 Watering program is implemented
4 Monitor irrigation	4.1 Plants and crops are inspected for growth rate and signs of stress 4.2 Frequency of irrigation is recorded 4.3 Water usage is measured and recorded, and does not exceed water allocation for a given period 4.4 Differences between estimated water use and actual water used are calculated 4.5 Water quality is measured according to enterprise OHS policy and procedures 4.6 Plant or crop growth and water use efficiency is assessed 4.7 Soil is measured for readily available water 4.8 Climate and weather conditions are recorded 4.9 Watering program is adjusted in response to rainfall events and changes to evapotranspiration rates
5 Record irrigation information and activities	5.1 Plant or crop environment data is recorded 5.2 Water usage is recorded 5.3 Irrigation shifts are recorded 5.4 System process data is recorded



## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- access and discuss irrigation schedule
- interpret the information in an irrigation schedule
- liaise with other work areas
- consult with appropriate senior personnel or consultants
- compare plant health and growth to benchmark requirements
- identify irrigation requirements throughout the growing season by monitoring:
  - soil moisture levels
  - watertable level
  - water quality
  - signs of plant nutrient deficiencies
  - climatic conditions
  - frost risk
  - plant varietal characteristics and requirements
  - soil type and depth
  - crop stage and requirements if applicable
  - symptoms of water stress
  - effective root depth
- implement the irrigation schedule. This may include consideration of:
  - resources, including operators with appropriate skills
  - application rates
  - timing and length
  - materials, chemicals, services
  - maintenance programs and supplies
  - interaction between different irrigation employees or shifts.
- instruct irrigation system operator(s) as required
- apply sampling techniques
- conduct soil moisture tests
- monitor irrigation activities. This may include:
  - identifying soil moisture content and depth to which water will reach
  - identifying emitter output consistency
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record problems and/or corrective action taken
- monitor the effectiveness of irrigation activities

- monitor the environmental impact of irrigation activities
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- maintain work area to meet housekeeping standards
- implement and follow relevant enterprise OHS and environmental policies and procedures.

### Required knowledge includes:

#### Knowledge of:

- effect of irrigation techniques on plant growth
- visual symptoms of plant nutrient deficiencies, water stress and frost
- principles of soil moisture monitoring eg volumetric soil moisture content, percentage compared to soil moisture tension
- water budgeting tools
- irrigation strategies
- sampling techniques and procedures
- testing techniques and procedures
- interpretation of routine soil moisture tests
- procedures and responsibility for reporting problems
- resource requirements and availability
- recording requirements and procedures
- consultation requirements and procedures
- OHS hazards and controls
- environmental impacts, hazards and controls for irrigation.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• estimate water availability for plants/crops</li> <li>• determine irrigation shifts and rates</li> <li>• test soil moisture levels</li> </ul>

	<ul style="list-style-type: none"> <li>• monitor and record irrigation data</li> <li>• evaluate effectiveness of irrigation.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Irrigation schedules</i></b> may include:	<p>any system that schedules irrigation water through a growing season. Schedules may be based on:</p> <ul style="list-style-type: none"> <li>• soil-based systems, monitoring soil moisture</li> <li>• climate-based systems</li> <li>• plant-based systems, monitoring the plant</li> <li>• a combination of the above.</li> </ul>
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## Unit Sector(s)

Irrigation

## AHCIRG401A Acquire resources for irrigation installation and construction

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers acquiring resources for irrigation installation and construction and defines the standard required to: organise resources for irrigation installation and construction; obtain resources for irrigation installation and construction; arrange connection of temporary services; organise on site labour.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to irrigation installers who acquire resources for irrigation installation and construction including completion of formalities for commencing work.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Notify client, authorities and agencies of the schedule of works	1.1.All fees due are paid and parking restrictions arranged as appropriate. 1.2.Insurance cover is established and provision for security made. 1.3.Irrigation installation and construction date is confirmed with client. 1.4.All authorities requiring formal notification of commencement of work are contacted.
2. Organise delivery of site accommodation	2.1.Site facilities are delivered and positioned on site. 2.2.Site signage is erected to comply with local government regulations.
3. Organise delivery of plant	3.1.On-site plant delivery dates are confirmed. 3.2.Rubbish removal facility is set up.
4. Arrange connection of temporary services	4.1.Temporary power and water connections are arranged with service providers, as required. 4.2.Temporary site access and egress is authorised by local authority, as required.
5. Organise on-site labour	5.1.Construction work supervisor is engaged/appointed. 5.2.Occupational Health and Safety (OHS) and industrial relation matters are addressed as required. 5.3.Appropriate installation/construction workers are employed according to contract.
6. Order material	6.1.Orders for materials are placed and site delivery dates organised using approved enterprise procedures and documentation. 6.2.Final pre-construction adjustments are made to

ELEMENT	PERFORMANCE CRITERIA
	satisfy the schedule as required by contract.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use the project schedule to organise a sequence of pre-construction operations making allowances for any constraints
- place and check orders for materials
- negotiate start dates and manage resources to minimise delays and down-time
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- follow relevant enterprise OHS and environmental procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- requirements of statutory authorities and agencies
- local government regulations
- project resources budget
- ordering procedures
- labour hiring requirements and procedures
- environmental impacts of irrigation system installation using water from any ground or underground source
- relevant enterprise OHS and industrial relations requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• organise resources for irrigation installation and construction</li> <li>• obtain resources for irrigation installation and construction</li> <li>• arrange connection of temporary services</li> <li>• organise on site labour.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Resources for installation may include:	<ul style="list-style-type: none"> <li>• those for the installation and construction of gravity fed and pressurised systems.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCIRG402A Determine hydraulic parameters for an irrigation system

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers determining hydraulic parameters for an irrigation system and defines the standard required to: calculate water volumes and pressure required to deliver water; and select system components to deliver the required rate of irrigated water.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to irrigation installers and designers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm water delivery specifications for irrigation system	1.1. Soil characteristics are confirmed and hydraulic properties determined. 1.2. Plant/crop water requirements are gathered for various stages of growth. 1.3. Peak water requirements are determined for each area to be irrigated.
2. Determine pressures required to deliver required amount of water over specified area	2.1. Static pressures between water source and delivery points are determined. 2.2. Dynamic pressure necessary to achieve required water volume is calculated.
3. Analyse technical drawings to determine pressure losses through system	3.1. Losses resulting from fittings, laterals and elevation differences are calculated. 3.2. Losses resulting from flow through canals, culverts and pipes of varying sizes and diameters within a system are determined. 3.3. Total friction loss is calculated. 3.4. Hydraulic parameters for system are determined.
4. Select system components to deliver water efficiently	4.1. Water delivery components are selected to achieve the most efficient delivery rate and pressure. 4.2. Flow direction and control components are selected to be compatible with pipes and to achieve minimal friction losses.

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- read contour maps and interpret elevations and distances
- calculate pressures, flows, velocities and friction losses
- determine efficiency of the system with varying system components
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- apply hydraulic principles to manual and computerised irrigation systems
- follow relevant enterprise Occupational Health and Safety (OHS) and environmental procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- intermediate hydraulic principles, such as static and dynamic pressure, pressure loss, friction loss, flow rate and velocity, effect of gradient on flow rate, contact time and drainage
- irrigation system components
- types and pressure ratings for pipes, fittings and outlets
- environmental impacts of irrigation, using water from any ground or underground source
- enterprise and environmental requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• calculate water volumes and pressure required to deliver water</li> <li>• select system components to deliver the required rate of irrigated water.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
This standard covers:	<ul style="list-style-type: none"> <li>• pressurised irrigation systems, such as micro-irrigation systems and spray irrigation systems</li> <li>• gravity-fed irrigation systems.</li> </ul>
Irrigation systems may include	<ul style="list-style-type: none"> <li>• manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCIRG404A Implement an irrigation-related environmental protection program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the implementation of an irrigation related environmental protection program and defines the standard required to: identify adverse environmental impacts of irrigation activities and appropriate remedial action; apply and comply with environmental requirements; provide and explain information on the irrigation and drainage environmental plan; explain and demonstrate enterprise environmental record systems and procedures; calculate stormwater control requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to persons whose job role includes implementing procedures to reduce the impacts of irrigation and drainage systems on the environment and responding to potential and actual environmental pollution events.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Provide information to workers involved in irrigation and related work	<p>1.1. Information on the irrigation and drainage environmental plan is provided and explained to all workers involved in irrigation and related work.</p> <p>1.2. Relevant codes of practice, legislation and regulations and their application are explained to all workers involved in irrigation and related work.</p> <p>1.3. Information about known risks to the environment and work practices associated with enterprise irrigation practices and related activities are explained and demonstrated.</p> <p>1.4. Enterprise environmental record systems and procedures are explained and demonstrated.</p> <p>1.5. Environmental protection induction and training needs are identified and arrangements made to fulfil those needs.</p>
2. Implement and monitor procedures for identifying risks to the environment and maintaining effective control	<p>2.1. Risks to the environment are identified and reported so that adequate risk assessment and control measures are implemented.</p> <p>2.2. Work procedures to control risks to the environment are implemented, and regular monitoring occurs to ensure ongoing adherence and effectiveness of risk</p>

ELEMENT	PERFORMANCE CRITERIA
measures	control. 2.3. Inadequacies in existing risk control measures are identified, and measures to reduce exposure to environmental pollution events through improved work processes and procedures are raised with the owner/manager. 2.4. Inadequacies in allocation of resources to ensure environmental protection are identified and reported to the owner/manager.
3. Implement procedures for responding to potential and actual environmental pollution events	3.1. Procedures for responding to potential and actual pollution events are implemented, where necessary, to ensure that prompt and effective control action is taken. 3.2. Pollution events are investigated and reported to identify their cause according to established investigation procedures and Occupational Health and Safety (OHS) requirements. 3.3. Stormwater control requirements are calculated, as necessary, according to environmental protection authority requirements. 3.4. Suitable measures to prevent recurrence and minimise risk of pollution events are discussed with the owner/manager, and revised procedures implemented as necessary.
4. Implement and monitor procedures for maintaining environmental protection record	4.1. Environmental protection records are kept according to enterprise and legal requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- apply and comply with environmental requirements



<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<ul style="list-style-type: none"> <li>• provide and explain information on the irrigation and drainage environmental plan</li> <li>• explain and demonstrate enterprise environmental record systems and procedures</li> <li>• calculate stormwater control requirements</li> <li>• follow relevant enterprise OHS and environmental procedures</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• environmental legislation, regulations and guidelines</li> <li>• environmental impacts of irrigation, using water from any ground or underground source</li> <li>• OHS procedures relating to investigation of irrigation-related hazards and implementation of an environmental protection program.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify adverse environmental impacts of irrigation activities and appropriate remedial action</li> <li>• apply and comply with environmental requirements</li> <li>• provide and explain information on the irrigation and</li> </ul>

<b>EVIDENCE GUIDE</b>	
	drainage environmental plan <ul style="list-style-type: none"> <li>• explain and demonstrate enterprise environmental record systems and procedures</li> <li>• calculate stormwater control requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pressurised irrigation systems may include:	<ul style="list-style-type: none"> <li>• micro-irrigation systems</li> <li>• spray irrigation systems</li> <li>• gravity fed irrigation systems.</li> </ul>
Irrigation systems may include:	<ul style="list-style-type: none"> <li>• manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Irrigation
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCIRG405A Plan and coordinate gravity-fed irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning and coordinating gravity-fed irrigation systems and defines the standard required to: operate gravity fed irrigation systems; apply enterprise monitoring procedures and identify adverse environmental impacts; brief, monitor and direct work crews; coordinate a range of activities and procedures for effective and efficient water use.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to installers who plan and coordinate gravity-fed irrigation systems for an allocated set of fields and are responsible for monitoring and directing work crews.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan irrigation activities	<p>1.1. Work crews are briefed to carry out the required gravity fed irrigation activities in accordance with enterprise, environmental and Occupational Health and Safety (OHS) requirements.</p> <p>1.2. Sufficient irrigation equipment is checked and available for the allocated fields to be irrigated.</p> <p>1.3. Water availability is checked.</p> <p>1.4. Pumps, bores and other water delivery mechanisms are checked for serviceability.</p> <p>1.5. Irrigation sequence is determined.</p>
2. Coordinate irrigation activities	<p>2.1. Crew activities are monitored for efficient team work, and direction provided as necessary.</p> <p>2.2. Water levels in ditches and channels are monitored and maintained to provide sufficient head.</p> <p>2.3. Pumps and other mechanical equipment are monitored and operating problems identified and corrected as necessary.</p>
3. Record irrigation activities	<p>3.1. Personnel hours and activities are recorded in accordance with enterprise practice.</p> <p>3.2. Irrigation start and finish times are recorded in accordance with enterprise practice.</p> <p>3.3. Water storage levels are recorded in accordance with enterprise practice.</p> <p>3.4. Monitoring activities and data are recorded in accordance with enterprise practice.</p> <p>3.5. Recommendations for service and maintenance activities are recorded in accordance with enterprise practice.</p>

ELEMENT	PERFORMANCE CRITERIA
	practice.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and monitor safe systems of work
- operate gravity fed irrigation systems
- apply enterprise monitoring procedures
- brief, monitor and direct work crews
- identify adverse environmental impacts of irrigation activities and take appropriate remedial action
- coordinate a range of activities and procedures
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- soil/plant/water relationships
- environmental impacts of irrigation using water from any ground or underground source
- irrigation system components
- common operational problems
- OHS and environmental legislation, codes of practice and enterprise procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• operate gravity fed irrigation systems,</li> <li>• apply enterprise monitoring procedures and identify adverse environmental impacts</li> <li>• brief, monitor and direct work crews</li> <li>• coordinate a range of activities and procedures for effective and efficient water use.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Surface irrigation systems may include:	<ul style="list-style-type: none"> <li>• border check</li> <li>• contour irrigation</li> <li>• furrow irrigation</li> <li>• hillside flooding</li> <li>• basin irrigation.</li> </ul>
Gravity fed systems may include:	<ul style="list-style-type: none"> <li>• manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

## Unit Sector(s)

Unit sector	Irrigation
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## Co-requisite units

Co-requisite units	

## Competency field

Competency field	
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## AHCIRG406A Plan on-site irrigation system installation and construction work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning on-site irrigation system installations and construction work and defines the standard required to: identify operational requirements from contract documentation; develop strategies and plan procedures for installation and construction; develop a project plan with tasks, responsibilities, timelines and costs.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to irrigation installers who plan on-site irrigation system installation and construction work.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Appraise contract documentation and translate into operational requirements	<p>1.1. Copy of building approval and conditions is obtained as required.</p> <p>1.2. Contract documentation is reviewed for any unusual aspects of construction, use of materials and penalties.</p> <p>1.3. Availability of sub-contractors is ascertained and selected to suit job requirements.</p> <p>1.4. Availability of materials is checked with suppliers.</p> <p>1.5. Site access limitations are assessed.</p> <p>1.6. Relevant authorities controlling construction work advised of commencement date for project as required.</p>
2. Develop strategies for implementing the construction operations	<p>2.1. Procedures for controlling and recording site deliveries are established.</p> <p>2.2. Procedures for recording the hire of plant and equipment are determined.</p> <p>2.3. Occupational Health and Safety (OHS) procedures are established, including hazard/risk management.</p> <p>2.4. Procedures are established for dealing with environmental issues associated with irrigation construction work.</p> <p>2.5. Procedures required for the control of multiple projects are determined.</p>
3. Prepare project schedule for irrigation installation and construction	<p>3.1. Construction operations are prepared in sequence.</p> <p>3.2. Operations are entered into a manually prepared schedule or computer based software package.</p> <p>3.3. 'Critical path' is identified and schedule revised with</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>new activities/projects, as needed, and documented.</p> <p>3.4. Timeframe is adjusted to take account of anticipated delays.</p>
<p>4. Determine all the required resources for project</p>	<p>4.1. Temporary services and site accommodation is determined as required.</p> <p>4.2. Plant requirements and dates are selected and accessed.</p> <p>4.3. On site labour requirements are determined.</p>
<p>5. Prepare dilapidation report</p>	<p>5.1. Records are made of the condition of existing building(s) to be retained and structures on the adjacent site boundaries.</p> <p>5.2. Copies of reports are submitted to adjacent building owners prior to commencing construction.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse contract conditions
- develop strategies
- schedule projects
- determine resources
- identify adverse environmental impacts of irrigation activities and appropriate remedial/preventative action
- incorporate legislative and enterprise OHS and environmental procedures into planning
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• installation and construction processes for on-site irrigation systems</li> <li>• logical construction sequence for the system</li> <li>• analysis of the required project resources</li> <li>• environmental impacts of irrigation using water from any ground or underground source</li> <li>• relevant enterprise OHS and environmental procedures</li> <li>• relevant Australian Standards (e.g. AS3500)</li> <li>• effect of main soil types on approach to excavation work and installation of irrigation components.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify operational requirements from contract documentation</li> <li>• develop strategies and plan procedures for installation and construction</li> <li>• develop a project plan with tasks, responsibilities, timelines and costs.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Planning may include:	<ul style="list-style-type: none"> <li>the planning of installation and construction work for both gravity fed and pressurised irrigation systems.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCIRG407A Supervise on-site irrigation installation and construction work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising on-site irrigation installation and construction work and defines the standard required to: organise supplies and labour; organise the installation of supplies and equipment; implement and monitor on site operations; test the installation or construction against specifications; carry out any remediation work required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those persons who supervise on-site irrigation installation and construction work.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Implement effective communication	<p>1.1.Site instructions for irrigation installation and construction work are recorded to comply with quality management requirements.</p> <p>1.2.Dates, times and personnel to attend site meetings are organised.</p>
2. Implement and monitor Occupational Health and Safety (OHS) and risk management procedures	<p>2.1.First aid facilities are established as necessary.</p> <p>2.2.Plant and equipment requiring certificated operators are identified to comply with risk management procedures.</p> <p>2.3.Likely hazards are identified and precautions taken.</p> <p>2.4.Role of Construction Safety Supervisor is identified.</p> <p>2.5.Documentation for safety reporting is instigated.</p>
3. Organise the supply and installation of materials and equipment	<p>3.1.Material orders are placed according to appropriate schedule.</p> <p>3.2.Equipment is hired according to planned schedule.</p> <p>3.3.Maintenance procedures are established for equipment.</p>
4. Supervise on-site operations	<p>4.1.Operations are implemented according to appropriate schedule and contract.</p> <p>4.2.Sub-contractor operations are co-ordinated and monitored, including all aspects of materials used and standards of workmanship.</p> <p>4.3.Problems and delays are addressed as they arise and action recorded.</p> <p>4.4.Industrial relations are monitored continuously and issues resolved to minimise impact on job progress.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.5. Revisions are made to project schedule, when required, and variations documented to comply with quality management procedures.</p> <p>4.6. Quality management procedures are applied continuously as per adopted standards for job.</p> <p>4.7. Safety procedures are monitored continuously, reports analysed and procedures reviewed as required.</p> <p>4.8. Reports on current project status are prepared for management.</p> <p>4.9. Supervision of multiple projects is planned.</p>
5. Administer progress claims/payment	<p>5.1. Summary records are prepared for progress claims.</p> <p>5.2. Actual expenditure and earnings are checked against scheduled projected costs.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe systems of work
- order materials and equipment to meet schedule
- administer the contract on site
- supervise construction operations in the most efficient sequence
- identify adverse environmental impacts of irrigation installation activities and take appropriate remedial action
- comply with statutory requirements
- follow environmental procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of



**REQUIRED SKILLS AND KNOWLEDGE**

cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- communication procedures for on site labour and authorities
- safety procedures and quality assurance programs
- local government regulations
- on-site contract provisions
- projected costs
- environmental impacts of irrigation system installation using water from any ground or underground source
- OHS and environmental legislation, codes of practice and environmental procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- organise supplies and labour
- organise the installation of supplies and equipment
- implement and monitor on site operations
- test the installation or construction against specifications
- carry out any remediation work required.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Systems may include:	<ul style="list-style-type: none"> <li>• both gravity fed and pressurised systems.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCIRG408A Schedule irrigations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of determining the timing and amount of each irrigation to meet crop or plant needs and environmental requirements, and defines the standard required to: use and maintain in-field equipment that monitors the plant environment; incorporate data from monitoring sources into scheduling systems; monitor crop/plant water use; assess efficacy of irrigation; record irrigation and scheduling parameters; plan for extremes of weather.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to scheduling for an irrigation system will be carried out without supervision but with general guidance on progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Monitor crop/plant water use	<p>1.1. Water use is measured or estimated from one or more systems.</p> <p>1.2. Water is accumulated as a soil water deficit in the root zone.</p>
2. Apply a measured amount of water	<p>2.1. A pre-determined deficit is predicted using a scheduling system(s).</p> <p>2.2. Irrigation is applied to partly or fully replace the deficit.</p> <p>2.3. Where appropriate, water quantities are increased to ensure dilution and transport of toxic solutes below the root zone.</p>
3. Assess efficacy of irrigation and repeat cycles of irrigation	<p>3.1. Effectiveness of irrigation application with in-field equipment is measured.</p> <p>3.2. The estimated soil moisture level in scheduling system is adjusted to match that measured.</p> <p>3.3. Where necessary, the scheduling system(s) is recalibrated.</p> <p>3.4. Cycles of irrigation are repeated until schedule is correctly established.</p>
4. Record irrigation and scheduling parameters	<p>4.1. Each irrigation and significant rainfall event, plus other appropriate parameters used in scheduling system, are recorded.</p> <p>4.2. Drainage amount below root zone at each irrigation is estimated and recorded.</p> <p>4.3. System performance data is recorded.</p>
5. Plan for extremes of	<p>5.1. Estimated deficits are modified to cater for any</p>

ELEMENT	PERFORMANCE CRITERIA
weather	<p>prolonged saturation following heavy rainfall.</p> <p>5.2.Shift areas, and where applicable, application rates, are altered to suit appropriate irrigation schedules that minimise frost damage.</p> <p>5.3.Strategies involving prioritising of plants/crops and intermittent irrigation are implemented at times of extreme heat.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use and maintain in-field equipment that monitors the plant environment
- incorporate data from monitoring sources (such as in-field equipment and remote sources) into scheduling systems that compute irrigation requirement
- monitor crop/plant water use
- apply a measured amount of water
- assess efficacy of irrigation and repeat cycles of irrigation
- record irrigation and scheduling parameters
- plan for extremes of weather
- follow environmental procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- inter-relationship between plant, soil and the aerial environments in the determination of water budgets
- plant/crop response to moisture stress at different stages of growth

**REQUIRED SKILLS AND KNOWLEDGE**

- possible adverse impacts on the crop and environment from inefficient scheduling or unpredictable weather effects
- recognition of moisture stress effects (sometimes desired) on plants
- physical soil characteristics such as infiltration rate, water holding capacity and wetted volume in the root zone
- weather forecasting of extreme weather events such as heat waves, frosts and storms, and appropriate contingency tactics to minimise impacts
- in-field irrigation reticulation performance and its capacity limits
- water quality monitoring methods and acceptable quality limits
- water authority standards and procedures
- enterprise and environmental policies and procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- use and maintain in-field equipment that monitors the plant environment
- incorporate data from monitoring sources into scheduling systems
- monitor crop/plant water use
- assess efficacy of irrigation
- record irrigation and scheduling parameters
- plan for extremes of weather

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of irrigation systems may include:	<ul style="list-style-type: none"> <li>• micro</li> <li>• spray</li> <li>• gravity fed</li> <li>• border check systems</li> </ul>
Irrigation systems may range from:	<ul style="list-style-type: none"> <li>• manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCIRG410A Select and manage pumping systems for irrigation

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of operating and maintaining irrigation pumping systems and defines the standard required to: select pumps and pumping equipment to meet design requirements; install and test pumps; develop procedures to maintain pumping systems; commission and test the pumping system; and carry out troubleshooting.

### Application of the Unit

This Unit applies to irrigation installation site managers and managers of irrigation systems in the irrigation servicing, amenity horticulture and food and fibre production industries.

### Licensing/Regulatory Information

All high voltage electrical work must be carried out by a qualified electrician.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Identify irrigation system requirements from the irrigation design	1.1 The components for an <i>irrigation pumping system</i> are identified 1.2 The water source and height of pull for water into the system are determined 1.3 The water output for irrigation is determined 1.4 The total friction loss of irrigation components is calculated
2 Select pump according to type, installation, range of flow rates, operating head and delivery distance	2.1 The basic <i>type of pump</i> is selected based on the pump task and placement and the power source 2.2 The total operating head required is calculated 2.3 The required discharge for the pump is calculated based on the irrigation output required and friction losses in the system 2.4 The speed and power requirements of the pump motor are determined 2.5 The limiting suction lift of the pump is determined 2.6 Pump performance curves are interpreted in selecting an efficient irrigation pump 2.7 Size of impeller is determined from the pump curve
3 Install pumps	3.1 Pump is sited as close as possible to water source and level 3.2 Suction and delivery pipes are attached correctly 3.3 Pump connections are airtight 3.4 The pump is anchored on a base 3.5 Pump and motor connection are correctly aligned 3.6 Ventilation is provided for the motor 3.7 <i>Filters and valves</i> are fitted and valves are correctly oriented 3.8 Pump is connected to the <i>irrigation controller</i> if required
4 Commission and test irrigation pumps	4.1 Procedures are developed and implemented for carrying out pre-start checks 4.2 Pump start up procedures are developed and implemented 4.3 Pumps are pressure tested to check delivery performance 4.4 Power usage and water output is checked against requirements and pump specifications 4.5 Pumping system is checked for leakages and cavitation 4.6 Pump control systems are checked for accurate operation
5 Develop maintenance procedures for the pumping system	5.1 Routine maintenance procedures are developed to rectify the effects of normal wear 5.2 Periodic inspection checklists are developed to assist in

- 5.3 Pump overhaul or repairs are carried out
- 5.4 A pump maintenance record is kept, including details of the pump and all pumping system components for ordering
- 6 Carry out troubleshooting on pumping systems
  - 6.1 Lack of discharge and/or pressure are investigated and settings or components changed
  - 6.2 Loss of water suction is investigated and alteration made to placement or leakages fixed
  - 6.3 Cavitation in pumps is investigated and settings or components changed
  - 6.4 Excessive power consumption is investigated and design and pump selection reviewed and checks made for mechanical defects

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret pump curves
- calculate pumping requirements
- select pumps, filters and valves
- calculate pressure loss due to irrigation components
- position pumps, valves and filters
- open and closing valves
- pressure test pumps
- monitor performance of pumps, valves and filters
- service, maintain and replace pumps, valves and filters
- use pressure testing equipment
- use recorded information to review energy and water efficiency for an irrigation system
- identify adverse environmental impacts of irrigation pumping activities and appropriate remedial action
- implement and follow relevant enterprise OHS and environmental policies and procedures.

### Required knowledge includes:

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#### Knowledge of:

- the relevant statutory and authority requirements related to the installation of commissioning domestic irrigation pumps

- levelling and alignment processes
- the application of mechanical, hydraulic and electrical principles
- properties of water including pressure and flow rates
- selection factors for pumps
  - source of water and lift
  - the required pumping flow rate and pressure
  - the total suction head
  - the total dynamic head
- types of pumps and application in irrigation
  - centrifugal
  - vertical turbine
  - submersible
  - propeller
- advantages and disadvantages of each pump type
- types suitable as booster and floating pumps
- pump power requirements
- discharge and flow rates
- pump efficiency
- minimum pressures for emitters and sprinkler heads
- types of impellers and their use
- cavitation - cause and effect
- net positive suction head (NPSH)
- pump positioning (driver alignment and suction length)
- pump components and their principles of operation
- pump gauges and controls
- types of valves
- automatic pump switches
  - timers
  - pressure switches
  - irrigation controllers
  - flow switches
- installation factors
  - adequate space, head room, ventilation and lighting
  - correct alignment procedures of pump and motor shafts with direct coupled units
  - provision for adjustment and ease of dismantling
- priming and operating pumps
- pump performance and pressure testing
- the sources of information and the processes for the calculation of material requirements and flow rates
- the process of installing and commissioning domestic irrigation pumps
- routine preventative maintenance

- overhaul or repair operations
- environmental procedures for installing and maintaining irrigation pumping systems
- OHS legislation.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select pumps and pumping equipment to meet design requirements</li> <li>• install and test pumps</li> <li>• develop procedures to maintain pumping systems</li> <li>• commission and test the pumping system</li> <li>• carry out troubleshooting.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b><i>Irrigation pumping systems</i></b> may include:	all types of pumps and components (including filters and valves) used to move water to or through an irrigation system.

<p><i>Types of pumps</i> may include:</p>	<ul style="list-style-type: none"> <li>• centrifugal (belt driven or coupled) <ul style="list-style-type: none"> <li>• volute</li> <li>• diffuser</li> <li>• turbine</li> <li>• mixed flow</li> <li>• axial flow</li> <li>• radial flow propeller</li> <li>• electro-submersible</li> </ul> </li> <li>• rotary <ul style="list-style-type: none"> <li>• gear</li> <li>• lobe</li> <li>• screw</li> <li>• vane</li> </ul> </li> <li>• reciprocating <ul style="list-style-type: none"> <li>• piston</li> <li>• plunger</li> <li>• simplex</li> <li>• duplex</li> <li>• multiplex.</li> </ul> </li> </ul>
<p><i>Types of valves</i> may include:</p>	<ul style="list-style-type: none"> <li>• air release valves</li> <li>• air replenishment valves</li> <li>• backflow prevention valves</li> <li>• ball valves</li> <li>• butterfly valves</li> <li>• check valves</li> <li>• float valves</li> <li>• flow control valves</li> <li>• flow measuring valves</li> <li>• foot valves</li> <li>• gate valves</li> <li>• globe valves</li> <li>• pressure regulating valves</li> <li>• pressure relief valves</li> <li>• Schrader valves</li> <li>• scour valves</li> <li>• solenoid valves (pilot operated or direct acting).</li> </ul>
<p><i>Types of filters</i> may include:</p>	<ul style="list-style-type: none"> <li>• centrifugal sand filters</li> <li>• media filters</li> <li>• screen or disc filters.</li> </ul>
<p><i>Irrigation controllers</i> may include:</p>	<p>a range from simple time switches operating a single</p>

	valve to programmable controllers operating a large number of valves on a complex schedule.
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## Unit Sector(s)

Irrigation

# **AHCIRG411A Construct and install a low volume irrigation system**

## **Modification History**

Not applicable.

## **Unit Descriptor**

This Unit covers the process of constructing and installing a low volume irrigation system and defines the standard required to: establish the requirements of the system; implement operational procedures for the project; establish and organise resources; supervise on-site construction; and commission the system.

## **Application of the Unit**

This Unit applies to irrigation site supervisors and installation project managers who are responsible for the construction and installation of low volume irrigation systems.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This Unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop and implement construction procedures	1.1 Employment procedures and contract management procedures are developed 1.2 Procedures for controlling and recording site deliveries are established 1.3 Procedures for recording the hire of plant and equipment are determined 1.4 OHS procedures are established, including risk assessment 1.5 Client, authorities and agencies are notified of the schedule of works 1.6 Procedures for dealing with environmental issues associated with construction work are determined
2 Interpret the <i>low volume irrigation system</i> design for the site	2.1 The purpose, scale and required output of the irrigation system is determined 2.2 The landscape of the site is assessed 2.3 Construction requirements are determined and verified with the designer 2.4 Components are selected to meet design specifications and site requirements
3 Organise resource requirements	3.1 Tasks and timelines are nominated with resources required for each 3.2 Labour requirements are organised 3.3 Parts and equipment are delivered to the site and checked 3.4 Equipment and machinery is selected and maintained 3.5 Jobs and tasks are allocated to the work team 3.6 Safety induction is carried out for the task and site
4 Supervise installation and construction	4.1 The site is prepared and set out 4.2 The main lateral line is laid out 4.3 Submains and flushing manifold are inserted 4.4 Risers, emitters and other components are installed
5 Complete installation work and test components	5.1 Water supply is connected 5.2 Emitters are checked for optimal coverage and efficiency 5.3 Valves are set to allow water to targeted areas 5.4 The low volume system is started up and flushed 5.5 Measuring devices and controllers are attached to the system
6 Commission system	6.1 Operating faults are identified and corrective actions taken to meet design specifications 6.2 Testing/monitoring equipment is calibrated to



manufacturer's specifications

6.3 Test procedures are carried out and recorded

6.4 System is handed over operating in accordance with design specifications

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret irrigation designs
- develop operational procedures
- implement employment procedures
- conduct OHS risk assessment
- supervising installation tasks:
  - set out and prepare site
  - lay out and mark lateral location
  - inserting submains and flushing manifold
  - inserting risers and emitters
  - install irrigation components
  - complete installation work and test components
  - checking and cleaning backwash filter
  - start-up procedures
  - checking and cleaning backwash filter
  - operating specifications for pressures and flow rates
  - setting up irrigation controllers
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a wide range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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#### Knowledge of:

- characteristics and operation of joints, valves and sprinkler components

- water quality and water filtration techniques
- calculations for installing low volume irrigation systems
- behaviour of water on varying terrain and soil types
- distribution uniformity
- soil water retention testing techniques
- volume and pressure requirements
- pump capacity
- types of pumps and water flow rates
- start-up procedures
- operating specifications for pressures and flow rates
- setting up irrigation controllers
- setting up fertigation equipment
- commissioning procedures
- employment procedures
- project management principles
- design interpretation
- safe work practices for construction
- licensing requirements for electrical work.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the requirements of the system</li> <li>• implement operational procedures for the project</li> <li>• establish and organise resources</li> <li>• supervise on-site construction</li> <li>• commission the system.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Low volume irrigation systems</i> may include:	any systems that operate under comparatively low volume and pressure including micro irrigation, pop-ups at less than 0.1 litres/second, and drippers.
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## Unit Sector(s)

Irrigation

# AHCIRG412A Construct and install a sprinkler irrigation system

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of constructing and installing a sprinkler irrigation system and defines the standard required to: establish the requirements of the system; implement operational procedures for the project; establish and organise resources; supervise on-site construction; and commission the system.

## Application of the Unit

This Unit applies to irrigation site supervisors and installation project managers who are responsible for the construction and installation of sprinkler irrigation systems.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop and implement construction procedures	1.1 Employment procedures and contract management procedures are developed 1.2 Procedures for controlling and recording site deliveries are established 1.3 Procedures for recording the hire of plant and equipment are determined 1.4 OHS procedures are established, including risk assessment 1.5 Client, authorities and agencies are notified of the schedule of works 1.6 Procedures for dealing with environmental issues associated with construction work are determined
2 Interpret the <i>sprinkler irrigation system</i> design for the site	2.1 The purpose, scale and required output of the irrigation system is determined 2.2 The landscape of the site is assessed 2.3 Construction requirements are determined and verified with the designer 2.4 Components are selected to meet design specifications and site requirements
3 Organise resource requirements	3.1 Tasks and timelines are nominated with resources required for each 3.2 Labour requirements are organised 3.3 Parts and equipment are delivered to the site and checked 3.4 Equipment and machinery is selected and maintained 3.5 Jobs and tasks are allocated to the work team 3.6 Safety induction is carried out for the task and site
4 Supervise installation and construction	4.1 Plan is interpreted and installers are supervised and work is monitored to conform to the plan. 4.2 Components are assembled and connected according to the plan, and joints are completed and tested according to manufacturer specifications. 4.3 Fittings and valves are fitted and adjusted to the requirements of the installation plan, and all joints are secured according to enterprise guidelines. 4.4 Pumping system is installed and tested
5 Complete installation work and test components	5.1 Water supply is connected 5.2 The system is started up and flushed 5.3 Sprinklers are checked for optimal coverage and efficiency 5.4 Measuring devices and controllers are attached to the

system

- 6 Commission system
- 6.1 Operating faults are identified and corrective actions taken to meet design specifications
  - 6.2 Testing/monitoring equipment is calibrated to manufacturer's specifications
  - 6.3 Pressure testing is carried out and compared to specifications
  - 6.4 Adjustments are made as required
  - 6.5 The system is handed over in compliance with design specifications

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret irrigation designs
- develop operational procedures
- implement employment procedures
- conduct OHS risk assessment
- supervise operational tasks
  - earth moving and construction
  - power and pumping plant installation
  - supply and distribution pipeline laying and joining
  - sprinkler lateral pipelines laying and joining
  - setting up irrigation controllers
  - pressure testing of the system
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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#### Knowledge of:

- calculations for installing sprinkler irrigation systems

- behaviour of water on varying terrain and soil types
- soil water retention testing techniques
- organising equipment and materials for installation work
- water quality and water filtration techniques
- pump capacity
- types of pumps and water flow rates
- volume and pressure requirements
- operating specifications for pressures and flow rates
- distribution uniformity
- characteristics and operation of joints, valves and sprinkler components
- water quality and water filtration techniques
- labour requirements and management
- environmental impacts of sprinkler irrigation
- irrigation system components and operating specifications
- site preparation and construction procedures
- safe work practices for construction
- licensing requirements for electrical work.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the requirements of the system</li> <li>• implement operational procedures for the project</li> <li>• establish and organise resources</li> <li>• supervise on-site construction</li> <li>• commission the system.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Sprinkler irrigation systems*** may include:

any systems that use spray or rotor type sprinklers to distribute irrigation water at higher volume including pop-up sprinklers, fixed, and movable sprinklers (e.g. K Line and Ezy Shift).

## Unit Sector(s)

Irrigation



# AHCIRG413A Construct and install a moving sprinkler irrigation system

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of constructing and installing a moving sprinkler irrigation system and defines the standard required to: establish the requirements of the system; implement operational procedures for the project; establish and organise resources; supervise on-site construction; and commission the system.

## Application of the Unit

This Unit applies to irrigation site supervisors and installation project managers who are responsible for the construction and installation of moving sprinkler irrigation systems.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop and implement construction procedures	1.1 Employment procedures and contract management procedures are developed 1.2 Procedures for controlling and recording site deliveries are established 1.3 Procedures for recording the hire of plant and equipment are determined 1.4 OHS procedures are established, including risk assessment 1.5 Client, authorities and agencies are notified of the schedule of works 1.6 Procedures for dealing with environmental issues associated with construction work are determined
2 Interpret the <i>moving sprinkler irrigation system</i> design for the site	2.1 The purpose, scale and required output of the irrigation system is determined 2.2 The landscape of the site is assessed 2.3 Construction requirements are determined and verified with the designer 2.4 Components are selected to meet design specifications and site requirements
3 Organise resource requirements	3.1 Tasks and timelines are nominated with resources required for each 3.2 Labour requirements are organised 3.3 Parts and equipment are delivered to the site and checked 3.4 Equipment and machinery is selected and maintained 3.5 Jobs and tasks are allocated to the work team 3.6 Safety induction is carried out for the task and site
4 Supervise installation and construction	4.1 Installers are supervised and work is monitored to conform to the design specification 4.2 Components are assembled and connected according to the plan, and joints are completed and tested according to manufacturer specifications 4.3 Sprinklers, pressure regulators and hose directors are fitted and adjusted to comply with the requirements of the installation plan, and all joints are secured 4.4 Gear box and control panel are fitted 4.5 Wheels are fitted and tensioned 4.6 Pumping system is installed and tested
5 Complete installation work and test components	5.1 Water supply is connected 5.2 Sprinklers are checked for optimal coverage and efficiency

- 5.3 The system is started up and flushed
- 5.4 Measuring devices are attached to the system
- 6 Commission system
  - 6.1 Operating faults are identified and corrective actions taken to meet design specifications
  - 6.2 Testing/monitoring equipment is calibrated to manufacturer's specifications
  - 6.3 Testing is carried out and compared to specifications
  - 6.4 Adjustments are made as required
  - 6.5 The system is handed over in compliance with design specifications

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret irrigation designs
- develop operational procedures
- implement employment procedures
- conduct OHS risk assessment
- supervision of workers and use of machinery to
  - lay out components for construction
  - join span pipes with correctly tensioned bolts
  - connect Vjack trusses in sequence to bow the span
  - connect goose necks and hose connectors
  - fit pre-cut drop hoses and connect sprinklers
  - assemble sprinklers, pressure regulators and hose directors
  - fit gear box and control panel
  - fit and tension wheels
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge includes:****Knowledge of:**

- pump capacity
- types of pumps and water flow rates
- volume and pressure requirements
- characteristics and operation of moving sprinkler systems
- calculations for installing moving sprinkler irrigation systems
- components and sequence of construction
- water quality and water filtration techniques
- commissioning procedures
- system operation and testing for distribution uniformity
- safe work practices for construction
- licensing requirements for electrical work.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the requirements of the system</li> <li>• implement operational procedures for the project</li> <li>• establish and organise resources</li> <li>• supervise on-site construction</li> <li>• commission the system.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Moving sprinkler irrigation systems</i></b> describe:	specifically hard and soft reel self-travelling irrigators, lateral move systems and centre pivots.
Testing of the system may include:	<ul style="list-style-type: none"> <li>• pressure testing</li> <li>• volume testing</li> <li>• coverage testing.</li> </ul>

## Unit Sector(s)

Irrigation

## AHCIRG414A Construct and install a surface irrigation system

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of constructing and installing a surface irrigation system and defines the standard required to: establish the requirements of the system; implement operational procedures for the project; establish and organise resources; supervise on-site construction; and commission the system.

### Application of the Unit

This Unit applies to irrigation site supervisors and installation project managers who are responsible for the construction and installation of surface irrigation systems.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop and implement construction procedures	1.1 Employment procedures and contract management procedures are developed 1.2 Procedures for controlling and recording site deliveries are established 1.3 Procedures for recording the hire of plant and equipment are determined 1.4 OHS procedures are established, including risk assessment 1.5 Client, authorities and agencies are notified of the schedule of works 1.6 Procedures for dealing with environmental issues associated with construction work are determined
2 Interpret the <i>surface irrigation system</i> design for the site	2.1 The purpose, scale and required output of the irrigation system is determined 2.2 The landscape of the site is assessed 2.3 Construction requirements are determined and verified with the designer 2.4 Components are selected to meet design specifications and site requirements
3 Organise resource requirements	3.1 Tasks and timelines are nominated with resources required for each 3.2 Labour requirements are organised 3.3 Parts and equipment are delivered to the site and checked 3.4 Equipment and machinery is selected and maintained 3.5 Jobs and tasks are allocated to the work team 3.6 Safety induction is carried out for the task and site
4 Supervise installation and construction	4.1 Trenches are excavated to specifications 4.2 Earth works are carried out 4.3 Bay outlets and gates are constructed 4.4 Pipes are laid and joined 4.5 Fittings and valves are fitted and adjusted to the requirements of the installation plan, and all joints are secured according to enterprise guidelines 4.6 Pumping system is installed and tested
5 Complete installation work and test components	5.1 System is checked for water movement and volume 5.2 Measuring devices and controllers are attached to the system
6 Commission system	6.1 The system is started up and flushed 6.2 Valves are set allowing for water to targeted areas

- 6.3 Operating faults are identified and corrective actions taken to meet design specifications
- 6.4 Testing/monitoring equipment is calibrated to manufacturer's specifications
- 6.5 Adjustments are made as required
- 6.6 The system is handed over in compliance with design specifications

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret irrigation designs
- develop operational procedures
- implement employment procedures
- conduct OHS risk assessment
- supervise workers in:
  - earth moving and construction procedures
  - power and pumping plant installation
  - pump and gated pipe installation
  - construction of canals, channels, head ditches, beds, check structures, tailwater holding ponds
- estimate quantities and volumes of soil to be moved
- document requirements for structures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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#### Knowledge of:

- water quality and water filtration techniques
- site preparation and construction procedures
- calculations for installing surface irrigation systems



- behaviour of water on varying terrain and soil types
- soil water retention testing techniques
- organising equipment and materials for installation work
- water quality and water filtration techniques
- labour requirements and management
- irrigation system components and operating specifications
- environmental impacts of surface irrigation
- OHS legislation and safe work procedures.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the requirements of the system</li> <li>• implement operational procedures for the project</li> <li>• establish and organise resources</li> <li>• supervise on-site construction</li> <li>• commission the system.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Surface irrigation systems</i> may include:	any systems that apply water across the surface of a levelled or contoured area. These include furrow, border and basin irrigation.
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## Unit Sector(s)

Irrigation

# AHCIRG415A Interpret and apply irrigation designs

## Modification History

Not applicable.

## Unit Descriptor

This Unit of Competency specifies the outcomes required to interpret the irrigation design for an installation site and defines the standard required to: interpret symbols and abbreviations on plans and drawings; define the placement and function of irrigation structures; plan for construction works on the site; select and verify system components; and provide instructions to staff on the site.

## Application of the Unit

This Unit applies to irrigation site supervisors and installation project managers who are responsible for interpreting irrigation designs, plans, drawings and specifications and translating them into an installation site operations plan

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Identify the key features on an <i>irrigation design</i>	1.1 Commonly used symbols and abbreviations on plans are identified, understood and applied 1.2 Common irrigation terms used on plans are identified, understood and applied 1.3 Key features of irrigation plans, elevations and sections are identified 1.4 Scale, elevations and sections are identified from drawings
2 Define the placement and function of the irrigation system	2.1 The proposed purpose and capacity of the irrigation system is identified 2.2 The designed system is positioned in relation to the landscape of the site 2.3 Environmental impacts of the irrigation system, and its installation, are identified from the design 2.4 The plans, drawings and specifications for an irrigation design are interpreted 2.5 'As constructed' drawings are prepared
3 Mark out structures	3.1 Boundaries of the site are marked 3.2 Existing irrigation infrastructure on the site is identified 3.3 Electricity and communications infrastructure is identified on the site plan, marked out and safety procedures developed 3.4 Remnant vegetation to be retained is marked out 3.5 Proposed pipelines identified on the plan are pegged out 3.6 Proposed irrigation structures identified on the plan are pegged out
4 Estimate earth moving requirements for construction	4.1 Levels are taken and earthworks drawings are interpreted 4.2 Earth to be relocated or removed from the site is estimated 4.3 Sequence of earthworks is established and communicated 4.4 Materials required for irrigation structures are listed and quantified 4.5 Construction requirements are verified with designer
5 Select pumps and system components	5.1 Design specifications are interpreted for water volume, pressure and delivery pattern required 5.2 Pumping system is selected to meet design specifications and site requirements 5.3 Irrigation system components are selected to meet design specifications and site requirements 5.4 Component selection is verified with designer

- |  |   |
|--|---|
| 6 Mark out locations of all components | 6.1 The sequence of operations for installation is established                              |
|  | 6.2 The delivery and storage area for components is identified                              |
|  | 6.3 Placement of all components is identified from the design and markings made on the site |
| 7 Develop instructions for staff       | 7.1 Environmental hazards and strategies are included in instructions                       |
|  | 7.2 Sequence of activities and work duties is documented                                    |
|  | 7.3 OHS hazards and risk controls are communicated  |
|  | 7.4 Construction schedule is provided to staff  |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- read contour maps and interpret elevations and distances
- marking out procedures
- interpret technical drawings and site plans
- calculate pressures, flows, velocities and friction losses
- determine efficiency of the system with varying system components
- follow relevant enterprise OHS and environmental procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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#### Knowledge of:

- interpretation of plans and general and technical specifications
- hydraulic calculations
- selection of water pumping and distribution components delivery based on specifications and requirements
- pumps and pumping system components
- erosion control and design principles
- levels and levelling

- earthmoving principles
- principles of native topsoil conservation and protection
- Occupational Health and Safety (OHS) and environmental legislation, codes of practice and enterprise procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret symbols and abbreviations on plans and drawings</li> <li>• define the placement and function of irrigation structures</li> <li>• plan for construction works on the site</li> <li>• select and verify system components</li> <li>• provide instructions to staff on the site.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b><i>Irrigation designs</i></b> may include:	plans, drawings and specifications covering low volume, sprinkler, moving sprinkler, surface or

	irrigation drainage systems.
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## Unit Sector(s)

Irrigation

## AHCIRG416A Supervise low volume irrigation maintenance

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of supervising a maintenance program for a low volume irrigation system and defines the standard required to: develop maintenance procedures; supervise maintenance of irrigation components and testing equipment; supervise maintenance of the irrigation area; and record and report maintenance activities.

### Application of the Unit

This Unit applies to irrigation site supervisors and managers who are responsible for the maintenance program for low volume irrigation.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop a <i>maintenance program</i> for a <i>low volume irrigation system</i>	1.1 Maintenance requirements for irrigation components and structures are established 1.2 Maintenance requirements for the irrigation site are established 1.3 The frequency of maintenance activities required are determined and a schedule is developed 1.4 Maintenance activities are costed out in terms of required staff, materials and equipment 1.5 OHS risks associated with the maintenance program are assessed and suitable controls implemented 1.6 The environmental impacts of maintenance activities are minimised 1.7 A system for reporting maintenance activities is developed
2 Supervise maintenance of low volume irrigation components	2.1 Maintenance checklists are developed for irrigation components 2.2 Component operation is systematically monitored and operating faults are identified and appropriate action taken 2.3 Abnormal operation or frequent and recurring breakdowns are identified, investigated and maintenance organised as required 2.4 Situations requiring expert advice are identified and specialist assistance sought in accordance with site procedures 2.5 Equipment condition is routinely reviewed to ensure and maintain efficient operations
3 Carry out <i>maintenance of testing equipment</i>	3.1 Preventative maintenance is performed 3.2 Equipment wear and faults are identified and reported 3.3 Minor repairs are performed within limits of authorisation 3.4 Defective parts are replaced and adjustments made 3.5 Expert help is sought where difficulties are encountered 3.6 Maintenance and calibration records are updated
4 Supervise pest and weed control in an irrigated area	4.1 Evidence of pests is assessed and integrated control measures appropriate to type and species of infestation are determined 4.2 Areas of weed infestation, which may be reduced or eradicated, are located and species identified 4.3 Integrated control methods are selected to control pests and weeds 4.4 Control methods are scheduled at the optimum time with

- minimal damage to the crop
- 4.5 Records of the severity of infestations and treatments are maintained
- 5 Complete records of irrigation system maintenance
- 5.1 Records of maintenance activities are maintained
- 5.2 Results of maintenance works are assessed against the maintenance program

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- inspect irrigation system
- test irrigation equipment
- test emitter output and function
- check connections
- service filter strainer periodically
- ensure proper operation of automatic flush valves
- confirm operational pressures
- maintain testing equipment
- identify pests and weeds in the irrigated area
- use pest and weed control strategies
- carry out control systems checks
- supervise minor repairs of equipment
- identify the need for, and schedule, major repairs or replacements
- maintain testing equipment
- record all test results clearly and concisely with attention to detail
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- collate records and analyse performance
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant enterprise OHS and environmental policies and procedures.

### Required knowledge includes:

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#### Knowledge of:

- irrigation system components
- operational and maintenance requirements

- develop enterprise procedures for pre-season, irrigation and post-season maintenance
- pre and post-season maintenance covering
  - emitter parts
  - emitter operating pressures
  - emitter output
  - emitter distribution uniformity
  - pumping and distribution systems
- visual checks for blockages or signs of wear in emitters
- pressure testing as per procedures
- flushing and checking of lines
- developing a maintenance program and checklists
- pest and weed control
- environmental procedures for irrigation maintenance
- OHS hazard identification and risk assessment.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop maintenance procedures</li> <li>• supervise maintenance of irrigation components and testing equipment</li> <li>• supervise maintenance of the irrigation area</li> <li>• record and report maintenance activities.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Maintenance programs</i></b> may include:	preventative maintenance carried out at end of season or throughout the irrigation season, including the regular replacement of irrigation components.
<b><i>Low volume irrigation systems</i></b> may include:	low volume irrigation systems include systems that operate under comparatively low volume and pressure including micro irrigation, pop-ups at less than 0.1 litres/second, and drippers.
<b><i>Maintenance of testing equipment</i></b> may include:	replacing 'remove and replace' components; lubrication; working adjustments to tolerances; cleaning and storing; and completing usage records.

## Unit Sector(s)

Irrigation

## AHCIRG417A Supervise sprinkler irrigation maintenance

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of supervising a maintenance program for a sprinkler irrigation system and defines the standard required to: develop maintenance procedures; supervise maintenance of irrigation components and structures; check and service testing equipment; supervise maintenance of the irrigation area; and record and report maintenance activities.

### Application of the Unit

This Unit applies to irrigation site supervisors and managers of irrigation systems who are responsible for maintenance programs for sprinkler irrigation.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop a <i>maintenance program</i> for a <i>sprinkler irrigation system</i>	1.1 Maintenance requirements for irrigation components and structures are established 1.2 Maintenance requirements for the irrigation site are established 1.3 The frequency of maintenance activities required are determined and a schedule is developed 1.4 Maintenance activities are costed out in terms of required staff, materials and equipment 1.5 OHS risks associated with the maintenance program are assessed and suitable controls implemented 1.6 The environmental impacts of maintenance activities are minimised 1.7 A system for reporting maintenance activities is developed
2 Supervise maintenance of sprinkler irrigation components	2.1 Maintenance checklists are developed for irrigation components 2.2 Component operation is systematically monitored and operating faults are identified and appropriate action taken 2.3 Abnormal operation or frequent and recurring breakdowns are identified, investigated and maintenance organised as required 2.4 Situations requiring expert advice are identified and specialist assistance sought in accordance with site procedures 2.5 Equipment condition is routinely reviewed to ensure and maintain efficient operations
3 Supervise maintenance of sprinkler irrigation structures	3.1 Maintenance checklists are developed for irrigation components 3.2 Structures are inspected as necessary to locate and evaluate defects 3.3 Appropriate repair methods are identified to ensure defect is repaired effectively 3.4 Structures are repaired or replaced according to requirements 3.5 Materials required for job are identified and organised as required to enable appropriate maintenance of components 3.6 <i>Testing equipment</i> is maintained
4 Supervise pest and weed control in an irrigated area	4.1 Evidence of pests is assessed and integrated control measures appropriate to type and species of infestation are determined 4.2 Areas of weed infestation on irrigation works are located

- and species identified
- 4.3 Integrated control methods are selected to control pests and weeds
- 4.4 Control methods are scheduled at the optimum time with minimal damage to desired plants
- 4.5 Severity of infestations and records of treatments are maintained
- 5 Complete records of irrigation system maintenance
  - 5.1 Records are maintained of maintenance activities
  - 5.2 Results of maintenance works are assessed against the maintenance program

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- develop enterprise procedures for pre-season, irrigation and post-season maintenance
- inspect irrigation system
- test irrigation equipment
- service irrigation equipment
- check sprinkler output and function
- remove and replace valves and filters
- check controllers
- carry out control systems checks
- supervise minor repairs of equipment
- identify the need for, and schedule, major repairs or replacements
- record all test results clearly and concisely with attention to detail
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant enterprise OHS and environmental policies and procedures
- identify OHS hazards and implement safe work procedures.

### Required knowledge includes:

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#### Knowledge of:

- irrigation system components
- operational and maintenance requirements

- develop enterprise procedures for pre-season, irrigation and post-season maintenance
- pre and post-season maintenance covering
- system components
- sprinkler operating pressures
- sprinkler output
- sprinkler distribution uniformity
- pumping and distribution systems
- drainage systems
- visual checks for blockages or signs of wear in components
- pressure testing as per procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop maintenance procedures</li> <li>• supervise maintenance of irrigation components and testing equipment</li> <li>• supervise maintenance of irrigation structures</li> <li>• supervise maintenance of the irrigation area</li> <li>• record and report maintenance activities.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may



be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Maintenance programs</i> may include:	preventative maintenance carried out at end of season or throughout the irrigation season, including the regular replacement of irrigation components.
<i>Sprinkler irrigation systems</i> may include:	describe systems that use spray or rotor type sprinklers to distribute irrigation water at higher volume including pop-up sprinklers, fixed, and movable sprinklers (e.g. K Line and Ezy Shift).
Maintenance of <i>testing equipment</i> may include:	replacing 'remove and replace' components; lubrication; working adjustments to tolerances; cleaning and storing; and completing usage records.

## Unit Sector(s)

Irrigation

# AHCIRG418A Supervise moving sprinkler irrigation maintenance

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of supervising a maintenance program for a sprinkler irrigation system and defines the standard required to: develop maintenance procedures; supervise maintenance of irrigation components and structures; check and service testing equipment; supervise maintenance of the irrigation area; and record and report maintenance activities.

## Application of the Unit

This Unit applies to irrigation site supervisors and managers of irrigation systems who are responsible for maintenance programs for moving sprinkler irrigation.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop a <i>maintenance program</i> for a <i>moving sprinkler irrigation system</i>	1.1 Maintenance requirements for irrigation components and structures are established 1.2 Maintenance requirements for the irrigation site are established 1.3 The frequency of maintenance activities required are determined and a schedule is developed 1.4 Maintenance activities are costed out in terms of required staff, materials and equipment 1.5 OHS risks associated with the maintenance program are assessed and suitable controls implemented 1.6 The environmental impacts of maintenance activities are minimised 1.7 A system for reporting maintenance activities is developed
2 Supervise maintenance of moving sprinkler irrigation components	2.1 Maintenance checklists are developed for irrigation components 2.2 Component operation is systematically monitored and operating faults are identified and appropriate action taken 2.3 Abnormal operation or frequent and recurring breakdowns are identified, investigated and maintenance organised as required 2.4 Situations requiring expert advice are identified and specialist assistance sought in accordance with site procedures 2.5 Equipment condition is routinely reviewed to ensure and maintain efficient operations
3 Supervise maintenance of moving sprinkler irrigation structures	3.1 Maintenance checklists are developed for irrigation components 3.2 Structures are inspected as necessary to locate and evaluate defects 3.3 Appropriate repair methods are identified to ensure defect is repaired effectively 3.4 Structures are repaired or replaced according to requirements 3.5 Materials required for job are identified and organised as required to enable appropriate maintenance of components 3.6 <i>Testing equipment</i> is maintained
4 Complete records of irrigation system maintenance	4.1 Records are maintained of maintenance activities 4.2 Results of maintenance works are assessed against the maintenance program

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- develop maintenance procedures and demonstrate the skills for regular and end of season maintenance tasks to:
  - change the engine oil and filter
  - replace the air and fuel filters
  - grease drive shafts on pump, and motor
  - check spark plugs on gas, propane or natural gas motors
  - drain, flush and refill the cooling system
  - refill the drip oil reservoir and allow oil to drain into the drip line based on pump column length
  - ensure that the right-angle gear head is free moving and clean and lubricate non-reverse pins
  - check for malfunctioning sprinklers
  - check injection pump and safety equipment operation
  - inspect lift base and arms for any stress marks or cracks
  - check all bolts for correct torques
- develop enterprise procedures for pre-season, irrigation and post-season maintenance
- inspect irrigation system
- test irrigation equipment
- carry out visual checks for blockages or signs of wear in components
- pressure test as per procedures
- carry out control systems checks
- supervise minor repairs of equipment
- identify the need for, and schedule, major repairs or replacements
- record all test results clearly and concisely with attention to detail
- dispose of unused or waste materials from site
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant enterprise OHS and environmental policies and procedures.

### Required knowledge includes:

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#### Knowledge of:

- irrigation system components

- operational and maintenance requirements
- pre and post-season maintenance covering:
  - system components
  - sprinkler operating pressures
  - sprinkler output
  - sprinkler distribution uniformity
  - pumping and distribution systems
  - drainage systems
- environmental impacts of irrigation maintenance
- OHS hazards and safe work procedures.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop maintenance procedures</li> <li>• supervise maintenance of irrigation components and testing equipment</li> <li>• supervise maintenance of irrigation structures</li> <li>• supervise maintenance of the irrigation area</li> <li>• record and report maintenance activities.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may

be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Moving sprinkler systems</i> may include:	moving sprinkler irrigation systems describe specifically hard and soft reel self-travelling irrigators, lateral move systems and centre pivots.
<i>Maintenance programs</i> may include:	preventative maintenance carried out at end of season or throughout the irrigation season, including the regular replacement of irrigation components.
Maintenance of <i>testing equipment</i> may include:	replacing 'remove and replace' components; lubrication; working adjustments to tolerances; cleaning and storing; and completing usage records.

## Unit Sector(s)

Irrigation

## **AHCIRG419A Supervise surface irrigation maintenance**

### **Modification History**

Not applicable.

### **Unit Descriptor**

This Unit covers the process of supervising a maintenance program for a surface irrigation system and defines the standard required to: develop maintenance procedures; supervise maintenance of irrigation components and structures; check and service testing equipment; supervise maintenance of the irrigation area; and record and report maintenance activities.

### **Application of the Unit**

This Unit applies to irrigation site supervisors and managers who are responsible for the maintenance program for surface irrigation.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

This Unit contains employability skills.

### **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop a <i>maintenance program</i> for a <i>surface irrigation system</i>	1.1 Maintenance requirements for irrigation components and structures are established 1.2 Maintenance requirements for the irrigation site are established 1.3 The frequency of maintenance activities required are determined and a schedule is developed 1.4 Maintenance activities are costed out in terms of required staff, materials and equipment 1.5 OHS risks associated with the maintenance program are assessed and suitable controls implemented 1.6 The environmental impacts of maintenance activities are minimised 1.7 A system for reporting maintenance activities is developed
2 Supervise maintenance of surface irrigation components	2.1 Maintenance checklists are developed for irrigation components 2.2 Component operation is systematically monitored and operating faults are identified and appropriate action taken 2.3 Abnormal operation or frequent and recurring breakdowns are identified, investigated and maintenance organised as required 2.4 Situations requiring expert advice are identified and specialist assistance sought in accordance with site procedures 2.5 Equipment condition is routinely reviewed to ensure and maintain efficient operations
3 Supervise maintenance of surface irrigation structures	3.1 Maintenance checklists are developed for irrigation components 3.2 Structures are inspected as necessary to locate and evaluate defects 3.3 Appropriate repair methods are identified to ensure defect is repaired effectively 3.4 Structures are repaired or replaced according to requirements 3.5 Materials required for job are identified and organised as required to enable appropriate maintenance of components 3.6 <i>Testing equipment is maintained</i>
4 Supervise pest and weed control in an irrigated area	4.1 Evidence of pests is assessed and integrated control measures appropriate to type and species of infestation are determined 4.2 Areas of weed infestation on irrigation works are located



- and species identified
- 4.3 Integrated control methods are selected to control pests and weeds
- 4.4 Control methods are scheduled at the optimum time with minimal damage to desired plants
- 4.5 Severity of infestations and records of treatments are maintained
- 5 Complete records of irrigation system maintenance
  - 5.1 Records are maintained of maintenance activities
  - 5.2 Results of maintenance works are assessed against the maintenance program

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- develop enterprise procedures for pre-season, irrigation and post-season maintenance
- carry out control systems checks
- supervise minor repairs of equipment
- identify the need for, and schedule, major repairs or replacements
- maintain testing equipment
- identify pests and weeds in the irrigated area
- use pest and weed control strategies
- record all test results clearly and concisely with attention to detail
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner
- collate records and analyse performance
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant enterprise OHS and environmental policies and procedures.

### Required knowledge includes:

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#### Knowledge of:

- irrigation system components
- operational and maintenance requirements
- pre and post-season maintenance covering:
  - system components
  - irrigation beds

- pumping systems
- drainage systems
- head and tail water structures
- irrigation systems inspection
- irrigation equipment testing
- visual checks for blockages or signs of wear in gates and valves
- volume testing as per procedures
- environmental impacts of irrigation maintenance
- hazards and implement safe work procedures.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop maintenance procedures</li> <li>• supervise maintenance of irrigation components and testing equipment</li> <li>• supervise maintenance of irrigation structures</li> <li>• supervise maintenance of the irrigation area</li> <li>• record and report maintenance activities.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the

candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Maintenance programs</i> may include:	preventative maintenance carried out at end of season or throughout the irrigation season, including the regular replacement of irrigation components.
<i>Surface irrigation</i> may include:	systems that apply water across the surface of a levelled or contoured area. These include furrow, border and basin irrigation.
<i>Maintenance of testing equipment</i> may include:	replacing 'remove and replace' components; lubrication; working adjustments to tolerances; cleaning and storing; and completing usage records.

## Unit Sector(s)

Irrigation

## AHCIRG420A Manage a low volume irrigation system

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of managing a low volume irrigation system and defines the standard required to: develop procedures for system operation; troubleshoot faults and blockages; measure performance of the system; and benchmark energy and water efficiency of the system.

### Application of the Unit

This Unit applies to irrigation managers in the amenity horticulture and food and fibre production industries.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Ensure the <i>low volume irrigation system</i> is prepared for operation	1.1 Staff are trained in carrying out pre-start checks and routine servicing 1.2 The irrigation controller is programmed and/or adjusted to meet the required schedule 1.3 Procedures are established for adjusting valves and checking filters and emitters
2 Develop and implement start-up and shutdown procedures for a low volume irrigation system	2.1 Start-up procedures for a low volume irrigation system are developed according to system specifications and technical manuals 2.2 Shut down sequence and isolation procedures are developed according to system specifications and technical manuals 2.3 Safety/security lock off devices and signage is installed according to enterprise policy and procedures 2.4 Instructions are provided for flushing the system as required
3 Carry out trouble shooting for faults and blockages	3.1 Access to faulty components and blockages is arranged 3.2 Faulty components are removed from the system, according to system specifications and technical manuals, and repaired or disposed of in an environmentally responsible way 3.3 Replaceable components are selected from manufacturer catalogues and procured using enterprise procedures 3.4 Replacement components are installed to meet system specifications according to technical manuals
4 Measure performance of a low volume irrigation system	4.1 Variations in pressures are identified and recorded in accordance with enterprise policy and procedures 4.2 Water flow rates are measured and recorded in accordance with enterprise policy and procedures 4.3 Variations in water flow and distribution are identified and recorded in accordance with enterprise policy and procedures 4.4 Pump performance parameters are measured as necessary and recorded in accordance with enterprise policy and procedures 4.5 Variations in pump performance parameters are measured where relevant and recorded in accordance with enterprise policy and procedures 4.6 Distribution and delivery systems are inspected and malfunctions in system are identified, fixed and actions recorded in accordance with enterprise policy and procedures 4.7 Factors external to the system that may cause interference

- are identified and recorded in accordance with enterprise policy and procedures
- 5 Review system performance status
- 5.1 System pressures and variations are recorded in accordance with enterprise policy and procedures
  - 5.2 System flow rates and variations are recorded in accordance with enterprise policy and procedures
  - 5.3 Distribution uniformity and mean application rates are calculated and recorded in accordance with enterprise policy and procedures
  - 5.4 Watering depth is determined and recorded in accordance with enterprise policy and procedures
  - 5.5 Calculations are made for energy use and water efficiency and compared to industry benchmarks

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- develop and supervise procedures for starting up, carrying out operational checks and shutting down
- carry out operational tests
- measure, interpret and adjust flow rates and pressures
- operate, maintain and repair irrigation systems
- shut down and isolate components
- replace components
- access and prepare data records for both print-based and computer-based data
- use computers for recording and reporting data
- apply measuring and testing techniques
- measure output and efficiency of an irrigation system
- calculate pressure differentials, flow rates, crop yields, estimated water usage/actual water usage
- use recorded information to review energy and water efficiency for an irrigation system
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant enterprise OHS and environmental policies and procedures.

**Required knowledge includes:****Knowledge of:**

- irrigation schedules
- application rates
- irrigation times
- dripper output
- pressure variations and blockages
- salinity levels and water quality
- depth of irrigation
- low volume irrigation technologies
- component specifications
- pump types used in low volume irrigation systems and their output and efficiency ratings
- soil water retention testing techniques
- measuring and monitoring procedures for factors contributing to irrigation system delivery
- water authority standards and procedures
- best practices for reducing environmental impacts of irrigation
- OHS risk assessment.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop procedures for system operation</li> <li>• troubleshoot faults and blockages</li> <li>• measure performance of the system</li> <li>• benchmark energy and water efficiency of the system.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

	enterprise circumstances.
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## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Low volume irrigation systems*** may include:

low volume irrigation systems include systems that operate under comparatively low volume and pressure including micro irrigation, pop-ups at less than 0.1 litres/second, and drippers.

## Unit Sector(s)

Irrigation



## AHCIRG421A Manage a sprinkler irrigation system

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of managing a sprinkler irrigation system and defines the standard required to: develop procedures for system operation; troubleshoot faults and blockages; measure performance of the system; and benchmark energy and water efficiency of the system.

### Application of the Unit

This Unit applies to irrigation managers in the amenity horticulture and food and fibre production industries.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Ensure <i>sprinkler irrigation system</i> is prepared for operation	1.1 Staff are trained in carrying out pre-start checks and routine servicing 1.2 The irrigation controller is programmed and/or adjusted to meet the required schedule 1.3 Procedures are established for adjusting valves and checking filters and emitters
2 Develop and implement start-up and shutdown procedures for a sprinkler irrigation system	2.1 Start-up procedures for a sprinkler irrigation system are developed according to system specifications and technical manuals 2.2 Shut down sequence and isolation procedures are developed according to system specifications and technical manuals 2.3 Safety/security lock off devices and signage is installed according to enterprise policy and procedures
3 Carry out trouble shooting for faults and blockages	3.1 Access to faulty components and blockages is arranged 3.2 Faulty components are removed from the system, according to system specifications and technical manuals, and repaired or disposed of in an environmentally responsible way 3.3 Replaceable components are selected from manufacturer catalogues and procured using enterprise procedures 3.4 Replacement components are installed to meet system specifications according to technical manuals
4 Measure performance of a sprinkler irrigation system	4.1 Variations in pressures are identified and recorded in accordance with enterprise policy and procedures 4.2 Water flow rates are measured and recorded in accordance with enterprise policy and procedures 4.3 Variations in water flow and distribution are identified and recorded in accordance with enterprise policy and procedures 4.4 Pump performance parameters are measured as necessary and recorded in accordance with enterprise policy and procedures 4.5 Variations in pump performance parameters are measured where relevant and recorded in accordance with enterprise policy and procedures 4.6 Distribution and delivery systems are inspected and malfunctions in system are identified, fixed and actions recorded in accordance with enterprise policy and procedures 4.7 Factors external to the system that may cause interference are identified and recorded in accordance with enterprise

- policy and procedures
- 5 Review system performance status
- 5.1 System pressures and variations are recorded in accordance with enterprise policy and procedures
  - 5.2 System flow rates and variations are recorded in accordance with enterprise policy and procedures
  - 5.3 Distribution uniformity and mean application rates are calculated and recorded in accordance with enterprise policy and procedures
  - 5.4 Watering depth is determined and recorded in accordance with enterprise policy and procedures
  - 5.5 Calculations are made for energy use and water efficiency and compared to industry benchmarks

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- develop and supervise procedures for starting up, carrying out operational checks and shutting down
- carry out operational tests
- measure, interpret and adjust flow rates and pressures
- operate, maintain and repair irrigation systems
- shut down and isolate components
- replace components
- access and prepare data records for both print-based and computer-based data
- use computers for recording and reporting data
- apply measuring and testing techniques
- measure output and efficiency of an irrigation system
- calculate pressure differentials, flow rates, crop yields, estimated water usage/actual water usage
- measure output and efficiency of an irrigation system
- use recorded information to review energy and water efficiency for an irrigation system
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant enterprise OHS and environmental policies and procedures.

**Required knowledge includes:****Knowledge of:**

- develop and supervise procedures for starting up, carrying out operational checks and shutting down
- monitor system effectiveness:
  - application rates
  - irrigation times
  - sprinkler coverage and output
  - soil moisture levels
  - pressure variations and blockages
  - salinity levels and water quality
  - depth of irrigation
  - infiltration and runoff
- measure, interpret and adjust flow rates and pressures
- sprinkler irrigation technologies
- component specifications
- pump types used in sprinkler irrigation systems and their output and efficiency ratings
- weather patterns
- soil moisture testing techniques
- irrigation schedules
- environmental impacts of irrigation using water from any ground or underground source
- best practices for reducing environmental impacts of irrigation
- water in soils and plants
- water requirements of plants/crops consistent with sound environmental management
- using records to review an irrigation system.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop procedures for system operation</li> </ul>

	<ul style="list-style-type: none"> <li>• troubleshoot faults and blockages</li> <li>• measure performance of the system</li> <li>• benchmark energy and water efficiency of the system.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Sprinkler irrigation systems</i></b> may include:</p>	<p>sprinkler irrigation systems describe systems that use spray or rotor type sprinklers to distribute irrigation water at higher volume including pop-up sprinklers, fixed, and movable sprinklers (e.g. K Line and Ezy Shift).</p>

### Unit Sector(s)

Irrigation

## AHCIRG422A Manage a moving sprinkler irrigation system

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers the process of managing a moving sprinkler irrigation system and defines the standard required to: develop procedures for system operation; troubleshoot faults and blockages; measure performance of the system; and benchmark energy and water efficiency of the system.

### Application of the Unit

This Unit applies to irrigation managers in the food and fibre production industries.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Ensure the <i>moving sprinkler irrigation system</i> is prepared for operation	1.1 Staff are trained in carrying out pre-start checks and routine servicing 1.2 The irrigation controller is programmed and/or adjusted to meet the required schedule 1.3 Procedures are established for adjusting valves and checking filters and emitters
2 Develop and implement start-up and shutdown procedures for a moving sprinkler irrigation system	2.1 Start-up procedures for a sprinkler irrigation system are developed according to system specifications and technical manuals 2.2 Shut down sequence and isolation procedures are developed according to system specifications and technical manuals 2.3 Soil conditions for operation are specified, or tracks maintained, to reduce compaction
3 Carry out trouble shooting for faults and blockages	3.1 Access to faulty components and blockages is arranged 3.2 Faulty components are removed from the system, according to system specifications and technical manuals, and repaired or disposed of in an environmentally responsible way 3.3 Replaceable components are selected from manufacturer catalogues and procured using enterprise procedures 3.4 Replacement components are installed to meet system specifications according to technical manuals
4 Measure performance of a moving sprinkler irrigation system	4.1 Variations in pressures are identified and recorded in accordance with enterprise policy and procedures 4.2 Water flow rates are measured and recorded in accordance with enterprise policy and procedures 4.3 Variations in water flow and distribution are identified and recorded in accordance with enterprise policy and procedures 4.4 Pump performance parameters are measured as necessary and recorded in accordance with enterprise policy and procedures 4.5 Variations in pump performance parameters are measured where relevant and recorded in accordance with enterprise policy and procedures 4.6 Distribution and delivery systems are inspected and malfunctions in system are identified, fixed and actions recorded in accordance with enterprise policy and procedures 4.7 Factors external to the system that may cause interference are identified and recorded in accordance with enterprise

- policy and procedures
- 5 Review system performance status
- 5.1 System pressures and variations are recorded in accordance with enterprise policy and procedures
  - 5.2 System flow rates and variations are recorded in accordance with enterprise policy and procedures
  - 5.3 Distribution uniformity and mean application rates are calculated and recorded in accordance with enterprise policy and procedures
  - 5.4 Watering depth is determined and recorded in accordance with enterprise policy and procedures
  - 5.5 Calculations are made for energy use and water efficiency and compared to industry benchmarks

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- measure output and efficiency of an irrigation system
- develop and supervise procedures for starting up, carrying out operational checks and shutting down
- monitor system effectiveness:
  - application rates
  - irrigation times
  - sprinkler coverage and output
  - soil moisture levels
  - pressure variations and blockages
  - salinity levels and water quality
  - depth of irrigation
  - infiltration and runoff
- measure, interpret and adjust flow rates and pressures
- fix blockages and replace components
- use records to review an irrigation system.



## Required knowledge includes:

### Knowledge of:

- moving sprinkler irrigation technologies
- component specifications
- pump types used in moving sprinkler irrigation systems and their output and efficiency ratings
- servicing and maintenance of travelling mechanism
- environmental hazards of runoff and compaction
- general irrigation methods for moving sprinkler systems
- main components of moving sprinkler irrigation systems
- pump types used in moving sprinkler irrigation systems and their operation
- energy efficiency indicators/ benchmarks for moving sprinkler irrigation:
  - Application Efficiency
  - Average Application Rate
  - Instantaneous Application Rate
- soil moisture testing techniques
- soil/plant/water relationships
- water requirements of plants/crops consistent with sound environmental management
- critical measures for moisture availability:
  - readily available water
  - wilting point
  - field capacity
- monitoring soil compaction and drainage
- physical soil characteristics such as infiltration rate, water holding capacity and wetted volume in the root zone
- irrigation schedules
- environmental impacts of irrigation using water from any ground or underground source
- best practices for reducing environmental impacts of irrigation
- water requirements of plants/crops consistent with sound environmental management.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate	The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and

competency in this Unit	<p>satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• read and follow operations manual and irrigation schedules</li> <li>• carry out pre-start checks</li> <li>• operate and inspect the system</li> <li>• measure and interpret flow rates and pressures</li> <li>• identify environmental hazards</li> <li>• shut down in response to irrigation indicators.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Moving sprinkler irrigation systems</i></b> may include:</p>	<p>moving sprinkler irrigation systems describe specifically hard and soft reel self-travelling irrigators, lateral move systems and centre pivots.</p>

## Unit Sector(s)

Irrigation

# AHCIRG423A Manage a surface irrigation system

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of managing a surface irrigation system and defines the standard required to: develop procedures for system operation; troubleshoot faults and blockages; measure performance of the system; and benchmark energy use and water efficiency of the system.

## Application of the Unit

This Unit applies to irrigation managers of irrigation systems in the amenity horticulture and food and fibre production industries.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Ensure <i>the surface irrigation system</i> is prepared for operation	1.1 Staff are trained in carrying out pre-start checks and routine servicing 1.2 The irrigation controller is programmed and/or adjusted to meet the required schedule 1.3 Procedures are established for adjusting valves and checking filters and emitters
2 Develop and implement start-up and shutdown procedures for a surface irrigation system	2.1 Start-up procedures for a sprinkler irrigation system are developed according to system specifications and technical manuals 2.2 Training is provided in priming pumps and setting gates to commence irrigating 2.3 Shut down sequence and isolation procedures are developed according to system specifications and technical manuals 2.4 Soil conditions for operation are specified, or tracks maintained, to reduce compaction
3 Measure performance of a surface irrigation system	3.1 Variations in pressures at the headworks and control valves are recorded in accordance with enterprise policy and procedures 3.2 Water flow rates are measured and recorded in accordance with enterprise policy and procedures 3.3 Variations in water flow and distribution are identified and recorded in accordance with enterprise policy and procedures 3.4 Pump performance parameters are measured as necessary and recorded in accordance with enterprise policy and procedures 3.5 Variations in pump performance parameters are measured where relevant and recorded in accordance with enterprise policy and procedures 3.6 Distribution, drainage and water measurement systems are inspected and malfunctions in system are identified, fixed and actions recorded in accordance with enterprise policy and procedures 3.7 Factors external to the system that may cause interference are identified and recorded in accordance with enterprise policy and procedures
4 Review system performance status	4.1 System pressures and variations are recorded in accordance with enterprise policy and procedures 4.2 System flow rates and variations are recorded in accordance with enterprise policy and procedures

- 4.3 Distribution uniformity and mean application rates are calculated and recorded in accordance with enterprise policy and procedures
- 4.4 Watering depth is determined and recorded in accordance with enterprise policy and procedures
- 4.5 Quantity and quality of tailwater are measured, and amount of water reused
- 4.6 Calculations are made for energy use and water efficiency and compared to industry benchmarks

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- develop procedures and provide training to staff to
- set up pipes, system equipment and outlets
- use syphons
- check pressure at the headworks and control valves
- carry out running repairs on irrigation delivery and drainage systems
- carry out shut down procedures
- develop procedures for starting up, carrying out operational checks and shutting down
- provide supervision and training
- measure and record water flow rates
- identify and record variations in water flow and distribution
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant enterprise OHS and environmental policies and procedures.

## Required knowledge includes:

### Knowledge of:

- main components of surface irrigation systems
- set up of headwater, tailwater, channels and beds
- pump types used in surface irrigation systems and their operating requirements
- physical soil characteristics such as infiltration rate, water holding capacity and wetted volume in the root zone
- water in soils and plants
- water requirements of plants/crops consistent with sound environmental management
- critical measures for moisture availability:
  - readily available water
  - water holding capacity
  - wilting point
  - field capacity
  - infiltration rates
  - evapotranspiration
- soil moisture testing techniques
- environmental impacts of irrigation using water from any ground or underground source
- pump types used in surface irrigation systems and their operation
- in accordance with enterprise policy and procedures
- calculating irrigation efficiency
- using records to review an irrigation system.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop procedures for system operation</li> <li>• troubleshoot faults and blockages</li> <li>• measure performance of the system</li> <li>• benchmark energy use and water efficiency of the</li> </ul>

	system
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Surface irrigation systems</i> may include:	any systems that apply water across the surface of a levelled or contoured area. These include furrow, border and basin irrigation.

## Unit Sector(s)

Irrigation

# AHCIRG424A Construct and install an irrigation drainage system

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of constructing and installing an irrigation drainage system and defines the standard required to: establish the requirements of the drainage system; implement operational procedures for the project; establish and organise resources; supervise on-site construction; commission the drainage system; and rehabilitate the site.

## Application of the Unit

This Unit applies to irrigation site supervisors and installation project managers who are responsible for the construction and installation of irrigation drainage systems.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop and implement construction procedures	1.1 Employment procedures and contract management procedures are developed 1.2 Procedures for controlling and recording site deliveries are established 1.3 Procedures for recording the hire of plant and equipment are determined 1.4 OHS procedures are established, including risk assessment 1.5 Client, authorities and agencies are notified of the schedule of works 1.6 Procedures for dealing with environmental issues associated with construction work are determined
2 Organise resource requirements	2.1 Tasks and timelines are nominated with resources required for each 2.2 Labour requirements are organised 2.3 Parts and equipment are delivered to the site and checked 2.4 Equipment and machinery is selected and maintained 2.5 Jobs and tasks are allocated to the work team 2.6 Safety induction is carried out for the task and site
3 Interpret the <i>irrigation drainage system</i> design for the site	3.1 The purpose, scale and required output of the irrigation drainage system is established from the drainage plan 3.2 The landscape of the site is assessed 3.3 Construction requirements are determined and verified with the designer 3.4 Components are selected to meet design specifications and site requirements
4 Carry out preparatory work	4.1 The site is cleaned and marked out 4.2 Drainage structures are pegged out 4.3 Levels are taken and earth works planned
5 Supervise construction of the drainage system	5.1 Trenches are excavated to specification 5.2 Earth works are carried out 5.3 Drainage structures are constructed 5.4 Pipes are laid and joined 5.5 Fittings and valves are fitted and adjusted to the requirements of the installation plan, and all joints are secured according to enterprise guidelines. 5.6 Pumping system is installed and tested
6 Commission the irrigation drainage	6.1 The system is started up 6.2 Operating faults are identified and corrective actions taken

- system to meet design specifications
- 6.3 Testing/monitoring equipment is used to monitor system efficiency
  - 6.4 Adjustments are made as required
- 7 Rehabilitate the works area
- 7.1 Earthworks are resurfaced and sealed
  - 7.2 Vegetation areas are planted and maintained
  - 7.3 Waste and surplus materials are disposed of in an environmentally sound manner

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret irrigation designs
- develop operational procedures
- implement employment procedures
- conduct OHS risk assessment
- supervise workers in:
  - earth moving and construction procedures
  - power and pumping plant installation
  - pump and gated pipe installation
  - construction of canals, channels, head ditches, beds, check structures, tailwater holding ponds
- estimate quantities and volumes of soil to be moved
- document requirements for structures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

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#### Knowledge of:

- measuring and monitoring procedures for factors contributing to drainage system performance

- positive and negative environmental impacts of drainage systems
- water table and salinity measures
- water quality monitoring methods and techniques
- soil moisture measurement procedures
- water authority standards and procedures
- drainage appliances/fixtures/fittings and related
- level and align site
- types and operational parameters of drains
- components used in drainage systems
- isolation processes and procedures
- levelling and alignment processes
- regulatory requirements, codes of practice and relevant enterprise service standards relating to blockage removal, disconnection and reconnection activities
- enterprise policies and procedures
- environmental role of drainage systems
- environmental impacts of drainage systems.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the requirements of the drainage system</li> <li>• implement operational procedures for the projec;</li> <li>• establish and organise resources</li> <li>• supervise on-site construction</li> <li>• commission the drainage system</li> <li>• rehabilitate the site.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Irrigation drainage systems*** may include:

both surface and sub-surface drainage installed to handle water which is excess to plant requirements in an irrigated area.

## Unit Sector(s)

Irrigation

# AHCIRG425A Monitor and control irrigation drainage systems

## Modification History

Not applicable.

## Unit Descriptor

This Unit covers the process of monitoring and controlling the performance and efficiency of an irrigation drainage system and defines the standard required to: identify and correcting system problems; measure, record and report soil moisture, salinity and water table depth; apply measuring and testing techniques; regulate drainage flows and clear blockages; record and report system performance.

## Application of the Unit

This Unit applies to irrigation managers in the amenity horticulture and food and fibre production industries.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Assess <i>irrigation drainage</i> and collection <i>systems</i>	1.1 Measurements are taken with appropriate equipment to determine drainage performance 1.2 Drainage/tail water quality is measured in accordance with OHS and enterprise policy and procedures 1.3 Water table depth is measured where required in accordance with OHS and enterprise policy and procedures 1.4 Soil salinity is measured where required in accordance with OHS and enterprise policy and procedures 1.5 Factors external to the system, which may cause interference, are identified and recorded in accordance with OHS and enterprise policy and procedures 1.6 Drainage system data is analysed and compared to the performance specified in the irrigation drainage plan
2 Regulate flows	2.1 Flow regulating systems are inspected and apply adjustments are applied necessary to achieve discharge requirements specified 2.2 Discharge flows are monitored and diversions applied to facilitate repair or emergency
3 Control and operate <i>drainage system structures</i> and processes	3.1 Processes are controlled to maintain performance specified in the irrigation drainage plan 3.2 Maintenance procedures for drainage system structures are developed and implemented 3.3 Operational conditions of the drainage system are identified, addressed and reported according to organisational requirements 3.4 Processes are integrated to improve drainage network performance
4 Troubleshoot drainage problems	4.1 A visual inspection is undertaken to determine damaged or broken components and results are recorded in accordance with Occupational Health and Safety (OHS) and enterprise policy and procedures 4.2 Areas being drained are inspected for signs of water pooling and problems are recorded in accordance with OHS and enterprise policy and procedures 4.3 Access to drainage lines is obtained to allow blockage to be cleared 4.4 Blockage is cleared or blocked section is replaced according to enterprise, environmental and OHS procedures 4.5 Drainage line is tested to confirm blockage is cleared from pipe system

- 4.6 Drainage line is repaired/resealed to permit normal use
- 4.7 The drainage site is rehabilitated
- 5 Record and report system performance status
  - 5.1 Water quality is recorded in accordance with enterprise procedures
  - 5.2 Water table depth, soil moisture and salinity are recorded in accordance with enterprise procedures
  - 5.3 Strategies that minimise the negative environmental impacts and maximise the positive impacts of the drainage system, are documented

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- identify hazards and implement safe work procedures
- apply soil moisture testing techniques
- calculate water volumes from rate and depth
- measure water table depth, soil moisture and salinity
- clear and refill drainage lines
- isolate drainage lines
- clear blockages from drainage systems
- identify adverse environmental impacts of drainage systems and appropriate remedial action
- use computers for recording and reporting drainage system data
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## Required knowledge includes:

### Knowledge of:

- measuring and monitoring procedures for factors contributing to drainage system performance
- positive and negative environmental impacts of drainage systems
- water table and salinity measures
- water quality monitoring methods and techniques
- soil moisture measurement procedures
- water authority standards and procedures
- enterprise policies and procedures
- environmental role of drainage systems.
- drainage appliances/fixtures/fittings and related
- level and align site
- types and operational parameters of drains
- components used in drainage systems
- isolation processes and procedures
- levelling and alignment processes
- regulatory requirements, codes of practice and relevant enterprise service standards relating to blockage removal, disconnection and reconnection activities
- environmental impacts of drainage systems
- OHS legislative requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify and correcting system problems</li> <li>• measure, record and report soil moisture, salinity and water table depth</li> <li>• apply measuring and testing techniques</li> <li>• regulate drainage flows and clear blockages</li> <li>• record and report system performance.</li> </ul>



Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
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## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Irrigation drainage systems</i></b> may include:</p>	<p>both surface and sub-surface drainage installed to handle water which is excess to plant requirements in an irrigated area.</p>
<p><b><i>Drainage system structures</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• surface drains</li> <li>• culverts</li> <li>• mole drains</li> <li>• sand slit</li> <li>• sub-surface traps</li> <li>• pit and trap systems</li> <li>• dune and swale systems</li> <li>• reed beds</li> <li>• water-recycling pumps and baffles.</li> </ul>

## Unit Sector(s)

Irrigation

## AHCIRG426A Evaluate water supply for irrigation

### Modification History

Not applicable.

### Unit Descriptor

This Unit of Competency specifies the outcomes required to evaluate a water supply for an irrigation operation and defines the standard required to: determine the amount required and quality parameters for irrigation water; carry out water sampling and analyse the results; compare costing and delivery arrangements for alternative water sources; and complete purchasing arrangements.

### Application of the Unit

This Unit applies to irrigation operations managers who are responsible for sourcing irrigation water and analysing its suitability and cost.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Determine water needs for irrigation	1.1 The water needs of plants to be irrigated are determined 1.2 The permeability of the soil and deep drainage losses are calculated 1.3 Evapotranspiration rates are calculated through the growing season 1.4 Soil water deficits throughout the season are calculated based on expected rainfall 1.5 The amount of irrigation water required through the growing season is calculated
2 Assess a <i>water source</i> for water quality	2.1 Water source is tested for electrical conductivity and results analysed 2.2 Water source is tested for ionic composition and results analysed 2.3 Water source is tested for biological composition and results analysed
3 Determine cost and availability of alternative water sources	3.1 Water availability and access requirements are evaluated for water sources 3.2 Capital expenditure requirements are costed for water sources 3.3 Operating expenditure requirements are costed for water sources 3.4 Regulatory requirements for purchasing irrigation water are investigated and incorporated into business planning
4 Complete water sourcing and/or acquisition arrangements	4.1 Contractual arrangements are made for purchase or sourcing of water 4.2 Planning is carried out for short term purchasing or selling of water depending on seasonal conditions if necessary

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- apply basic principles of hydraulics to the selection of irrigation systems, legal access and structures
- take water samples

- analyse results for electrical conductivity and ionic composition of irrigation water
- estimate the irrigation requirements of plants
- calculate water losses in an irrigation system
- compare costs for different water sources
- calculate capital and operating expenditure for a water supply system
- carry out purchasing of water rights.

### Required knowledge includes:

#### Knowledge of:

- plant water requirements in terms of water quality and frequency of supply
- types of irrigation systems
- selection of irrigation systems
- irrigation drainage, seepage, surface and subsurface drainage systems
- salinity and ionic composition impacts on soil structure and plant growth
- conveyance and disposal of drained effluent
- re-use systems, management of irrigation systems
- operations and maintenance requirements.
- water supply potential for the development of irrigation systems
- management planning and operation of water allocations
- water law
- cost benefit analysis
- capital and operating expenditure calculations to source water
- environmental and energy-use implications of resource utilisation and development
- efficiency of irrigation systems and long-term viability
- climatic factors in irrigation development, rainfall, evaporation, evapotranspiration and hydrology
- plant physiology and plant water use, transpiration crop water requirements in terms of water quality and quantity
- soils and water, soil moisture retention and movement, plant root zones and development, infiltration and leaching
- irrigation scheduling, soil moisture measurement.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate	The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and

competency in this Unit	<p>satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the amount required and quality parameters for irrigation water</li> <li>• carry out water sampling and analyse the results</li> <li>• compare costing and delivery arrangements for alternative water sources</li> <li>• complete purchasing arrangements.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Water sources</i></b> may include:	<ul style="list-style-type: none"> <li>• town water</li> <li>• permanent watercourses</li> <li>• storages</li> <li>• underground water</li> <li>• recycled water.</li> </ul>

## Unit Sector(s)

Irrigation

# **AHCIRG427A Plan and supervise on-site irrigation system installation and construction work**

## **Modification History**

Not applicable.

## **Unit Descriptor**

This Unit covers planning and supervising on-site irrigation system installations and construction work and defines the standard required to: identify operational requirements from contract documentation; develop a project plan with tasks, responsibilities, timelines and costs; organise the installation of supplies and equipment; implement and monitor on site operations; test the installation or construction against specifications; and monitor budgets and maintain documentation.

## **Application of the Unit**

This Unit applies to irrigation installation project managers who work in the irrigation servicing, amenity horticulture and food and fibre production industries.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This Unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Appraise contract documentation and determine operational requirements	1.1 Copy of building approval and conditions is obtained as required 1.2 Contract documentation is reviewed for any unusual aspects of construction, use of materials and penalties 1.3 Availability of sub-contractors is ascertained and selected to suit job requirements 1.4 Availability of materials is checked with suppliers 1.5 Site access limitations are assessed 1.6 Relevant authorities controlling construction work advised of commencement date for project as required 1.7 Procedures are developed for site deliveries, plant hire and hazard to the environment
2 Prepare project schedule for <i>irrigation system</i> installation and construction	2.1 Construction operations are prepared in sequence 2.2 Operations are entered into a manually prepared schedule or computer based software package 2.3 'Critical path' is identified and schedule revised with new activities/projects, as needed, and documented 2.4 Timeframe is adjusted to take account of anticipated delays
3 Determine all the required resources for project	3.1 Temporary services and site accommodation is determined as required 3.2 Plant requirements and dates are selected and accessed 3.3 On site labour requirements are determined 3.4 A dilapidation report is made of the condition of existing plant and structures
4 Implement and monitor Occupational Health and Safety (OHS) and risk management procedures	4.1 First aid facilities are established as necessary 4.2 Plant and equipment requiring certificated operators are identified to comply with risk management procedures 4.3 Likely hazards are identified and precautions taken 4.4 Role of Construction Safety Supervisor is identified 4.5 Documentation for safety reporting is instigated
5 Organise the installation of materials and equipment	5.1 Material orders are placed according to appropriate schedule 5.2 Equipment is hired according to planned schedule 5.3 Maintenance procedures are established for equipment
6 Supervise on-site operations	6.1 Operations are implemented according to appropriate schedule and contract 6.2 Sub-contractor operations are co-ordinated and monitored, including all aspects of materials used and standards of workmanship

- 6.3 Problems and delays are addressed as they arise and action recorded
  - 6.4 Industrial relations are monitored continuously and issues resolved to minimise impact on job progress
  - 6.5 Revisions are made to project schedule, when required, and variations documented to comply with quality management procedures
  - 6.6 Quality management procedures are applied continuously as per adopted standards for job
  - 6.7 Safety procedures are monitored continuously, reports analysed and procedures reviewed as required
  - 6.8 Reports on current project status are prepared for management
- 7 Monitor budget and comply with employment requirements
- 7.1 Summary records are prepared for progress claims
  - 7.2 Actual expenditure and earnings are checked against scheduled projected costs
  - 7.3 Employment records are maintained

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- place and check orders for materials
- negotiate start dates and manage resources to minimise delays and down-time
- notify client, authorities and agencies of the schedule of works
- comply with requirements of statutory authorities and agencies
- develop strategies
- schedule project tasks and timelines
- determine resources
- place and check orders for materials
- organise delivery of site accommodation
- organise delivery of plant
- organise delivery of components
- take delivery materials and arrange checks
- arrange connection of temporary services
- organise on-site labour
- analyse contract conditions
- develop a project schedule to:



- administer the contract on site
- supervise construction operations in the most efficient sequence
- monitor the delivery of materials and equipment to meet schedule
- monitor tasks and manage resources to minimise delays and down-time
- monitor project resources, including budget
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- manage contingencies
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- develop and implement relevant enterprise OHS and environmental procedures
- incorporate legislative and enterprise OHS and environmental procedures into planning
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### **Required knowledge includes:**

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#### **Knowledge of:**

- installation and construction processes for on-site irrigation systems
- logical construction sequence for the system
- analysis of the required project resources
- labour hiring requirements and procedures
- communication procedures for on-site labour and authorities
- safety procedures and quality assurance programs
- state legislation and local government requirements for irrigation installation
- on-site contract provisions
- projected costs
- local government regulations
- labour hiring requirements and procedures
- relevant Australian Standards (e.g. AS3500)
- effect of main soil types on approach to excavation work and installation of irrigation components
- environmental impacts of irrigation activities and appropriate remedial/preventative action
- OHS and environmental procedures.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify operational requirements from contract documentation</li> <li>• develop a project plan with tasks, responsibilities, timelines and costs</li> <li>• organise the installation of supplies and equipment</li> <li>• implement and monitor on site operations</li> <li>• test the installation or construction against specifications</li> <li>• monitor budgets and maintain documentation.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Irrigation systems</i></b> may include:	low volume, sprinkler, moving sprinkler, surface or irrigation drainage systems.

## Unit Sector(s)

Irrigation

## AHCIRG428A Provide irrigation sales and service

### Modification History

Not applicable.

### Unit Descriptor

This Unit covers providing advice on irrigation products and services and defines the standard required to: retain technical currency in all aspects of irrigation relevant to the client group; engage with and give advice to customers; ensure that the advice and product/service type are applicable and suitable for the purpose and growing environment of the client; encourage add on sales; conduct retail transactions; represent the enterprise in a professional manner when dealing with customers.

### Application of the Unit

This Unit applies to rural products merchandisers whose job role includes providing advice and making sales in irrigation products and services.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Identify customer needs	1.1 Appropriate interpersonal skills are used to accurately identify customer needs 1.2 Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements 1.3 Available products are matched to customer needs and against ecological considerations 1.4 Knowledge and understanding of irrigation products is actively and regularly researched and updated from authoritative sources
2 Provide advice on products and services	2.1 Advice that addresses customer needs is provided to customers in a timely and professional manner 2.2 Products that may meet customer needs are appropriately exhibited or explained to customer 2.3 Alternative and additional products and services are suggested as necessary 2.4 Customers concerns and questions are addressed sensitively in line with enterprise requirements
3 Recommend irrigation components and pumps	3.1 Irrigation design is interpreted 3.2 Pump and component requirements are established and discussed with customer 3.3 Advice is provided on irrigation pumps that is based on suitability for the task, energy efficiency from pump curves and serviceability 3.4 Advice on components is provided based on technically correct and current information
4 Research irrigation innovations and products	4.1 Contacts in irrigation product development are maintained and review of new products is conducted 4.2 Exhibitions and field displays are studied to update technical expertise 4.3 Technical information and extension advice is read and incorporated into advice to customers and clients
5 Conduct retail transactions with irrigation clients	5.1 Quantities for irrigation installation projects are estimated 5.2 Quotes on products and services are provided 5.3 Price and payment options are negotiated 5.4 Advice on irrigation product warranties is provided 5.5 Advice on and arrange product service and repairs is provided 5.6 Delivery of irrigation merchandise is arranged

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- provide customer service
- conduct research of products
- interpret irrigation plans
- estimate requirements for materials and components from a plan
- interpret pump curves
- calculate pumping requirements
- select irrigation components for a system
- calculate pressure loss due to irrigation components
- pressure test pumps
- monitor performance of pumps and irrigation components
- use pressure testing equipment
- use recorded information to review energy and water efficiency for an irrigation system
- identify adverse environmental impacts of irrigation pumping activities and appropriate remedial action
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge includes:****Knowledge of:**

- store irrigation products and pump range
- interpretation of manufacturers specifications
- price negotiation and payment options
- store product and service and repair policy
- pump and irrigation equipment characteristics, technical capabilities and limitations
- pump and irrigation equipment components, controls, features and functions
- determination of pump capacities in relation to proposed application
- irrigation components technical specifications and suitability
- demonstration and assembly of irrigation products and components
- basic diagnostic techniques
- Occupational Health and Safety (OHS) legislation and industry requirements
- Environmental legislation and industry requirements.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• retain technical currency in all aspects of irrigation relevant to the client group</li> <li>• engage with and give advice to customers</li> <li>• ensure that the advice and product/service type are applicable and suitable for the purpose and growing environment of the client</li> <li>• encourage add on sales</li> <li>• conduct retail transactions</li> <li>• represent the retailer in a professional manner when dealing with customers.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

	enterprise circumstances.
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## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Irrigation products may include:	any products used in the irrigation sector covering low volume, sprinkler, moving sprinkler and surface irrigation systems.
Irrigation services may include:	any services associated with the installation, construction, maintenance or repair of irrigation infrastructure and equipment.

## Unit Sector(s)

Irrigation



## AHCIRG501A Audit irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of collating and assessing system performance data, and compiling a system evaluation report including recommendations for improvements and defines the standard required to: compile data to compare the performance of the system with benchmarks; solve performance problems and recommend solutions; identify adverse impacts of irrigation system activities on the natural resource base of the irrigated area; identify environmental impacts of irrigation on the lower catchment; and use computer software for irrigation auditing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to irrigation system auditors.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collect and collate all available data	1.1.Data on system performance is collated. 1.2.Data on environmental and Occupational Health and Safety (OHS) issues is collated. 1.3.Data on equipment supply and usage is collated. 1.4.Data on crop production is collated. 1.5.Data on water use and quality is collated. 1.6.Data on climatic trends is collated. 1.7.Data on physical and chemical properties of soil is collated.
2. Assess actual data against benchmarks, specifications and predictions	2.1.System performance is compared to system specifications and performance predictions. 2.2.Supply and stock use is compared to previous and estimated usage and costs. 2.3.Crop production is compared to previous and predicted production. 2.4.Water usage and quality is compared to past and predicted usage and quality. 2.5.Climatic information is compared to predicted trends. 2.6.Soil properties are compared to previous and predicted properties. 2.7.Production costs related to irrigation system are compared to previous and predicted costs. 2.8.Net profits are compared to past and predicted profits.
3. Compile a report of	3.1.Report includes discussion of results of data

ELEMENT	PERFORMANCE CRITERIA
system evaluation	analysis. 3.2. Indicators of good performance are isolated and discussed. 3.3. Indicators of poor performance are isolated and discussed. 3.4. Causes of deviations from performance specifications and requirements are examined. 3.5. Conclusions about irrigation system performance in relation to crop production and business performance are clearly stated. 3.6. Conclusions are supported by the data.
4. Recommend alterations to irrigation system to achieve performance improvement	4.1. Recommendations are made to modify or eliminate causes of poor performance, or to enhance current performance.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse and organise data
- solve performance problems and recommend solutions
- identify adverse environmental impacts of irrigation system activities and recommend appropriate remedial action
- use computer software for irrigation auditing
- recommend relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• evaluation procedures</li> <li>• irrigation system performance indicators</li> <li>• statistical data analysis procedures or software</li> <li>• environmental impacts of irrigation systems using water from any ground or underground source</li> <li>• relevant enterprise OHS legislation, codes of practice and enterprise requirements.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• compile data to compare the performance of the system with benchmarks</li> <li>• solve performance problems and recommend solutions</li> <li>• identify adverse impacts of irrigation system activities on the natural resource base of the irrigated area</li> <li>• identify environmental impacts of irrigation on the lower catchment</li> <li>• use computer software for irrigation auditing.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Irrigation systems may include:	<ul style="list-style-type: none"> <li>• pressurised irrigation systems such as micro-irrigation systems</li> <li>• spray irrigation systems</li> <li>• gravity fed irrigation systems.</li> </ul>
Irrigation systems may range from:	<ul style="list-style-type: none"> <li>• manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>
Benchmarks for audit may include:	<ul style="list-style-type: none"> <li>• statistics and records from industry sources</li> <li>• records/reports from other farms in the region (comparative analysis)</li> <li>• meteorological records and reports</li> <li>• reports from Regulatory Authorities.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCIRG502A Design irrigation system maintenance and monitoring programs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of designing irrigation system maintenance and monitoring programs and defines the standard required to: identify irrigation system monitoring and maintenance requirements; determine the resources required for irrigation system maintenance; design a maintenance program for an irrigation system; develop procedures for scheduling and monitoring an irrigation system to achieve required performance; and develop contingency plans for the irrigation system for periods of restricted water supply.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to irrigation managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Design an irrigation system maintenance program	<p>1.1.Resources needed to perform maintenance tasks are specified in the program outline.</p> <p>1.2.Repairs, replacements and servicing requirements for all equipment and machinery are specified in the program outline.</p> <p>1.3.Activities required to maintain the irrigation site, system hardware and water quality are specified according to enterprise needs.</p> <p>1.4.Manufacturer's operating manuals are obtained and used as guidance to specify maintenance activities, schedule and skills required.</p> <p>1.5.Timing and frequency of maintenance activities are scheduled to co-ordinate with other enterprise activities.</p> <p>1.6.System maintenance program activities relate to water supply authority constraints and requirements for water and maintenance.</p> <p>1.7.Labour and Occupational Health and Safety (OHS) requirements for each activity are determined and recorded in the system maintenance program.</p> <p>1.8.Weed control, water storage and treatment maintenance form an integral part of the system maintenance program.</p> <p>1.9.Strategies are specified in the program to ensure that negative impacts of irrigation, drainage and water treatment systems are minimised, and positive</p>



ELEMENT	PERFORMANCE CRITERIA
	impacts are maximised.
2. Design a monitoring and scheduling program	2.1.Procedures for monitoring and recording system hardware use and performance are included in the monitoring and scheduling program. 2.2.Procedures for scheduling, monitoring and recording water use form an integral part of the monitoring and scheduling program. 2.3.Procedures for monitoring and recording operating costs are included in the program. 2.4.Contingency plans in the event of water restrictions being imposed are developed for inclusion in the monitoring and scheduling program.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse and organise information
- identify and schedule activities
- design scheduling and recording procedures
- identify adverse environmental impacts of irrigation, drainage and water treatment activities and appropriate remedial action
- develop and include relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- maintenance and monitoring design requirements

**REQUIRED SKILLS AND KNOWLEDGE**

- irrigation, drainage and water treatment maintenance activities
- water supply authority constraints
- water quality guidelines for fresh and marine water (e.g. ANZECC 1999)
- environmental impacts of irrigation
- drainage and water treatment using water from any ground or underground source
- OHS and environmental protection legislation, codes of practice and enterprise requirements for monitoring and maintenance programs.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify irrigation system monitoring and maintenance requirements
- determine the resources required for irrigation system maintenance
- design a maintenance program for an irrigation system
- develop procedures for scheduling and monitoring an irrigation system to achieve required performance
- develop contingency plans for the irrigation system for periods of restricted water supply.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Irrigation systems may include:	<ul style="list-style-type: none"> <li>• pressurised irrigation systems such as:             <ul style="list-style-type: none"> <li>• micro-irrigation systems</li> <li>• spray irrigation systems</li> <li>• gravity fed irrigation systems.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCIRG503A Design irrigation, drainage and water treatment systems

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the designing of irrigation, draining and water treatment systems and defines the standard required to: identify design requirements for drainage and water treatment; determine specifications for suitable pumping and power systems; design distribution, drainage, storage and treatment systems; design water transfer, recharge, reuse and harvesting systems to conserve natural resources and; assess the environmental impacts of the irrigation system to ensure it will comply with environmental protection agency regulations.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to those who design irrigation, drainage and/or water treatment systems with advice from technical advisers.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine design requirements	<p>1.1. Water is predicted to be available in sufficient quantity and quality for the particular crop or situation at the time it is needed by the enterprise.</p> <p>1.2. Water transfer, recharge, reuse and harvesting systems are designed to conserve natural resources.</p> <p>1.3. The process of collecting or storing water does not degrade the water quality for the enterprise or the environment.</p> <p>1.4. Construction specifications define the work required to make suitable water available to the enterprise in accordance with environmental and Occupational Health and Safety (OHS) requirements.</p> <p>1.5. Environmentally sensitive areas are identified and protected according to local, State and National legislation.</p> <p>1.6. Design calculations and decisions are documented to enterprise requirements.</p>
2. Define pumping and power systems	<p>2.1. Pumps are selected to deliver water efficiently when needed, from the water storage at the flow and pressure required to operate the distribution system to the design specifications.</p> <p>2.2. The pump motor combinations are efficient and the pumps are reliable, functional, serviceable and flexible for the intended application.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Energy requirements are determined, and layout of electricity lines are determined and checked with local authority.</p> <p>2.4. The relationship between capital and operational costs are optimised including a comparison of energy sources.</p> <p>2.5. Structures, valves and accessories are selected and integrated into a functional system that can be monitored and maintained according to enterprise guidelines.</p> <p>2.6. Performance indicators, design calculations and decisions are documented according to enterprise guidelines.</p> <p>2.7. Construction specifications define work required to make suitable pumping and power system available to enterprise.</p> <p>2.8. Power supply design specification is checked with power authorities.</p>
3. Design an irrigation distribution system	<p>3.1. Detailed topographic survey is conducted or an accurate map is obtained showing extent of irrigation, planting layout, physical constraints and contours with suitable interval.</p> <p>3.2. Detailed soil survey is conducted at suitable intervals and mapped to show variation in readily available water.</p> <p>3.3. Water budgets are determined having regard to the evapotranspiration state of the crop/plants, soil moisture characteristics and cultural practices.</p> <p>3.4. Distribution systems are evaluated and designed with respect to a range of key variables.</p> <p>3.5. Pipes, valves and fittings are sized according to design system specifications so that capital cost is balanced against operation costs over the anticipated system life.</p> <p>3.6. Flows, water levels and pressures are calculated and documented to be within the acceptable tolerances for optimum performance.</p> <p>3.7. Flows, water levels and pressures are achievable by the pumps operating at optimum efficiency and according to enterprise standards.</p> <p>3.8. Mechanisms for controlling and adjusting pressure are included, and isolation valves direct water to areas with different irrigation schedules.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.9. Channel systems and attendant structures are designed according to industry recommendations, and channel flow velocities are calculated according to enterprise standards.</p> <p>3.10. Soil types have been compared for erodeability and suitable fill has been selected for construction according to enterprise standards.</p> <p>3.11. Construction plans and specifications define work required to achieve the required standards of uniformity and efficiency of water application according to industry standards</p>
4. Design a drainage, storage and treatment system	<p>4.1. Regional geology and geography is investigated to predict sustainability of irrigation and storage.</p> <p>4.2. Site investigations to assess depth of clay, depth of ground water, soil and water salinity, and structural or chemical impediments are used to determine the most cost effective storage system.</p> <p>4.3. Predictions of leaching fractions and salt movements are documented, and soil amelioration and drainage management plans are developed.</p> <p>4.4. The need for leachate interception and dewatering system is determined, and if required, construction specification prepared for interception and collection, water treatment, disposal, and reuse or recycle.</p> <p>4.5. Drains and structures are capable of carrying the design water volumes and intensities according to enterprise standards.</p> <p>4.6. Damage from water logging is minimised according to enterprise standards.</p> <p>4.7. Hydrological calculations predict volumes and rates of surface run-off according to enterprise standards.</p>
5. Determine capital expense budget	<p>5.1. Design calculations and decisions are documented and relevant information is communicated clearly through plans, specifications and manuals.</p> <p>5.2. Design output is checked by a competent designer against enterprise objectives.</p> <p>5.3. Materials requirements are determined and documented from plans and specifications.</p> <p>5.4. Labour requirements are estimated, based upon documented work schedule with reasonable allowance for variances in work schedules.</p> <p>5.5. Costing attributed to each component is based upon quoted information from suppliers, or sound analysis</p>

ELEMENT	PERFORMANCE CRITERIA
	of individual elements.
6. Determine operating expense budget	6.1. Operating expense budget indicates all expenses applicable to the completed irrigation system.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collect and analyse information
- identify adverse environmental impacts of irrigation, drainage and water treatment activities and appropriate remedial action
- identify design requirements
- develop specifications
- compare costings
- develop budgets
- document outcomes
- develop and implement relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- design processes
- developments in irrigation technology
- drainage and storage development technology
- latest treatment technology
- automatic control and monitoring systems
- waste management and environmental issues
- budgeting



**REQUIRED SKILLS AND KNOWLEDGE**

- contractual development and obligations
- environmental protection agency regulations
- environmental impacts of irrigation, drainage and water treatment using water from any ground or underground source
- cost/benefit analysis
- OHS and environmental protection legislation, codes of practice and enterprise policies and procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify design requirements for drainage and water treatment
- determine specifications for suitable pumping and power systems
- design distribution, drainage, storage and treatment systems
- design water transfer, recharge, reuse and harvesting systems to conserve natural resources
- assess the environmental impacts of the irrigation system to ensure it will comply with environmental protection agency regulations.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Reuse systems may include:	<ul style="list-style-type: none"> <li>• dis-infestation and filtering equipment.</li> </ul>
Irrigation distribution systems covered by this standard are:	<ul style="list-style-type: none"> <li>• micro-irrigation systems</li> <li>• spray irrigation systems</li> <li>• surface irrigation systems</li> <li>• basin irrigation.</li> </ul>
Systems may range from:	<ul style="list-style-type: none"> <li>• manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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# AHCIRG504A Develop an irrigation and drainage management plan

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of compiling information on a property, and using this information to develop an Irrigation and Drainage Management Plan (IDMP) with specifications for a new or up-graded irrigation and drainage system where this is needed and defines the standard required to: compile and analyse information on property background, infrastructure, topography and natural resources, and land use; compile details of current irrigation and drainage system design and performance; determine performance requirements for distribution, treatment and drainage systems; incorporate specifications for a new or up-graded irrigation and drainage system into the; irrigation and drainage management plan.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to irrigation managers including farmers and applies to the process of compiling information on a property, and using this information to develop an IDMP with specifications for a new or up-graded irrigation and drainage system where this is needed.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Compile property background information	1.1. Ownership details are described. 1.2. Irrigation history is described. 1.3. Locality and property details are described. 1.4. Agreements and easements with surrounding properties are identified. 1.5. Property maps are developed to illustrate locality and property boundaries.
2. Compile information on infrastructure and topography	2.1. Significant topographical and infrastructure features are described. 2.2. Opportunities and strengths of the property are identified. 2.3. Limitations and weaknesses of the property are identified. 2.4. Local planning issues that may affect the irrigation development are identified. 2.5. Map overlay to illustrate topography and

ELEMENT	PERFORMANCE CRITERIA
	infrastructure is developed.
3. Compile information on natural resources	3.1. Soil survey information is described. 3.2. Strategies to minimise and reduce soil erosion, and physical and chemical soil deterioration are identified. 3.3. Water sources availability and qualities are described. 3.4. Ground water depth and salinity issues are identified. 3.5. Climatic characteristics are described. 3.6. Map overlay to illustrate natural resource features is developed.
4. Compile information on enterprise cropping and planting	4.1. Suitability of soils and water quality for enterprise crops/plans is described. 4.2. Special irrigation requirements of crops/plants are identified. 4.3. Monthly and annual water budgets for each crop/plant program are developed. 4.4. Current yields are identified and compared with benchmark crop yields. 4.5. Targets are established with consideration for any factors which would limit optimum production. 4.6. Intended crop rotations are described. 4.7. Map overlay to illustrate crop and plant details is developed.
5. Compile information on existing irrigation and drainage system where used	5.1. Evaluation of current system performance is described. 5.2. Current system performance is compared to benchmark performance parameters. 5.3. Scheduling procedures are described. 5.4. Drainage management performance is described including environmental authority compliance issues. 5.5. Areas for improvement in system management and/or structure are identified. 5.6. Map overlay to illustrate irrigation system layout is developed.
6. Develop an irrigation and drainage management plan with specifications for new or up-graded irrigation and	6.1. Performance requirements for distribution, treatment and drainage systems are summarised. 6.2. New or replacement components are listed. 6.3. Development timetable is developed. 6.4. Proposed scheduling system is described.

ELEMENT	PERFORMANCE CRITERIA
drainage system	<p>6.5. Performance monitoring procedures and Occupational Health and Safety (OHS) requirements are described.</p> <p>6.6. Drainage management processes are described.</p> <p>6.7. Map overlay is developed to illustrate proposed irrigation and drainage development.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- compile and analyse complex information
- interpret statistical data and measurements
- identify adverse environmental impacts of irrigation system activities and recommend appropriate remedial action
- develop plans and reports
- use a range of irrigation and information management software
- develop and implement relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- measuring and monitoring procedures
- soil/plant/water relationships
- readily available water
- water table and salinity
- methods and techniques of irrigation
- irrigation system options

**REQUIRED SKILLS AND KNOWLEDGE**

- computerised irrigation systems
- environmental impacts of irrigation systems using water from any ground or underground source
- enterprise policies and procedures
- relevant enterprise OHS procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- compile and analyse information on property background, infrastructure, topography and natural resources, and land use
- compile details of current irrigation and drainage system design and performance
- determine performance requirements for distribution, treatment and drainage systems
- incorporate specifications for a new or up-graded irrigation and drainage system into the
- irrigation and drainage management plan.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Irrigation distribution systems may include:	<ul style="list-style-type: none"> <li>• micro-irrigation systems</li> <li>• spray irrigation systems</li> <li>• surface irrigation systems</li> <li>• basin irrigation.</li> </ul>
Irrigation systems may range from:	<ul style="list-style-type: none"> <li>• manual operation and monitoring to fully automated with computer control and monitoring.</li> </ul>

## Unit Sector(s)

Unit sector	Irrigation
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## Co-requisite units

Co-requisite units	

## Competency field

Competency field	
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## AHCIRG505A Establish and maintain an irrigation-related environmental protection program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers establishing and maintain an irrigation-related environmental protection program and defines the standard required to: establish and maintain environmental records; identify and assess existing and potential risks to the environment arising from irrigation practices and related activities; monitor risks to, and impacts on, the environment from irrigation; develop an induction and training program to support environmental protection policies and practices; develop an irrigation and drainage environmental plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes determining actions to reduce the impacts of irrigation and drainage systems on the environment, to minimise the risk of environmental pollution and reduce the impact of such events when they occur.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish and maintain an irrigation and drainage environmental protection program	<p>1.1. An irrigation and drainage environmental plan is developed in consultation with property owner or manager.</p> <p>1.2. Environmental responsibilities for the property are clearly defined and included in the duties of all personnel.</p> <p>1.3. Financial and human resources are made available to implement the environmental plan in a timely and consistent manner.</p> <p>1.4. Environmental records are established and maintained according to relevant codes of practice, legislation and regulations.</p>
2. Establish and maintain arrangements to ensure the involvement of all personnel in the environmental program	<p>2.1. Procedures and processes that allow and encourage all personnel at all levels to have input into environmental issues are developed.</p> <p>2.2. Issues raised through involvement and consultation with personnel are addressed promptly.</p>

ELEMENT	PERFORMANCE CRITERIA
<p>3. Establish and maintain risk management procedures to protect the environment from irrigation practices and related activities</p>	<p>3.1. Procedures for identifying and assessing existing and potential risks to the environment arising from irrigation practices and related activities are established and maintained according to relevant environmental standards.</p> <p>3.2. Work processes and procedures are designed to reduce or eliminate risks and hazards to the environment.</p> <p>3.3. Organisational and administrative systems are established and maintained to control risks to the environment arising from irrigation practices and related activities.</p> <p>3.4. Procedures to monitor risks to the environment and compliance with relevant legislation and regulations are established and maintained.</p>
<p>4. Establish and maintain procedures for responding to environmental pollution events</p>	<p>4.1. Potential environmental pollution events are identified.</p> <p>4.2. Procedures to control the level of risk associated with pollution events are developed in consultation with relevant environmental protection agencies and local government authorities.</p> <p>4.3. Appropriate information and training is provided to enterprise personnel to ensure prompt implementation of response procedures according to organisational and OHS requirements.</p>
<p>5. Establish and maintain an environmental protection induction and training program</p>	<p>5.1. An environmental protection induction and training program is developed and incorporated into the organisational personnel training program to ensure compliance with relevant legislation and regulations is maintained.</p> <p>5.2. Records of environmental protection training are established and maintained according to enterprise standards.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- develop policies and procedures
- apply and comply with environmental requirements
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- use technology to draft documents, develop environmental information, and audit data bases
- audit data bases
- develop and implement relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- environmental impacts of irrigation, using water from any ground or underground source
- environmental planning for irrigation and drainage
- external factors that may effect the system
- relevant OHS and environmental protection legislation, codes of practice and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish and maintain environmental records</li> <li>• identify and assess existing and potential risks to the environment arising from irrigation practices and related activities</li> <li>• monitor risks to, and impacts on, the environment from irrigation</li> <li>• develop an induction and training program to support environmental protection policies and practices</li> <li>• develop an irrigation and drainage environmental plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Irrigation systems may include:	<ul style="list-style-type: none"> <li>• pressurised or gravity fed irrigation systems.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Irrigation
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLPW301A Supervise park visitor activities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of giving of advice and supervising public access and activities within a park or reserve and defines the standard required to: open and close park/ advise public on park/reserve access and activities; provide information safety requirements; interpret legislation and public health requirements; monitor visitor activities; evaluate appropriate situations to enforce regulations; act on non-compliance activities; report incidents.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of supervising park visitor activities and requires the ability to work effectively within own area of responsibility. It requires knowledge of the local environment and potential hazards, limits to personal and legal authority, public relations, cultural diversity and managing conflict.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Open and close park/reserve	<p>1.1.Park/reserve is opened and closed as scheduled in accordance with enterprise procedures.</p> <p>1.2.Security systems are operated in accordance with manufacturer's guidelines and enterprise procedures.</p> <p>1.3.Public is informed of opening and closing times in accordance with enterprise procedures.</p> <p>1.4.Non-compliance with park/reserve access conditions is acted upon in accordance with enterprise procedures.</p>
2. Advise public on park/reserve access and activities	<p>2.1.Public is communicated with in a courteous, confident and effective manner appropriate to their background.</p> <p>2.2.Public is informed of responsibilities and safety requirements when using park facilities in accordance with enterprise procedures, legislative and public health and safety requirements.</p> <p>2.3.Public is informed of changes to access rights to park facilities when these have been affected by changes to environmental conditions in accordance with enterprise procedures and public health and safety requirements.</p>
3. Monitor visitor activities	<p>3.1.Non-compliance with park/reserve access conditions is acted upon in accordance with enterprise procedures.</p>



ELEMENT	PERFORMANCE CRITERIA
	3.2. Incidents are reported and responded to in accordance with enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- open and close park/reserve
- advise public on park/reserve access and activities
- provide information on safety requirements
- interpret legislation and public health requirements
- monitor visitor activities
- evaluate appropriate situations to enforce regulations
- assert authority and act on non-compliance activities
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- local environment, environmental hazards
- understand limits to personal and legal authority
- public relations, crowd behaviour, implications on cultural diversity
- enterprise procedures, OHS and legislative requirements
- enterprise security systems and communication equipment
- interpersonal skills and relating to different cultural groups
- instructions/guidelines and regulations and maps.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• open and close park/reserve</li> <li>• advise public on park/reserve access and activities</li> <li>• provide information on safety requirements</li> <li>• interpret legislation and public health requirements</li> <li>• monitor visitor activities</li> <li>• evaluate appropriate situations to enforce regulations</li> <li>• act on non-compliance activities</li> <li>• report incidents.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Activities may include:	<ul style="list-style-type: none"> <li>• working policies</li> <li>• Standard Operating Procedures</li> <li>• visitor protocols of the park or reserve.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLPW303A Construct access tracks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of constructing access tracks and clearing vegetation on rural land and defines the standard required to: determine control points; required grades, and water crossing points and structures from field observations; construct tracks utilising industry endorsed earthworks methods and patterns for specific machines; excavate; transport; dump and compact road material; finish track surface; clean worksite.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in land management who are required to implement erosion control principles and apply specialised earthmoving techniques to fine tolerances. Work is often carried out in varied conditions and landscapes, which requires operators to develop skills that are unique to this sector.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for construction of access track	<ul style="list-style-type: none"> <li>1.1. Equipment and attachments are matched to programmed tasks and terrain scheduled on site.</li> <li>1.2. Work readiness of selected equipment is verified in line with contractor policy.</li> <li>1.3. Construction details and sequence are confirmed from supervisor.</li> <li>1.4. Survey pegs and site indicators are identified and located on work site.</li> <li>1.5. Compliance with relevant regulatory planning and environmental legislation are confirmed.</li> <li>1.6. Organisational occupational health&amp;safety procedures, practices policies, and precautions are observed and followed.</li> <li>1.7. Site environmental concerns are adhered to in accordance with relevant national, state, and local legislation and/or regulations.</li> <li>1.8. Determine control points, required grades, and water crossing points and structures from field observations and any available additional information.</li> <li>1.9. Any permits or licences required for the construction are identified, sought and obtained.</li> <li>1.10. People, materials and equipment required for the construction are coordinated and scheduled in accordance with organisation guidelines.</li> </ul>

ELEMENT	PERFORMANCE CRITERIA
2. Form access track	<p>2.1. Industry endorsed earthworks methods and patterns for specific machines are utilised during construction.</p> <p>2.2. Optimum machine loads are monitored and maintained to suit prevailing conditions.</p> <p>2.3. Safe machine operating techniques and procedures are deployed to match terrain, site conditions and other operators or workers.</p> <p>2.4. Excavation, transport, dumping and compaction of material is completed in line with job sequence and endorsed industry practices.</p> <p>2.5. Vegetation is cleared according to enterprise guidelines and industry best practice.</p> <p>2.6. Neighbouring landholders, local authorities and interest groups are liaised with during the construction activity in according to enterprise guidelines and industry best practice.</p> <p>2.7. Documentation required by organisation and/or occupational health&amp;safety guidelines, is completed clearly and accurately.</p> <p>2.8. Operational staff, clients and contractors are communicated with regularly throughout the construction activity to ensure smooth operation and progress.</p>
3. Apply final finish to track	<p>3.1. Endorsed industry methods are utilised to surfaces to achieve job requirements.</p> <p>3.2. Site features and vegetation are retained in line with works plan/schedule.</p> <p>3.3. Site is cleared and debris removed in line with contractor policy.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare for access track construction
- liaise with stakeholders

## REQUIRED SKILLS AND KNOWLEDGE

- determine control points, required grades, and water crossing points and structures from field observations
- operate appropriate machinery
- form access tracks
- apply final finish techniques to surfaces
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- erosion and sediment control standards and principles
- provisions of the relevant wild life, environmental, planning, ground water legislation
- safety
- erosion control and design principles
- soils and soil formation
- levels and levelling
- earthmoving principles
- principles for machine operation
- total catchment issues
- legal issues
- environmental issues
- country code
- managing peak water flows
- subsurface and surface drainage principles and systems.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Competence requires evidence that access tracks have been appropriately constructed according to enterprise guidelines, relevant legislation and industry best practice. The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select and prepare equipment</li> <li>• determine control points, required grades, and water crossing points and structures from field observations</li> <li>• construct tracks utilising industry endorsed earthworks methods and</li> <li>• patterns for specific machines</li> <li>• excavate, transport, dump and compact road material</li> <li>• finish track surface and clean worksite.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Machinery and activities may include:	<ul style="list-style-type: none"> <li>• all machinery, equipment and processes used in the construction of access tracks and clearing of vegetation.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLPW304A Carry out inspection of designated area

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of carrying out inspection of designated area and defines the standard required to: define the scope and criteria on which to base inspection; define the hazards and risks to Occupational Health and Safety (OHS) and the environment associated with the inspection; conduct inspections; complying with statutory requirements and enterprise protocols for entry to private property; establish environmental impacts caused by the presence of the target; document the inspection and recommend follow up actions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to carrying out an inspection of designated areas and is likely to be under limited supervision with checking related to overall progress. Responsibility for the work of others may be involved.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Define area and target of inspection	<p>1.1. Location and size of area to be inspected identified consistent with management strategy and/or supervisor's instructions.</p> <p>1.2. Frequency of inspection set according to management strategy.</p> <p>1.3. Targets of inspection determined from Management Strategy.</p> <p>1.4. Characteristics and favoured conditions for targets confirmed with management.</p>
2. Carry out Risk Assessment and minimisation	<p>2.1. Time and duration of inspection checked and relevant personnel notified.</p> <p>2.2. Risks to the environment associated with the inspection are identified in accordance with statutory and local authority requirements.</p> <p>2.3. Precautions to minimise environmental risks associated with the inspection are taken in line with statutory and local authority standards.</p> <p>2.4. Hazards associated with the inspection are identified in accordance with OHS standards.</p> <p>2.5. Precautions to minimise hazards are taken in accordance with OHS standards.</p>
3. Prepare for inspection	<p>3.1. Vehicles, equipment and materials required for the inspection are identified.</p> <p>3.2. Vehicles, equipment and materials are checked for</p>

ELEMENT	PERFORMANCE CRITERIA
	serviceability following manufacturer's guidelines.
4. Carry out inspection	<p>4.1. Vehicles are operated and driven within statutory requirements and industry practice.</p> <p>4.2. Inspection is carried out within the specified area and following the requirements of the integrated pest management strategy.</p> <p>4.3. Target occurrence is identified and recorded as required by the management strategy and enterprise practice.</p> <p>4.4. Statutory requirements and enterprise protocols regarding entering private property are fulfilled where appropriate.</p> <p>4.5. Dealings with landholders or their employees follow regulatory requirements and enterprise procedures.</p> <p>4.6. Precautions to minimise risks to the environment are implemented in accordance with statutory and local authority requirements.</p> <p>4.7. Precautions to minimise hazards are implemented in accordance with OHS standards.</p> <p>4.8. Incursions of non-targeted threats are noted and reported on.</p>
5. Establish the impact of the specified target	<p>5.1. Information on potential impacts is collected from stakeholders.</p> <p>5.2. Data on environmental hazards resulting from target presence are collected and analysed from stakeholders or available information.</p>
6. Prepare a report	<p>6.1. Collated data, inspection records and analysis of findings are documented with appropriate recommendations in accordance with enterprise guidelines.</p> <p>6.2. Targets reported as required by legislation, regulation or enterprise guidelines.</p> <p>6.3. Report submitted to supervisor or other authority.</p> <p>6.4. Samples submitted in compliance with legislative requirements, regulations or enterprise guidelines.</p> <p>6.5. Equipment and materials are cleaned and stored following industry standards or enterprise practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- define area and target of inspection
- carry out risk assessment and minimisation
- prepare for inspection
- carry out inspection
- identify targets and level of impact on site
- implement control measures
- monitor control methods
- clean and store equipment and materials following inspection
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- recognition and classification of local plant and animal species
- use of simple taxonomic or identification keys
- risk management
- characteristics of inspection targets
- inspection procedures and techniques
- monitoring techniques
- reporting protocols
- map reading
- relevant land use processes
- relevant legislative and regulatory requirements including environmental protection legislation.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• define the scope and criteria on which to base inspection</li> <li>• define the hazards and risks to OHS and the environment associated with the inspection</li> <li>• conduct inspections, complying with statutory requirements and enterprise protocols for entry to private property</li> <li>• establish environmental impacts caused by the presence of the target</li> <li>• document the inspection and recommend follow up actions.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Designated areas may include:	<ul style="list-style-type: none"> <li>• covers a range of designated areas such as farms, parks, reserves, and roadsides.</li> </ul>
Inspections may include:	<ul style="list-style-type: none"> <li>• plant and animal species and communities</li> <li>• threatened or endangered species</li> <li>• notifiable or noxious pests or animals</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• species not previously identified in the region</li> <li>• weeds or animals which may present a high risk and fire risks and threats.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Lands, parks and wildlife
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLPW305A Perform diving for scientific purposes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of scientific diving required to support scientific research, monitoring and inspection roles associated with places or areas of significance and defines the standard required to: plan to carry out a dive; prepare to dive; carry out pre-dive checks; monitor dive conditions; respond to incidents and amend dive procedures if necessary; debrief dive team; store diving equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires knowledge of the physics of diving, node compression tables, dive equipment and planning, emergency procedures, agency standing orders for notification, and radio operation procedures. This standard requires compliance with the current Australian Standard for Occupational Diving Operations: Scientific Diving.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan diving operations	<p>1.1.Objectives of dive are determined to enterprise guidelines, to diving standards and occupational health and safety guidelines.</p> <p>1.2.Number and type of dives to complete objectives are assessed to develop a dive program.</p> <p>1.3.Equipment and personnel required for dive operations are determined.</p> <p>1.4.Appropriate people are consulted about the dive objectives and proposed program.</p>
2. Prepare for diving operations	<p>2.1.Equipment and personnel required for dive operations are obtained.</p> <p>2.2.Appropriate notification and consents for dive plans are given and obtained.</p> <p>2.3.Equipment condition is checked to legislative, manufacturers', enterprise and code of practice requirements.</p> <p>2.4.Faulty equipment is sent for repair or discarded.</p> <p>2.5.Consumables requirements are assessed and sourced.</p> <p>2.6.Personnel are checked for competence and possession of a current medical clearance.</p> <p>2.7.Safety and emergency procedures for the dive program are developed to enterprise requirements and codes of practice.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Conduct dive	<p>3.1. Personnel and equipment are transported safely to dive site.</p> <p>3.2. Communications procedures are established for dives in remote areas.</p> <p>3.3. Pre-dive checks are performed to enterprise requirements and codes of practice.</p> <p>3.4. Final assessment on environmental factors is completed before entering the water.</p> <p>3.5. Dives are completed to procedures, safe working practices, defined objectives, enterprise requirements, codes of practice, legislation.</p> <p>3.6. Dives are conducted within the parameters of the special dive plan, including entry, descent, working on dive objective and exit.</p> <p>3.7. Dive procedures are amended within enterprise requirements, codes of practice and personal authority in light of dive conditions, and any changes to dive objectives.</p> <p>3.8. Dives are suspended or cancelled where safety or equipment operation considerations warrant.</p> <p>3.9. Dives are completed to objectives or suspended where personnel have completed allowed number of dives.</p> <p>3.10. Equipment is removed from site at completion of dives.</p> <p>3.11. Dives are logged to enterprise and legislative requirements and codes of practice.</p>
4. Debrief diving team	<p>4.1. Procedures applied during dive and outcomes of dive are reviewed by dive team promptly after dive.</p> <p>4.2. Procedures and dive plans are amended to enterprise requirements or codes of practice to reduce dive risks including safety and diver health, and improve dive efficiency and effectiveness.</p> <p>4.3. Dive debriefing is recorded to enterprise and legislative requirements and codes of practice.</p>
5. Check and store equipment	<p>5.1. Dive equipment is checked for condition and operation to manufacturer's instructions, enterprise requirements and codes of practice.</p> <p>5.2. Faulty equipment is sent for repair or discarded to enterprise requirements.</p> <p>5.3. Equipment is stored to manufacturers' and enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	5.4. Equipment use is recorded to enterprise, manufacturers' and legislative requirements. 5.5. All equipment is tested according to statutory requirements.
6. Review diving program	6.1. Dive plan is reviewed in light of debriefing, outcomes achieved, risk assessments and safety analysis, and future requirements. 6.2. Review conclusions are recorded and reported to enterprise requirements.
7. Respond to diving incidents	7.1. Dive operations are continually monitored to identify potential or actual maladies. 7.2. Dive operations are suspended or cancelled where potential or actual maladies have been identified. 7.3. A rescue approach is developed where required to enterprise requirements, or codes of practice. 7.4. Diver first aid is applied to injured or distressed personnel. 7.5. Emergency authorities are notified where assistance is required. 7.6. Procedures and dive plan are reviewed in light of risks identified and potential or actual malady. 7.7. All incidents are recorded on the enterprise/agency register.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- plan diving operations
- prepare for diving operations conduct dive
- debrief diving team
- check and store equipment
- review diving program
- respond to diving maladies

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<ul style="list-style-type: none"> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• physics of diving</li> <li>• no-decompression tables</li> <li>• dive equipment</li> <li>• dive planning</li> <li>• AS2299 Scientific Diving</li> <li>• rescue procedures</li> <li>• oxygen administration procedures</li> <li>• agency standing orders for notification</li> <li>• emergency service procedures</li> <li>• radio operation procedures.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• plan to carry out a dive</li> <li>• prepare to dive</li> <li>• carry out pre-dive checks</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• monitor dive conditions, respond to incidents and amend dive procedures if necessary</li> <li>• debrief dive team</li> <li>• store diving equipment.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Diving operations may include:	<ul style="list-style-type: none"> <li>• operations that are scientific investigation</li> <li>• monitoring of marine/coastal/freshwater environment, including ecosystems, communities, populations</li> <li>• sea bed forms</li> <li>• marine wrecks</li> <li>• search and rescue</li> <li>• ground truthing.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLPW306A Undertake sampling and testing of water

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of sampling and testing water quality as part of a monitoring program and defines the standard required to: plan a water sampling program under direction; test and correlate equipment; sample and test water; record results on data sheets.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to undertaking sampling and testing of water and is likely to be under limited supervision from others with checking only related to overall progress. Sampling and testing water quality requires knowledge of monitoring schedules, hydrological cycle, water quality determinations and standards, principles of water quality control, sampling and testing methods and groundwater salinity.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for sampling and testing field work	<p>1.1. Monitoring schedule is read/heard and confirmed with manager.</p> <p>1.2. Advanced water quality and environmental parameters are identified.</p> <p>1.3. Samples to be collected to determine water quality and environmental parameters are identified by supervisory staff.</p> <p>1.4. Equipment requirements for water sampling and testing are determined and arranged.</p> <p>1.5. Range of likely operating conditions, hazards and difficult/sensitive environments are assessed for impact on sampling and testing.</p>
2. Prepare equipment and resources	<p>2.1. Equipment required for sampling and testing is sourced according to monitoring procedures.</p> <p>2.2. Equipment is checked for availability and serviceability in accordance with enterprise procedures.</p> <p>2.3. Testing and correlation is carried out to verify correct and accurate performance of equipment.</p> <p>2.4. Repairs and maintenance of field-based equipment and instruments are carried out in accordance with enterprise procedures and manufacturer's instructions.</p> <p>2.5. Data or record sheets/books are collected for use.</p> <p>2.6. Equipment, data sheets and personnel are moved to</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>sampling sites without injury or damage and readied for use.</p> <p>2.7. Equipment is installed and protected according to manufacturer's specifications, safety and enterprise requirements.</p> <p>2.8. Staff undertaking sampling and testing are briefed on and are aware of responsibilities in accordance with monitoring schedule.</p> <p>2.9. Testing equipment is confirmed and serviceable for monitoring procedures in field conditions to enterprise and manufacturers' requirements.</p>
3. Carry out sampling and testing of water	<p>3.1. Tests are undertaken in accordance with monitoring plan and enterprise procedures to avoid erroneous readings.</p> <p>3.2. Samples are taken and tested in accordance with monitoring standards and guidelines.</p> <p>3.3. Samples for external analysis are prepared, packaged and sent to laboratory in accordance with monitoring schedule and laboratory standards.</p> <p>3.4. Specific and general observations including information on relevant ambient and antecedent environmental conditions are made in accordance with monitoring schedule.</p> <p>3.5. Personnel undertaking sampling and testing tasks are supervised and feedback given on work performance.</p> <p>3.6. Equipment operation and work practices conform to OHS requirements.</p>
4. Complete water sampling and testing activities	<p>4.1. Equipment and clothing is cleaned, sanitised, repaired and stored in accordance with enterprise procedures.</p> <p>4.2. Damaged or malfunctioning equipment is repaired on site or sent to manufacturer or specialist.</p> <p>4.3. Test results and observations are accurately recorded on data sheets and forwarded in accordance with enterprise procedures.</p> <p>4.4. Changes in field conditions and equipment are conveyed to supervisor according to enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan for sampling and testing
- prepare equipment and resources
- carry out sampling and testing
- complete water sampling and testing activities
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- hydrological cycle
- water monitoring schedules and guidelines
- standards for water quality
- sampling and testing methods
- groundwater contamination evaluation
- sources of groundwater contamination
- groundwater salinity - mechanisms, occurrence and management
- irrigation induced salinity, mechanisms and management.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• plan a water sampling program under direction</li> <li>• test and correlate equipment</li> <li>• sample and test water</li> <li>• record results on data sheets.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Sampling may include:	<ul style="list-style-type: none"> <li>• the range of water quality and environmental parameters such as dissolved oxygen, hardness, ammonia, nitrite, nitrate, carbon dioxide, alkalinity, temperature, salinity, pH and turbidity.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLPW401A Process applications for changes in land use

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers processing applications for changes in land use and defines the standard required to: establish client intentions and requirements; communicate the process, policies and relevant legislation to the applicant; discuss the scope and application of the submission in light of preliminary discussion; consider the application against eligibility criteria, and relevant policies and legislation; present findings and feedback to the applicant; provide request for further information or access to appeal if application is rejected.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes processing applications for changes in land use for legislative compliance.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish client requirements	<p>1.1.The proposed changes in land use are discussed with and confirmed with the landholder.</p> <p>1.2.The catchment characteristics are reviewed and discussed considering the proposed land use.</p> <p>1.3.Current impacting legislation and policies are explained to the landholder.</p> <p>1.4.Possible strategies are discussed with the landholder and the best option confirmed.</p>
2. Determine scope of the request	<p>2.1.Profile of site determined from survey and aerial photographs.</p> <p>2.2.Initial inspection checks against legislative or procedures according to enterprise guidelines and industry best practice.</p> <p>2.3.Native vegetation types checked against maps and local guidelines.</p> <p>2.4.Threats to local species are checked against local resources.</p> <p>2.5.Soil and water impact reviewed against proposed land use and industry principles.</p> <p>2.6.Cultural heritage issues noted according to agency guidelines and best practice procedures.</p>
3. Present finding	<p>3.1.Applicant is provided with technical data following program guidelines.</p> <p>3.2.Concurrence is communicated relating to the formal application following program guidelines.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3.Applicant is informed of specific requirements relating to submitting a formal application. 3.4.Self-assessment process communicated and confirmed following program guidelines. 3.5.Potential risks associated with proceeding with process communicated based on program guidelines.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- establish client requirements
- determine scope of the request
- present findings
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant Federal and State legislation and regulations on relevant land use
- interpreting aerial photographs, maps and GIS
- communicating with stakeholders
- agency policies and procedures
- formats for presenting information to clients.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish client intentions and requirements</li> <li>• communicate the process, policies and relevant legislation to the applicant</li> <li>• discuss the scope and application of the submission in light of preliminary discussion</li> <li>• consider the application against eligibility criteria, and relevant policies and legislation</li> <li>• present findings and feedback to the applicant</li> <li>• provide request for further information or access to appeal if application is rejected.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Applications may include:	<ul style="list-style-type: none"> <li>• a range of applications for change of land use covering the clearing of native vegetation and changes to drainage.</li> </ul>



## Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLPW402A Implement land and sea management practices

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers implementing land and sea management practices and defines the standard required to: access community members to determine appropriate indigenous land and sea management practices using accepted protocols; determine appropriate non-indigenous land and sea management practices; develop and discuss preferred options to implement land and sea management practices with indigenous groups and other stakeholders; undertake land and sea management practices in compliance with agreed approach and cultural customs and protocols.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes implementing Indigenous and non-Indigenous land and sea management practices required for a given area according to management plans and strategies, community guidelines and cultural protocols.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine appropriate indigenous land and sea management practices	<p>1.1. Correct cultural protocols are observed in discussing and evaluating Indigenous land and sea management practices.</p> <p>1.2. Management plans and priorities are reviewed.</p> <p>1.3. The most appropriate Indigenous practices for a specified area are assessed.</p> <p>1.4. Comparisons are made with non-Indigenous land and sea management practices.</p> <p>1.5. Technology, materials and resources for Indigenous land and sea management practices are defined and quantified for a specific area or practice.</p> <p>1.6. Appropriate persons to provide advice and information on Indigenous land and sea management practices are identified.</p> <p>1.7. Cultural protocols and customs in relation to disclosure of information on Indigenous land and sea management practices are determined.</p>
2. Determine appropriate non-Indigenous land and sea management practices	<p>2.1. Legislative, enterprise and best practice parameters governing non-Indigenous land and sea management practices are identified.</p> <p>2.2. Management plans and priorities are reviewed.</p> <p>2.3. The most appropriate non-Indigenous practices for a specified area are determined.</p> <p>2.4. Comparisons are made with Indigenous land and sea</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>management practices.</p> <p>2.5. Technology, materials and resources for non-Indigenous land and sea management practices are defined.</p> <p>2.6. Relevant information sources on non-Indigenous land and sea management practices are identified and accessed.</p>
3. Develop approach to implementation of land and sea management practices	<p>3.1. Options based on comparison of Indigenous and non-Indigenous land and sea management practices are developed.</p> <p>3.2. Appropriate persons, (government stakeholders and other relevant agencies) are consulted with about available options.</p> <p>3.3. Staging strategy for preferred option is prepared with realistic costs.</p> <p>3.4. Owners and stakeholders of specific area are consulted and involved in setting priorities for management work and practices.</p>
4. Undertake land and sea management practice	<p>4.1. Land and sea management practices are undertaken in compliance with agreed approach.</p> <p>4.2. Work is carried out according to enterprise guidelines, industry best practice and community expectations.</p> <p>4.3. Cultural customs and protocols are respected throughout performance of work.</p> <p>4.4. Practices are carried out by persons appropriately authorised to conduct them according to legislative and cultural requirements and protocols.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- determine appropriate Indigenous land and sea management practices
- determine appropriate non-Indigenous land and sea management practices
- develop approach to implementation of land and sea management practices

**REQUIRED SKILLS AND KNOWLEDGE**

- undertake land and sea management practices
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- cultural protocols which apply in communities
- Indigenous land and sea management practices
- Non-Indigenous land and sea management practices
- technology for use in environmental management
- implementation strategies for land and sea management
- Occupational Health and Safety (OHS), environmental and native title legislation and codes of practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- access community members to determine appropriate Indigenous land and sea management practices using accepted protocols

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• determine appropriate non-Indigenous land and sea management practices</li> <li>• develop and discuss preferred options to implement land and sea management practices with Indigenous groups and other stakeholders</li> <li>• undertake land and sea management practices in compliance with agreed approach and cultural customs and protocols.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Indigenous land and sea management practices may include:	<ul style="list-style-type: none"> <li>• fire management</li> <li>• feral animal control</li> <li>• ceremonial closures</li> <li>• sharing/passing on of knowledge and dreaming and story places</li> <li>• others as appropriate.</li> </ul>
Non-Indigenous land and sea management practices may include:	<ul style="list-style-type: none"> <li>• fire management</li> <li>• weed and feral animal control</li> <li>• waste management</li> <li>• pollution management</li> <li>• pest and disease management</li> <li>• others as appropriate.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLPW403A Inspect and monitor cultural places

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers inspecting and monitoring cultural places and defines the standard required to: establish the cultural value and background of the place; prepare or source checklists for inspection; inspect the place to establish a schedule of maintenance and monitor site management; submit report and recommendations based on requirements of contract including a review of existing management systems; monitor surroundings to establish restoration, reclamation, modification and protection that is required in the immediate area; monitor stakeholder views for impact on cultural significance, approach to maintenance, restoration and modification, and current and proposed uses of the place or area.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to those whose job role includes inspecting and monitoring the fabric and setting of heritage or culturally significant places to identify non-conformities with conservation and management plans. A high level of cultural awareness and the need to observe cultural protocols are important in parts of the process.</p> <p>Note: for Indigenous cultural places, the delivery and assessment against this unit must comply with community protocols and guidelines and be supported by elders and custodians of country.</p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for inspection	1.1. Significance of place is sourced from conservation and management plans. 1.2. According to operational request, specific facilities and equipment for inspection are determined. 1.3. Appropriate checklists relating to condition of fabric and surrounds are obtained to suit the application.
2. Carry out comprehensive inspection	2.1. Condition of fabric is inspected for deterioration and damage. 2.2. Non-conformity with conservation and management plans and Occupational Health and Safety (OHS) are recorded. 2.3. Observed deterioration and damage to the fabric is evaluated to determine short-term and long-term

ELEMENT	PERFORMANCE CRITERIA
	<p>impact on the significance of the place.</p> <p>2.4.Maintenance works for the cultural place is determined and scheduled.</p> <p>2.5.Records are checked for accuracy.</p> <p>2.6.Potential safety risks, hazards and situations are identified and detailed.</p>
3. Submit report and recommendations	<p>3.1.Situations requiring urgent action are addressed in accordance with conservation/management plan enterprise guidelines.</p> <p>3.2.Draft reports are provided to stakeholders in oral and/or written formats.</p> <p>3.3.Concise and accurate report are prepared and submitted to management.</p> <p>3.4.Existing management systems are reviewed particularly regarding frequency and scope of inspection.</p> <p>3.5.Recommendations for future action are consistent with conservation/management plan and industry standards and best practice.</p> <p>3.6.Collected data and information is submitted for inclusion on information management system.</p>
4. Monitor surroundings	<p>4.1.Condition of surrounds and setting of the place or area is monitored for deterioration, damage and for biological or geophysical changes.</p> <p>4.2.Deterioration and damage to surrounds and setting of place or area is evaluated to determine short-term and long-term impact on the significance of the place.</p> <p>4.3.Required restoration or modification of biological aspects of the setting, including indigenous and exotic species, are planned to maintain the cultural and natural significance.</p> <p>4.4.Required restoration or modification of geophysical aspects of the setting and surrounds, including replacement of soils and protection of landforms are planned to maintain the cultural and natural significance.</p> <p>4.5.Maintenance, restoration and modification of fabric, setting and surrounds is integrated to maintain the cultural (both indigenous and non-indigenous), and natural significance of the place or area.</p>
5. Monitor stakeholder	5.1.Stakeholders are periodically consulted to determine

ELEMENT	PERFORMANCE CRITERIA
views on significance	<p>their views on the significance and maintenance of the place and area.</p> <p>5.2. Visitors are periodically consulted to obtain their views on the place and area.</p> <p>5.3. Changes in views and/or stakeholders are identified.</p> <p>5.4. Changes in views are assessed for impact on cultural significance, approach to maintenance, restoration and modification, and current and proposed uses of the place or area.</p> <p>5.5. Assessment of changed views is reported to enterprise and Burra Charter processes or indigenous places guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare for inspection
- carry out comprehensive inspection
- assess the condition of a designated area
- monitor an area for deterioration, damage and for biological or geophysical changes.
- submit report and recommendations
- monitor surroundings
- consult with stakeholders to monitor views on significance
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• relevant cultural concepts</li> <li>• relevant aspects of Australian Heritage Commission legislation and requirements, State/Territory Heritage requirements and World Heritage requirements</li> <li>• International Union for Conservation of Nature (IUCN) guidelines for protected area management categories</li> <li>• Australian and New Zealand Environment Conservation Council (ANZECC) environmental standards and best practice guidelines</li> <li>• national and International Charters of the International Council on Monuments and Sites (ICOMOS), including the Burra Charter</li> <li>• environmental legislation and codes of practice</li> <li>• construction techniques and materials</li> <li>• processes of deterioration and damage</li> <li>• maintenance, restoration and modifications applied or potentially that could be applied to place or area</li> <li>• threats to place or area, including visitor impacts.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence is required that cultural places have been appropriately inspected and monitored and that any maintenance activities conform to relevant legislation, charters and is according to enterprise guidelines and industry best practice. The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the cultural value and background of the place</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• prepare or source checklists for inspection</li> <li>• inspect the place to establish a schedule of maintenance and monitor site management</li> <li>• submit report and recommendations based on requirements of contract including a review of existing management systems</li> <li>• monitor surroundings to establish restoration, reclamation, modification and protection that is required in the immediate area</li> <li>• monitor stakeholder views for impact on cultural significance, approach to maintenance, restoration and modification, and current and proposed uses of the place or area.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Cultural places of significance may include:	<ul style="list-style-type: none"> <li>• areas of non-indigenous activity, buildings and other structures</li> <li>• natural areas of Indigenous cultural significance</li> <li>• areas of Indigenous activity such as burial, occupation and contact sites, engravings, grinding grooves, rock pictures, fish traps, middens and mounds.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLPW404A Produce maps for land management purposes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers producing maps for land management purposes and defines the standard required to: establish the land use, structures and natural resource features that are required to inform land use decisions; source data sets that provide the required information; validate the data for currency and compare to ground observations; incorporate data onto a map; provide a map key and any supporting information required; evaluate maps for suitability for purpose and value in making land management decisions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes preparing maps by hand or by using Geographical Information Systems (GIS) for land management purposes.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Obtain information for a specific land management purpose	<p>1.1.Information required to achieve result is defined and required data sets are correctly determined.</p> <p>1.2.Information from stakeholders on land management and production systems is collected and presented consistent with the local area management strategy.</p> <p>1.3.Information collected includes temporal and spatial data.</p> <p>1.4.Information is reviewed for relevance and accuracy.</p>
2. Assess data availability	<p>2.1.Availability of required data sets is ascertained through research of internal and external sources.</p> <p>2.2.Ownership of data is confirmed, and access and pricing determined.</p> <p>2.3.Data is obtained in line with industry standards, statutory requirements and enterprise policy.</p> <p>2.4.Where appropriate, procedures are developed to capture data.</p>
3. Assess data quality	<p>3.1.Data is assessed for integrity to determine suitability for task.</p> <p>3.2.Disparities between data sets are investigated and resolved to ensure integrity of data used.</p>
4. Format and present data	<p>4.1.Compatible format for data is identified.</p> <p>4.2.Relevant data elements are assembled.</p> <p>4.3.Data format(s) are selected to meet user's</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>requirements.</p> <p>4.4.Information is presented to meet user requirements using suitable media in a tidy, informative and useable manner.</p> <p>4.5.Information is presented in line with appropriate enterprise and Australian standards.</p>
5. Incorporate data onto map(s)	<p>5.1.Information is transferred from various data sources onto map(s).</p> <p>5.2.Maps are produced showing spatial and temporal data consistent with development and implementation of the land management strategy.</p> <p>5.3.Maps are analysed for data to assist in development or implementation of land management plan.</p>
6. Review customer satisfaction	<p>6.1.Work is completed in line with enterprise quality requirements.</p> <p>6.2.Feedback is sought from users regarding satisfaction with information and presentation.</p> <p>6.3.Any areas of dissatisfaction are resolved in line with enterprise policy and procedures.</p> <p>6.4.Customer feedback is analysed and used as a quality improvement tool.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess data availability
- assess data quality
- incorporate data onto maps
- review customer satisfaction
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

**REQUIRED SKILLS AND KNOWLEDGE**

- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- land management processes relevant to map being prepared
- relevant Commonwealth, State and Local legislative and regulatory requirements
- mapping principles and conventions including layout, legends, scale, media, printing and presentation styles
- use of software and hardware such as GIS, Computer-Aided Design (CAD), desktop publishing, desktop mapping, multimedia, graphic animation, plotters and printers.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- establish the land use, structures and natural resource features that are required to inform land use decisions
- source data sets that provide the required information
- validate the data for currency and compare to ground observations
- incorporate data onto a map
- provide a map key and any supporting information required
- evaluate maps for suitability for purpose and value in making land management decisions.

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Mapping products may include:	<ul style="list-style-type: none"> <li>transparency overlays for air photographs or printed maps and thematic maps produced on GIS.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCLPW405A Monitor biodiversity

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring biodiversity and defines the standard required to: use monitoring techniques suitable for the environment and species; install and use monitoring equipment; develop systems to capture, maintain and analyse data; make observations and record data on species diversity and abundance; review data to ensure the monitoring process is correctly targeted and implemented.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to natural area managers and those seeking information on natural systems or areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select monitoring techniques	<p>1.1. Monitoring operations are selected to obtain required data described in monitoring plan and enterprise requirements.</p> <p>1.2. Range of likely operating conditions, hazards and difficult/sensitive environments are assessed for impact on monitoring.</p> <p>1.3. Alternative land, sea and air operations are considered to collect data in line with enterprise procedures.</p> <p>1.4. Operations are trialled to test monitoring scheme for reliability, timeline and safety.</p>
2. Prepare equipment and resources	<p>2.1. Appropriate certificates, licenses and authorisations are obtained according to enterprise and legislative requirements.</p> <p>2.2. Equipment required for monitoring is sourced according to enterprise procedures.</p> <p>2.3. Equipment and personnel are transported to monitoring sites without injury or damage according to enterprise procedures.</p> <p>2.4. Equipment is installed and protected from weather conditions according to manufacturer's specifications, safety and enterprise requirements.</p> <p>2.5. Equipment and monitoring procedures are tested in field conditions to enterprise and manufacturers' requirements.</p>
3. Monitor biodiversity	<p>3.1. Observations are made according to monitoring plan and to enterprise procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.2.Data is recorded to monitoring plan and database requirements. 3.3.Location and times of observations are recorded to enterprise requirements. 3.4.OHS requirements are followed to legislative requirements and enterprise policies and procedures.
4. Review data	4.1.Records of monitored data are examined for consistency and accuracy within requirements of the monitoring plan. 4.2.Records are assessed to determine whether the observations and measurements are addressing factors and issues consistent with the monitoring plan. 4.3.Monitoring techniques are adjusted to overcome any deficiency or reported to enterprise procedures for adjustment to monitoring plan.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop monitoring techniques
- prepare and install equipment and resources
- monitor biodiversity
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- ecosystems
- plant and animal classification
- monitoring systems for flora, fauna and microorganism populations
- accepted scientific processes
- parks/reserves, conservation, environmental protection and heritage and tenure systems
- set up and use of monitoring equipment
- threats, both natural and from human activity, to places of natural significance
- international, national and local standards and Codes of Practice
- data recording and analysis techniques
- Occupational Health and Safety (OHS) and environmental legislation under which enterprise operates.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- use monitoring techniques suitable for the environment and species
- install and use monitoring equipment
- develop systems to capture, maintain and analyse data
- make observations and record data on species diversity and abundance
- review data to ensure the monitoring process is correctly targeted and implemented.



<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Natural systems or areas may include:	<ul style="list-style-type: none"> <li>• a place</li> <li>• an area</li> <li>• a park/reserve</li> <li>• an ecosystem or part of an ecosystem</li> <li>• a region or catchment</li> <li>• a species or group of species.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLPW501A Develop a management plan for a designated area

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a management plan for a designated area and defines the standard required to: discuss management plan objectives, deliverables and timeline with client; prepare a site plan detailing landscape values, physical features and characteristics, land uses (both past and present), physical condition and biological characteristics; identify land capability and conservation issues on and surrounding the site; analyse site information and description to assess feasibility of management objectives; develop and cost recommended actions and present to client for discussion as a draft management plan; consult with stakeholders and incorporate feedback into the final management plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to land managers who are responsible for the development of management strategies and the documentation of management plans with a defined emphasis on flora or fauna and covering the range of biodiversity present in a designated area.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Define the need for a management plan	1.1.Management plan objectives are identified for the designated area. 1.2.Brief is agreed in consultation with client. 1.3.Planning team including specialists and consultants is identified.
2. Undertake preliminary planning activities	2.1.Major stakeholders are identified. 2.2.Availability of specialists to assist in management planning work is ascertained and contracts are prepared where required. 2.3.Timelines for development of the management plan and reporting arrangements to client are established. 2.4.Resources required for the development of management strategies are identified.
3. Prepare a site description	3.1.Landscape values of the area are identified and mapped. 3.2.Physical features and characteristics of the area are identified and mapped. 3.3.Land uses, including current, cultural, and historical

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	<p>modifications, are researched and their effects on the designated area are determined and recorded.</p> <p>3.4. Physical condition of site is assessed and documented</p> <p>3.5. Biological characteristics of the site are documented.</p>
4. Analyse site information and description	<p>4.1. Information is evaluated in terms of core principles and objectives.</p> <p>4.2. Documents are produced including plans, technical reports and maps.</p> <p>4.3. Priorities and key conservation issues are determined.</p> <p>4.4. Longitudinal projections of continuing impacts are prepared.</p> <p>4.5. Land capability is assessed.</p> <p>4.6. Opportunities and constraints to meeting planning objectives and goals are identified and documented.</p> <p>4.7. Presentation to stakeholders/clients is undertaken and feedback incorporated into planning documentation.</p>
5. Identify management strategies	<p>5.1. Management strategies are identified that address defined objectives.</p> <p>5.2. Management strategies are designed to alleviate existing impacts or to target management actions.</p> <p>5.3. Management strategies are costed and compared to existing budgets and available resources.</p> <p>5.4. Staging of work is planned to prioritise outcomes and management resource allocation.</p> <p>5.5. Consultation with stakeholders/clients is undertaken and feedback incorporated into planning documentation.</p>
6. Prepare the management plan	<p>6.1. Site information and management strategies are documented into a draft management plan for consultation.</p> <p>6.2. Consultation with stakeholders and clients is undertaken according to enterprise guidelines.</p> <p>6.3. Changes are made to the draft plan, and a final plan is prepared and presented to client.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- define the need for a management plan
- undertake preliminary planning activities
- prepare a site description
- analyse site information and description
- identify management strategies
- prepare the management plan
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- management planning principles and issues
- basic civil design
- environmental assessment, survey and analysis techniques and practical application to a range of habitats and landscapes
- native fauna or flora identification, physiology, habitat requirements, and seasonal and nutritional influences on life cycle
- pest plant and animal and disease identification, physiology, control techniques, and equipment, pesticides and habitat requirements
- techniques and strategies for use in the management, rehabilitation and enterprise use of a range of native Australian habitats, species and landscapes
- Indigenous flora regeneration and revegetation techniques, equipment and methods of application in relation to a range of landscape characteristics
- management and rehabilitation techniques for the wildlife and habitat relevant to the designated area
- wildlife habitats associated with the designated area and local geographic region
- soil, plant and water testing processes and procedures, interpretation and application of results.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• discuss management plan objectives, deliverables and timeline with client</li> <li>• prepare a site plan detailing landscape values, physical features and characteristics, land uses (both past and present), physical condition and biological characteristics</li> <li>• identify land capability and conservation issues on and surrounding the site</li> <li>• analyse site information and description to assess feasibility of management objectives</li> <li>• develop and cost recommended actions and present to client for discussion as a draft management plan</li> <li>• consult with stakeholders and incorporate feedback into the final management plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Management plan strategies	<ul style="list-style-type: none"> <li>• urban forest management</li> <li>• indigenous flora regeneration and revegetation</li> </ul>

<b>RANGE STATEMENT</b>	
include:	<ul style="list-style-type: none"> <li>• strategies to provide habitat for wildlife and native predators</li> <li>• strategies to maintain biodiversity</li> <li>• strategies to moderate local weather conditions (e.g., wind speed, rainfall run-off, water table recharge, provide shade)</li> <li>• strategies to develop tree management plans</li> <li>• the selective removal of tree limbs for firewood and timber</li> <li>• the selective harvest of seed for revegetation or human consumption</li> <li>• as a genetic resource for plant propagation and medicinal components</li> <li>• as a contribution to sustainable land use</li> <li>• as an aesthetic contribution to enterprise (such as a home-stay farm for tourism).</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLPW503A Assess applications for legislative compliance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers assessing applications for legislative compliance and defines the standard required to: review existing data on land use changes according to program guidelines; check title and arrange for physical inspection; collect evidence from the site on potential impacts on species diversity and soil and water quality; record any evidence of issues with cultural values of the site; report recommendations supported by evidence.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes assessing applications for legislative requirements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for assessment	<p>1.1.Existing data concerning suitability of application for changes in land use is reviewed and confirmed consistent with legislative requirements.</p> <p>1.2.Intention to process formal application is communicated following program guidelines.</p> <p>1.3.Title search completed in line with program standards.</p> <p>1.4.Specific issues relating to collection of evidence communicated aligning with technical guidelines.</p> <p>1.5.Timing of inspection and data collection established with client following program policy.</p>
2. Collect site evidence	<p>2.1.Accuracy of site details checked in line with program guidelines.</p> <p>2.2.Relevant data collected following legislative requirements.</p> <p>2.3.Potential threats to species diversity are checked in line with procedures according to enterprise guidelines and industry best practice.</p> <p>2.4.Soil and water impact assessed consistent with proposed land use and industry principles.</p> <p>2.5.Cultural heritage issues investigated and recorded according to enterprise guidelines and industry best practice.</p>
3. Compile final report	<p>3.1.Detail and accuracy of site data collected checked against assessment criteria.</p> <p>3.2.Report recommendations supported by evidence following assessment criteria and legislative</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>requirements or procedures according to enterprise guidelines and industry best practice.</p> <p>3.3.Final report and supporting documentation presented in line with policy guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare for assessment
- collect site evidence
- compile final report
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant Federal and State legislation and regulations on vegetation clearance
- interpreting aerial photographs, maps and GIS
- communicating with stakeholders
- agency policies and procedures
- formats for compiling reports
- assessment approaches for area of notification.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• review existing data on land use changes according to program guidelines</li> <li>• check title and arrange for physical inspection</li> <li>• collect evidence from the site on potential impacts on species diversity and soil and water quality</li> <li>• record any evidence of issues with cultural values of the site</li> <li>• report recommendations supported by evidence.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Legislation may include:	<ul style="list-style-type: none"> <li>• Federal, State and Territory laws</li> <li>• local government and statutory authority regulations relevant to the area</li> <li>• worksite or job role.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Lands, parks and wildlife
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLPW504A Review assessments for legislative compliance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers reviewing assessments for legislative compliance and defines the standard required to: compile data and identify specific issues related to the proposed change in land use; check the accuracy of site details, and data on potential threatened species, soil and water impact and cultural heritage issues; submit assessment application and supporting documents; communicate the result and recommendations to the applicant.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes reviewing assessments for legislative compliance relating to changes in land use.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Validate the process	<p>1.1.Data concerning clearing application is compiled using industry methodology.</p> <p>1.2.Specific issues relating to proposed land use is investigated and reported according to enterprise guidelines and industry best practice.</p> <p>1.3.Documentation is presented in accordance with legislative requirements or procedures.</p>
2. Audit the data	<p>2.1.Accuracy of site details documented in line with program guidelines.</p> <p>2.2.Relevant data are collected following procedures according to enterprise guidelines and industry best practice.</p> <p>2.3.Potential threatened species recorded in line with legislative requirements.</p> <p>2.4.Soil and water impact assessed consistent with proposed land use and industry principles.</p> <p>2.5.Cultural heritage issues investigated and recorded following industry guidelines.</p>
3. Submit assessment application and supporting documents	<p>3.1.Detail and accuracy of site data is collected checked against assessment criteria.</p> <p>3.2.Report recommendations supported by evidence following assessment criteria and legislative requirements or procedures according to enterprise guidelines and industry best practice.</p> <p>3.3.Final report and supporting documentation presented in line with policy guidelines.</p>
4. Respond to applicant	<p>4.1.Result of assessment communicated to applicant in</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>line with program guidelines.</p> <p>4.2. Specific recommendations communicated consistent with legislative requirements or procedures according to enterprise guidelines and industry best practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- validate the process
- audit the data
- submit assessment application and supporting documents
- respond to applicant
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant federal and state legislation and regulations on changes in land use
- interpreting aerial photographs, maps and Geographic Information Systems (GIS)
- communicating with stakeholders
- agency review policies and procedures
- formats for compiling reports.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• compile data and identify specific issues related to the proposed change in land use</li> <li>• check the accuracy of site details, and data on potential threatened species, soil and water impact and cultural heritage issues</li> <li>• submit assessment application and supporting documents</li> <li>• communicate the result and recommendations to the applicant.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Legislative compliance relating to changes in land use includes:	<ul style="list-style-type: none"> <li>• applications for tree clearing</li> <li>• changes in drainage.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLPW505A Implement natural and cultural resource management plans

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers implementing natural and cultural resource management plans and defines the standard required to: determine priorities based on high significance areas, the level of risk to sensitive areas, and the potential for revenue generation; identify projects from the agreed priorities; develop budgets for projects and apply for funding; brief and train staff to carry out tasks and projects identified from the management plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes implementing natural and cultural resource management plans.  Note: for indigenous cultural places and contexts, the delivery and assessment against this standard must comply with community protocols and guidelines and be supported by elders and custodians of country.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine priorities within the plan	<p>1.1.Priorities in conservation or resource management plan are identified to conserve places/area of high significance before those of lower significance, address threats to significance, manage risks, and generate revenue from the resources.</p> <p>1.2.Priorities in the plan are expressed in terms of new or continuing investigations into natural and/or cultural significance, new procedures, and new or continuing development or maintenance projects.</p> <p>1.3.New procedures are developed and address conservation priorities within the context of legislation, enterprise procedures and Codes of Practice.</p>
2. Develop projects to priorities	<p>2.1.Projects are defined from the plan requirements in terms of development and maintenance.</p> <p>2.2.Project definition is developed to identify outcomes and key project steps.</p> <p>2.3.Preliminary project design is completed to identify project steps and funding requirements.</p> <p>2.4.Arrangements for project implementation are made to according to Occupational Health and Safety</p>

ELEMENT	PERFORMANCE CRITERIA
	(OHS), legislative and enterprise requirements.
3. Obtain and manage funds	3.1.Funds requirements to develop operations and projects to the plan are estimated. 3.2.Applications are made for funds according to legislative and enterprise requirements. 3.3.Funds are managed to budget and in accordance with enterprise procedures.
4. Brief staff on plan, priorities and project	4.1.Staff are briefed on the plan objectives, priorities and actions planned. 4.2.Staff are trained in new procedures developed to address plan objectives. 4.3.Project implementation details are developed in consultation with staff, and/or by staff under supervision.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- determine priorities within the plan
- develop projects to priorities
- obtain and manage funds
- brief staff on plan, priorities and projects
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- park/reserve management approaches

## REQUIRED SKILLS AND KNOWLEDGE

- human resource and financial management
- works and project management
- regional tourism activities
- the range of scientific, cultural, historical and other concepts that are to be integrated into the plan
- policies applying across all levels of government and within the specific region, including those under catchment plans
- international treaties, agreements and charters
- Australian Natural Heritage Charter and the Burra Charter and the interpretation of the charters
- enterprise policies and procedures
- good planning practice and enterprise planning procedures and timelines
- OHS and environmental protection legislation, codes of practice and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine priorities based on high significance areas, the level of risk to sensitive areas, and the potential for revenue generation
- identify projects from the agreed priorities
- develop budgets for projects and apply for funding
- brief and train staff to carry out tasks and projects identified from the management plan.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plans may include:	<ul style="list-style-type: none"> <li>all projects associated with natural and cultural resource management.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCLPW506A Investigate suspected breaches of Natural Resource Management (NRM) legislation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers investigating suspected breaches of NRM legislation and defines the standard required to: carry out preliminary site investigations into a reported or suspected breach of land use legislation; seek approval to proceed with a full investigation; carry out a site investigation; document records of interviews, proceedings and site details; check accuracy of all data and information collected; complete final report with supporting documentation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to officers who investigate suspected breaches of NRM legislation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Respond to advice of change in land use	<p>1.1. Recording of details relating to advice of change in land use is completed following organisational protocols.</p> <p>1.2. Pre site inspection investigations completed in accordance with organisational guidelines and Federal, State legislation and local regulations.</p> <p>1.3. Suspected breach reported and approval sought to proceed with investigation in accordance with organisational protocol.</p>
2. Carry out site investigation	<p>2.1. Site investigations proceed in accordance with organisation guidelines.</p> <p>2.2. Notification to other stakeholders of the consequences of their actions according to organisational guidelines is given.</p> <p>2.3. Interviews and record of proceedings are completed in accordance with legal and organisational protocols.</p> <p>2.4. Specific issues relating to collection of evidence aligning to technical guidelines are communicated.</p> <p>2.5. Record of specific site details relevant to the investigation is recorded following organisation guidelines.</p>
3. Collect site evidence	<p>3.1. Accuracy of site details in line with program guidelines is checked.</p> <p>3.2. Collected site evidence is obtained in accordance</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>with organisational guidelines and legal requirements.</p> <p>3.3. Completed investigations are sufficient to support judgement in accordance to organisational and legal requirements.</p>
4. Compile final report	<p>4.1. Detail and accuracy of supporting and validating data is checked in accordance with legal and organisational guidelines.</p> <p>4.2. Establishment of recommendations based on investigations conforms to legal protocol and organisational guidelines.</p> <p>4.3. Final report and supporting workplace documentation presented in line with policy guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- respond to advice of change in land use
- prepare for initial investigation
- carry out site investigation
- interview witnesses and land owners
- collect site evidence
- compile final report
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

## REQUIRED SKILLS AND KNOWLEDGE

- relevant Federal and State legislation and regulations on natural resource management issues
- interpreting aerial photographs, maps and Geographic Information Systems (GIS)
- communicating with stakeholders
- agency policies and procedures
- communicating with stakeholders, legal and agency policies and procedures
- formats for compiling reports and submitting evidence
- assessment approaches for area of notification.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out preliminary (pre site) investigations into a reported or suspected breach of land use legislation
- seek approval to proceed with a full investigation
- carry out a site investigation
- document records of interviews, proceedings and site details
- check accuracy of all data and information collected
- complete final report with supporting documentation.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Suspected breaches may include:	<ul style="list-style-type: none"><li>legislation breaches relating to clearing of native vegetation and changes to drainage processes and water quality.</li></ul>

## Unit Sector(s)

<b>Unit sector</b>	Lands, parks and wildlife
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCLPW601A Coordinate the preparation of a regional resource management plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of coordinating the development of regional plans in the context of natural resource management and defines the standard required to: review existing planning documents and sources of information to inform the plan; identify land management issues and potential solutions; identify stakeholders to form discussion groups and seek individual input to planning; organise for the collection and analysis of data to inform planning and monitor progress; work with stakeholders and technical advisers to develop goals and performance criteria; develop a draft plan for widespread consultation and feedback; finalise the regional resource management plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the coordinating the preparation of a regional resource management plan at a strategic level with the capacity to devolve responsibilities and tasks to specialist planners and others.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Review existing information	<p>1.1.Information obtained during scoping or prior resource management plans is reviewed to determine starting point for planning process.</p> <p>1.2.Sources of additional information are identified for use during planning process.</p>
2. Identify dimensions of issues	<p>2.1.Natural resource management issues previously identified are examined to determine current and future impacts.</p> <p>2.2.Causes, scope and types of potential solutions are identified from documentation for use in planning process.</p>
3. Form panels and groups to support process	<p>3.1.Key stakeholder groups are approached to obtain views on consultative structures and processes.</p> <p>3.2.Panels and groups are formed to cater for input of stakeholder information and views, and to obtain assistance on plan development.</p> <p>3.3.Structure of panels and groups is developed to allow diversity and to promote involvement,</p>

ELEMENT	PERFORMANCE CRITERIA
	ownership and co-operation between stakeholder groups.
4. Coordinate the collection of data	<p>4.1.Data collection and surveys on regional factors and issues is coordinated to provide information for the planning process.</p> <p>4.2.Inherent or stable and dynamic data is identified to ensure plan is developed on sound information basis.</p> <p>4.3.Rules and relationships between various data sets are developed where required for loading into a database.</p> <p>4.4.Specialists are sourced to process data for reporting to planning process.</p> <p>4.5.Arrangements are made for data to be recorded in a database where appropriate for further processing and reporting.</p> <p>4.6.Data collection and recording is managed within budgetary constraints.</p>
5. Coordinate the development of goals and strategies	<p>5.1.The development of goals and strategies is coordinated through the use of technical advice, panels and groups.</p> <p>5.2.Sources of appropriate technical advice are identified.</p> <p>5.3.Technical advice is obtained on issues at regional and local levels for integration into goals and strategies.</p> <p>5.4.Technical advice is provided to groups and panels in appropriate terms to assist in the development of goals and strategies.</p> <p>5.5.Panels and groups are facilitated to provide suggestion for goals and strategies, and to comment progressively on their formulation at a regional level.</p> <p>5.6.Original scope and basis for planning process are reviewed at major developmental stages to determine their ongoing validity.</p>
6. Coordinate the preparation of a draft plan	<p>6.1.Preparation of draft plan is coordinated using technical and stakeholder input to cater for range of natural resource management issues within economic, industry and social contexts.</p> <p>6.2.Personnel are coordinated to structure the draft plan to comply with legislative, program and</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>enterprise requirements.</p> <p>6.3. Draft plan includes goals, strategies and achievable and measurable outcomes that reflect prior consultation and technical advice.</p> <p>6.4. Draft plan is submitted to enterprise editing, review and approval processes required before public comment.</p>
7. Plan consultations	<p>7.1. Consultations are planned to ensure all stakeholders have the opportunity to comment.</p> <p>7.2. Formal consultations are recorded for use in revisions, and for reporting according to legislative, program and enterprise requirements.</p> <p>7.3. Consultations are organised to include Indigenous cultural heritage as applicable.</p>
8. Coordinate the revision of the plan to reflect consultations	<p>8.1. Revision of draft plan is coordinated to reflect consultation comments within the parameters allowed in legislative, program and enterprise requirements.</p> <p>8.2. Technical advice is obtained to develop an appropriate response to consultation comments.</p> <p>8.3. Revised plan is submitted to enterprise editing, review and approval processes required before final approval.</p> <p>8.4. Revised plan is submitted to regional planning group(s) before final approval.</p>
9. Submit plan for approval/endorsement	<p>9.1. Final plan is submitted for approval/endorsement and publication according to legislative, program, enterprise and contract requirements.</p> <p>9.2. Planning process and outcomes are evaluated to identify potential future improvements in process and outcomes.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

## REQUIRED SKILLS AND KNOWLEDGE

- facilitate to manage widely diverse groups, views and cultures
- coordinate multiple strands of planning development concurrently
- seek out technical advice and communication across a range of technical disciplines
- present effectively
- research in economic, planning, environmental and social areas
- address and relate to diverse groups of people
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- broad geographic indicators with particular emphasis on the region
- regional and rural planning concepts from town planning, rural industry planning, and natural resource planning perspectives
- impact of government processes and industry activities in social and economic terms
- consultative techniques
- cross cultural and cultural factors relevant to social structures
- local government operations
- natural resource management and issues
- sources of technical advice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• review existing planning documents and sources of information to inform the plan</li> <li>• identify land management issues and potential solutions</li> <li>• identify stakeholders to form discussion groups and seek individual input to planning</li> <li>• organise for the collection and analysis of data to inform planning and monitor progress</li> <li>• work with stakeholders and technical advisers to develop goals and performance criteria</li> <li>• develop a draft plan for widespread consultation and feedback</li> <li>• finalise the regional resource management plan.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Land management issues may include:</p>	<ul style="list-style-type: none"> <li>• damage to natural resources</li> <li>• activities or lack of activity causing ecosystems to operate outside their natural states</li> <li>• restoration of degraded areas</li> <li>• risk of damage and degradation to natural resources.</li> </ul>

## Unit Sector(s)

Unit sector	Lands, parks and wildlife
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSC101A Support landscape work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting landscape work and defines the standard required to: prepare tools and equipment; apply safe work practices in landscape construction and maintenance; support repair activities and clean up work area.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking landscape works in public, commercial and domestic situations.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for landscaping work	<p>1.1.The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2.Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3.Techniques used when loading and unloading materials demonstrate correct manual handling, and minimise damage to the load and the vehicle.</p> <p>1.4.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5.Landscaping support is provided according to Occupational Health and Safety (OHS) requirements and according to workplace information.</p> <p>1.6.OHS hazards are identified and reported to the supervisor.</p>
2. Undertake landscape work as directed	<p>2.1.Instructions and directions provided by supervisor are followed and clarification sought when necessary.</p> <p>2.2.Landscape work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines and OHS requirements.</p> <p>2.3.Interactions with other staff and customers are carried out in a positive and professional manner.</p> <p>2.4.Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.</p> <p>2.5.Problems or difficulties in completing work to</p>

ELEMENT	PERFORMANCE CRITERIA
	required standards or timelines are reported to supervisor.
3. Handle materials and equipment	<p>3.1. Waste material and debris produced during landscape work is stored in a designated area according to supervisor's instructions.</p> <p>3.2. Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines.</p> <p>3.3. A clean and safe work site is maintained while undertaking landscaping activities.</p>
4. Clean up on completion of landscaping work	<p>4.1. Materials are returned to store or disposed of according to supervisor's instructions and OHS requirements.</p> <p>4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions.</p> <p>4.3. Site is made good according to supervisor's instructions and good environmental and OHS practices.</p> <p>4.4. Work outcomes are reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safe work practices and safety directions
- prepare materials, tools and equipment for landscaping work
- undertake landscape work as directed
- handle materials and equipment
- clean up on completion of landscaping work
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• safe work practices</li> <li>• preparing for landscape work and cleaning up on project completion</li> <li>• basic construction techniques</li> <li>• landscaping tools and equipment</li> <li>• maintenance practices for planted areas</li> <li>• repair and maintenance of landscape features</li> <li>• OHS legislative requirements and Codes of Practice.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare tools and equipment</li> <li>• apply safe work practices in landscape construction and maintenance</li> <li>• support repair activities</li> <li>• clean up work area.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Work may include:	<ul style="list-style-type: none"> <li>activities that support the range of commercial landscaping projects.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLSC201A Assist with landscape construction work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assisting with landscape construction work and defines the standard required to: select and prepare tools and equipment; implement work procedures including Occupational Health and Safety (OHS); undertake landscape construction activities; transport and store machinery and equipment; clean up the site and dispose of or recycle waste materials and debris.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of assisting with landscape construction work. This standard involves working under limited supervision within established routines, methods and procedures. Responsibility for some roles and co-ordination within a team may be required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for landscape construction work	<p>1.1.The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2.Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3.Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5.Construction activities are undertaken according to OHS requirements and according to workplace information.</p> <p>1.6.OHS hazards are identified and reported to the supervisor.</p>
2. Undertake landscape construction activities as directed	<p>2.1.Instructions and directions provided by the supervisor are followed and clarification sought when necessary.</p> <p>2.2.Landscape construction is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3.Interactions with other staff and customers are carried out in a positive and professional manner.</p> <p>2.4.Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.</p> <p>2.5.Problems or difficulties in completing work to</p>

ELEMENT	PERFORMANCE CRITERIA
	required standards or timelines are reported to supervisor.
3. Handle materials and equipment	<p>3.1. Waste material and debris produced during landscape construction is stored in a designated area according to supervisor's instructions.</p> <p>3.2. Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines.</p> <p>3.3. A clean and safe work site is maintained while undertaking landscaping activities.</p>
4. Clean up on completion of landscaping work	<p>4.1. Materials are returned to store or disposed of according to supervisors instructions.</p> <p>4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions.</p> <p>4.3. Site is made good according to supervisor's instructions and good environmental practices.</p> <p>4.4. Work outcomes are reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare materials, tools and equipment for landscaping work
- undertake landscape construction as directed
- handle materials and equipment
- clean up on completion of landscaping work
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- safe work practices
- preparing for landscape work and cleaning up on project completion
- basic construction techniques
- landscaping tools and equipment
- maintenance practices for planted areas
- repair and maintenance of landscape features.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select and prepare tools and equipment
- implement work procedures including OHS
- undertake landscape construction activities
- transport and store machinery and equipment
- clean up the site and dispose of or recycle waste materials and debris.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Construction landscape features may include:	<ul style="list-style-type: none"> <li>• paths, paving</li> <li>• retaining walls</li> <li>• site structures and furniture</li> <li>• planted areas</li> <li>• irrigation systems.</li> </ul>
Maintenance of landscape features may include:	<ul style="list-style-type: none"> <li>• watering</li> <li>• weeding</li> <li>• staking</li> <li>• repairing</li> <li>• painting</li> <li>• cleaning.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLSC202A Construct low-profile timber or modular retaining walls

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of constructing low-profile timber or modular retaining walls and defines the standard required to: plan and prepare for construction; mark out the site and assemble materials; construct footings and place reinforcing; carry out wall construction; clear up the site and dispose of waste.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of constructing low profile timber or modular retaining walls in landscape settings and involves working under routine supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare work	<p>1.1. Personal Protective Equipment (PPE) and clothing is selected, used and maintained.</p> <p>1.2. Work instructions relating to constructing the retaining wall are interpreted and confirmed with the supervisor.</p> <p>1.3. Tools and equipment are prepared and used according to the supervisor's instructions.</p> <p>1.4. Manual handling and other Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.5. Services are located according to site and construction</p> <p>1.6. The quantity and quality of materials are checked to ensure they conform to the requirements of the job plans.</p>
2. Mark out site for retaining wall	<p>2.1. The position of the retaining wall is marked out according to site and construction plans.</p> <p>2.2. The location and depth of excavations are determined from site and construction plans.</p> <p>2.3. Profiles are established to conform to the tolerances designated by the supervisor and/or site and construction plans.</p> <p>2.4. Survey benchmarks are established.</p>
3. Prepare footings according to industry	<p>3.1. Foundations for the retaining wall are excavated to depth and dimensions according industry standards.</p>



ELEMENT	PERFORMANCE CRITERIA
standards	<p>3.2. Soil and waste material are removed and stockpiled to ensure a safe working area.</p> <p>3.3. Reinforcing and/or steps in the excavated site are located and positioned according to industry standards.</p> <p>3.4. Pegs or levels are positioned to maintain even depth and horizontal plane to the top of footings.</p> <p>3.5. Footings are placed, consolidated and finished to determined levels, to ensure coverage of reinforcement as necessary and according to industry standards.</p>
4. Prepare and install retaining wall components	<p>4.1. Components for installation are prepared and laid out.</p> <p>4.2. Components to be cut are marked out to length and/or shape and cut accurately to the requirements of profiles already established.</p> <p>4.3. Drainage media is installed according to supervisor's instructions.</p> <p>4.4. Base layer of retaining wall is constructed to a point above the top of the drainage media and weep holes are formed where indicated.</p> <p>4.5. Fill material is back-filled and compacted behind base of retaining wall.</p> <p>4.6. Retaining wall components are constructed to dimensions, profiles and levels as outlined in the specified site and construction plans and/or according to supervisor's instructions.</p> <p>4.7. Capping to top of retaining wall is set to specified levels with a tolerance appropriate to the style of capping.</p>
5. Clean up site and store tools and equipment	<p>5.1. Soil and waste material from the site is disposed of or recycled to minimise damage to the environment.</p> <p>5.2. Unused construction materials are stored and stacked for future re-use according to supervisors instructions.</p> <p>5.3. All tools and equipment are cleaned and stored according to supervisors instructions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- read and interpret site and construction plans
- calculate the amount of materials required and accurately mark out the area to be retained
- sort soil and waste material from the excavation site in an environmentally aware and sensitive manner, such as sorting it into organic, inorganic and recyclable piles
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- different construction materials for retaining walls
- construction approaches and methods
- OHS responsibilities of employees
- safe lifting practices for carrying large and heavy components
- the environmental impact of soil disturbance when excavating an area to be retained and the environmental effects of altering water flow when installing retaining walls, with or without drainage media
- methods of disposing of soil and waste materials in order to minimise damage to the environment
- Building Code of Australia relating to constructing retaining walls.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• plan and prepare for construction</li> <li>• mark out the site and assemble materials</li> <li>• construct footings and place reinforcing</li> <li>• carry out wall construction</li> <li>• clear up the site and dispose of waste.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Retaining walls may include:	<ul style="list-style-type: none"> <li>• all types of low [<math>\leq 900</math>mm] retaining walls using timber and modular concrete units.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSC203A Install aggregate paths

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of installing aggregate paths and defines the standard required to: set out the path on a site; undertake ground preparation for an aggregate path; construct the aggregate path and supporting structures; minimise the impact of the aggregate path on the surrounding natural area; dispose of waste materials according to requirements.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to the process of installing aggregate paths in landscape projects. The standard relates to working under direct supervision with regular checking. It requires the application of knowledge in Occupational Health and Safety (OHS) responsibilities, setting out, reading of plans, use of different aggregate materials, tools and equipment used in installation of paths and methods of disposing of soil and waste materials in order to minimise damage to the environment.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and prepare for installation	<p>1.1. Required workplace information is interpreted and confirmed with supervisor.</p> <p>1.2. Tools and equipment are prepared and used according to supervisors' instructions.</p> <p>1.3. The quantity and quality of materials are checked to ensure they conform to the requirements of the job.</p> <p>1.4. OHS hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.5. Personal Protective Equipment (PPE) and clothing is selected, used and maintained.</p> <p>1.6. Plans for public risk protection are developed in liaison with the supervisor according to statutory obligations and enterprise guidelines.</p> <p>1.7. The potential for environmental damage are assessed and measures are planned to avoid or control/minimise those impacts.</p>
2. Set out the site for path construction	<p>2.1. The location of the proposed path is marked out according to the site plan and contract documents or supervisors instructions.</p> <p>2.2. The marked out area is checked with the supervisor</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>for compliance with the site plan, contract documents and OHS requirements.</p> <p>2.3.Public risk protection measures are put in place and used throughout the course of construction work.</p>
3. Undertake ground preparation	<p>3.1.The area is cleared of debris and excavated to base level and soil and waste materials are relocated or disposed of as directed.</p> <p>3.2.Measures to avoid environmental impacts are put in place prior to commencement of work.</p> <p>3.3.Base material is placed and compacted to the required finished level.</p> <p>3.4.Work carried out conforms to site plan, contract documents and instructions.</p> <p>3.5.Set out work is checked at regular intervals with supervisor.</p> <p>3.6.3Edge restraints, where required, are installed according to site plan and instructions.</p> <p>3.7.Install drainage structures as directed.</p> <p>3.8.Site problems and discrepancies are reported to the supervisor.</p>
4. Lay surface aggregate materials	<p>4.1.Surface aggregate materials are spread over the area to the designated depth.</p> <p>4.2.Material is screed to ensure consistent depth of materials.</p> <p>4.3.Aggregate materials are levelled to the designated level and falls.</p> <p>4.4.Aggregate materials are compacted using appropriate machinery.</p>
5. Make good the site	<p>5.1.Soil and waste material from the site is disposed of or recycled to ensure minimal impact on the environment.</p> <p>5.2.Areas disturbed by installation works are reinstated according to good environmental practices.</p> <p>5.3.All tools&amp;equipment are cleaned and stored according to supervisors' instructions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan and prepare for installation and site safety
- set out the site for path construction
- undertake ground preparation
- lay surface aggregate materials
- make good the site
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- OHS responsibilities of employees
- OHS regulations regarding the erection of signs and barriers around the work area and responsibilities to the public
- the environmental impact of soil disturbance when preparing the site and the environmental effects of altering water flow when installing paths
- setting out site for path construction
- reading of plans and contract documents
- different base and aggregate materials and their performance
- tools and equipment used for installing paths
- methods of disposing of soil and waste materials in order to minimise damage to the environment
- machinery used in path construction
- ordering and estimating materials.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the



<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• set out the path on a site</li> <li>• undertake ground preparation for an aggregate path</li> <li>• construct the aggregate path and supporting structures</li> <li>• minimise the impact of the aggregate path on the surrounding natural area</li> <li>• dispose of waste materials according to requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Aggregate paths may include:	<ul style="list-style-type: none"> <li>• all types of aggregate paths used in landscaping.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSC204A Lay paving

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of laying modular paving and defines the standard required to: set out the paving area; prepare the ground; lay bedding material; lay pavers to the specified pattern; clean up the site and dispose of waste.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of laying modular paving in landscape projects and involves working under routine supervision with intermittent checking.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and prepare for paving work	<p>1.1. Required workplace information is interpreted and confirmed with supervisor.</p> <p>1.2. Tools and equipment are prepared and used according to supervisor's instructions.</p> <p>1.3. The quantity and quality of materials are checked to ensure they conform to the requirements of the job.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.5. Personal Protective Equipment (PPE) and clothing is selected, used and maintained.</p>
2. Set out and prepare paving area	<p>2.1. The area to be paved is marked out according to the site plan.</p> <p>2.2. The marked out area is checked with the supervisor for compliance with the site plan and OHS requirements, and adjusted where necessary.</p> <p>2.3. The reduced levels of the proposed paving area are calculated and pegged from the survey benchmark using the rise and fall method in a closed level run.</p>
3. Undertake ground preparation	<p>3.1. The area is excavated to shape, depth and dimensions to sub base level according to minimal industry standards.</p> <p>3.2. The sub base is trimmed to the designated level and falls to ensure that the final level of paving can be achieved.</p> <p>3.3. Drainage systems are constructed as necessary according to the site plan.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Base material is placed and compacted to the required finished level according to minimal industry standards.
4. Lay bedding material	<p>4.1. Bedding material is spread loosely over the area to ensure the designated bedding depth can be attained according to minimal industry standards.</p> <p>4.2. Screed rails are established to ensure the bedding course is maintained.</p> <p>4.3. Bedding material is levelled to the designated level and falls and in accordance with minimum industry standards.</p>
5. Lay pavers to a given pattern	<p>5.1. Grid string lines are set to required levels to ensure the designated pattern of the project is attained, and to maintain straight lines of components.</p> <p>5.2. Pavers are set out to the required dimensions and pattern according to the site plan.</p> <p>5.3. Whole pavers are laid and compacted to the established finish level.</p> <p>5.4. Pavers are marked, cut and fitted to accurately fill gaps in the pattern within tolerances nominated within the site plan.</p> <p>5.5. Permanent edge constraints are installed to prevent movement of pavers.</p>
6. Clean site and store tools and equipment	<p>6.1. Paving is swept thoroughly to produce a clean and flat surface free of debris.</p> <p>6.2. Sand is spread evenly of the paved area and compacted to the finished level.</p> <p>6.3. Soil and waste material from the site is disposed of or recycled to ensure minimal impact on the environment.</p> <p>6.4. All tools and equipment are cleaned and stored according to supervisors instructions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• read, interpret and apply information from a site plan that is to scale</li> <li>• calculate the amount of materials required, prepare the paving site, and follow a designated pattern</li> <li>• install modular pavers</li> <li>• sort soil and waste material from the excavation site in an environmentally aware and sensitive manner, such as sorting it into organic, inorganic, and recyclable piles</li> <li>• use literacy skills to follow sequenced written instructions and record information accurately and legibly</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• OHS responsibilities of employees</li> <li>• OHS regulations regarding the erection of signs and barriers around the area to be paved</li> <li>• the environmental impact of soil disturbance when preparing to pave, and the environmental effects of altering water flow when installing new drainage systems</li> <li>• methods of disposing of soil and waste materials in order to minimise damage to the environment.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include</p>

<b>EVIDENCE GUIDE</b>	
	achievement of the following: <ul style="list-style-type: none"> <li>• set out the paving area</li> <li>• prepare the ground</li> <li>• lay bedding material</li> <li>• lay pavers to the specified pattern</li> <li>• clean up the site and dispose of waste.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Paving may include:	<ul style="list-style-type: none"> <li>• clay or brick paving bricks.</li> </ul>
Permanent edge constraints may include:	<ul style="list-style-type: none"> <li>• concrete, timber or steel constraints</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Landscape
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### Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCLSC205A Install tree protection devices

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of protecting trees by installing protective devices and defines the standard required to: select tools and equipment for protecting trees prior to construction activities; install protective measures around trees to prevent them from damage; clean up materials and maintain worksite.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of protecting trees during construction work and relates working under routine supervision with intermittent checking. Responsibility for some roles and coordination within a team may be required. Tree protection at this level requires the application of knowledge and skills to a broad range of tasks.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to install	<p>1.1. Enterprise work procedures related to the task are received and confirmed.</p> <p>1.2. Trees to be protected, and method of protection to be used, are identified accurately from enterprise work procedures.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.4. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p> <p>1.5. Tools and equipment appropriate to the task being undertaken are prepared and used according to enterprise OHS requirements.</p> <p>1.6. Protection devices or materials to assemble devices are collected and checked against requirements as indicated in enterprise work procedures.</p>
2. Install protection devices	<p>2.1. Protection devices are assembled according to enterprise work procedures.</p> <p>2.2. Devices are installed in line with protection plans and/or enterprise work procedures.</p> <p>2.3. Work is carried out in a manner that minimises risk of damage to trees and the surrounding environment.</p>
3. Complete installation activities	<p>3.1. Protection devices are checked for their effectiveness according to enterprise work procedures.</p> <p>3.2. Damaged and/or ineffective devices are reported to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>the supervisor.</p> <p>3.3. A clean and safe area is maintained throughout and on completion of work.</p> <p>3.4. Workplace outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret site maps and tree protection plans
- operate equipment such as digging equipment, traffic control devices
- assemble or build protection devices
- read and interpret site maps and protection plans including a range of graphic symbols
- follow directions for the construction or assembly of protection devices
- follow supervisors instructions
- record or report workplace outcomes
- measure materials used in construction and assembly
- calculate quantities and area
- measure and estimate height, depth and distance.

#### Required knowledge

- potential damage to trees during construction work i.e. compaction, direct physical damage to trunk and crown, roots, soil contamination, changes in soil properties, environmental damage
- AS1742 Pt 3 1985 - Australian Standard Code of Practice, Work Site Traffic Management (if involved in traffic control)
- principles and techniques relating to the choice of tools and equipment for installing tree protection devices
- techniques for assembling or constructing a range of tree protection devices
- techniques and application of a range of tree protection devices suitable to the requirements of the species
- care and maintenance of trees during protection operations.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include evidence of the following:</p> <ul style="list-style-type: none"> <li>• select tools and equipment for protecting trees prior to construction activities</li> <li>• install protective measures around trees to prevent them from damage</li> <li>• clean up materials and maintain worksite.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Protection methods may include:	<ul style="list-style-type: none"> <li>• installation of fences, tree guards, tree plantings, barriers, retaining walls</li> <li>• soil coverings</li> <li>• erection of signs and bunting</li> <li>• traffic re-direction devices.</li> </ul>

## Unit Sector(s)

Unit sector	Landscape
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSC301A Set out site for construction works

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of setting out a site for construction works in accordance with site plans and specifications and defines the standard required to: interpret site plans and specifications; locate and mark out position of construction works; establish datum point and survey benchmarks on site; and take and verify site levels.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to the setting out of a site for construction work in accordance with site plans and specifications. These tasks may be done in advance of proposed works or in conjunction with construction works already being carried out.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Interpret site plans and specifications	<p>1.1.The various components of the site plan and specifications are identified.</p> <p>1.2.Site plan and specifications are compared with other available plans to ensure accuracy of information.</p> <p>1.3.Equipment required for the setting out of construction works is determined from the site plan and specifications.</p> <p>1.4.Environmental impact of proposed construction works is considered in the interpretation of site plans.</p> <p>1.5.Occupational Health and Safety (OHS) hazards associated with the setting out of construction works are assessed for potential risks, and controls implemented accordingly.</p>
2. Locate and mark out position of construction works	<p>2.1.Existing site features are located from the site plan.</p> <p>2.2.Position of proposed construction works is located from the site plan.</p> <p>2.3.Scale measurements of lines, shapes, angles and dimensions are transferred from the site plan to site.</p> <p>2.4.The shape of proposed construction works is marked out on site according to the site plan and specifications.</p>
3. Establish datum point and survey benchmarks on site	<p>3.1.Datum point is established to ensure all existing and proposed construction works can be linked by survey equipment.</p> <p>3.2.Survey benchmarks are selected and established on positions/structures on site according to site plan and specifications.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Take and verify site levels	4.1. Levelling equipment is set up and checked for accuracy of readings. 4.2. Instruments, which are out of specification, are adjusted accordingly. 4.3. Levels are taken, verified and recorded in accordance with established datum point and survey benchmarks. 4.4. Levelling equipment is cleaned, maintained and stored according to manufacturer instructions.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- implement mathematical and geometrical principles when locating and marking out a site for construction works
- use a range of surveyors instruments
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- interpretation of symbols and use of a legend on site plans and specifications, particularly in relation to benchmarks and the location of existing features
- understanding of compass directions and how to locate North from a site plan
- an awareness of other plans that may be referred to when setting out a site for construction works
- an awareness of common levelling and surveying terms
- environmental awareness associated with the preparation for construction works to ensure that the impact on the environment is minimal when works are implemented
- OHS hazards associated with setting out a site for construction works.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret site plans and specifications</li> <li>• locate and mark out position of construction works</li> <li>• establish datum point and survey benchmarks on site</li> <li>• take and verify site levels.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Set out may include:	<ul style="list-style-type: none"> <li>• the range of site plans and specifications, measuring and surveying equipment.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Landscape
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSC302A Construct landscape features using concrete

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of constructing concrete structures and features and defines the standard required to: interpret site plans and specifications; set out and prepare a site for receipt of concrete, pour, set and finish concrete; check quality of work and clean up site.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the construction of concrete structures and features as a component of landscape project works.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1.Plans and specifications are interpreted and clarified with the supervisor. 1.2.The quantity and quality of materials are checked to ensure they conform to design drawings and specifications. 1.3.Tools and equipment are selected and checked for serviceability according to enterprise guidelines. 1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented. 1.5.Environmental implications of constructing concrete structures are identified and reported to the supervisor.
2. Set out and prepare the site	2.1.Services are determined and located from site plans. 2.2.The position of the structure or feature is marked out according to design drawings and specifications. 2.3.Profiles are established to conform to the tolerances nominated within the design drawings and specifications. 2.4.Subsoil is prepared by removing all debris, vegetable matter and topsoil to provide a solid foundation for concrete. 2.5.Drainage systems are installed according to design drawings and specifications. 2.6.Form work is installed to the site in a manner that will ensure it remains rigid during concrete pouring operations. 2.7.Sub-base material is placed and compacted to the required finished levels. 2.8.Preparation of the site is completed according to the type of structure or feature to be constructed.
3. Mix and pour	3.1.Proportions for concrete mix are determined

ELEMENT	PERFORMANCE CRITERIA
concrete	<p>according to the strength requirements of the project.</p> <p>3.2. Volume of dry materials necessary to produce final concrete mix is determined.</p> <p>3.3. All dry ingredients and required additives are mixed together to ensure a thorough blending of all materials is achieved.</p> <p>3.4. Sufficient water is introduced to produce a concrete mix to the required consistency.</p> <p>3.5. Concrete mix samples are taken for testing, if required, to check for conformity to specifications.</p> <p>3.6. Concrete is poured to designated levels in a manner to avoid segregation of materials.</p> <p>3.7. Concrete is consolidated using an approved vibration method to industry standard (AS3600) to ensure air pockets are eliminated.</p>
4. Finish concrete	<p>4.1. Concrete is screeded to a flat surface to maintain the desired finished level.</p> <p>4.2. Surface is trowelled according to design drawings and specifications.</p> <p>4.3. A Concrete is finished off according to design drawings and specifications.</p>
5. Check quality of work and clean up site	<p>5.1. Quality of finished works is inspected to ensure the standard of the finished structure or feature is in accordance with design drawings and specifications.</p> <p>5.2. Form work is removed and cleaned in a manner which will allow for re-use of the form work.</p> <p>5.3. All debris is removed and disposed of in a manner that minimises risk to the environment.</p> <p>5.4. All tools and equipment are cleaned and stored according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- measure and construct profiles using mathematical techniques

**REQUIRED SKILLS AND KNOWLEDGE**

- establish levels using levelling equipment
- undertake and interpret tests performed on a concrete mix
- place, consolidate and finish concrete
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- MPA testing theory and what effects MPA specifications in a concrete mix
- the comparative environmental implications associated with soil removal and the establishment of drainage systems
- industry standards in relation to reinforcing and consolidating concrete.
- sub-base and sub-grade materials and preparation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- interpret site plans and specifications
- set out and prepare a site for receipt of concrete
- pour, set and finish concrete
- check quality of work and clean up site.

**Context of and specific resources for**

Competency requires the application of work practices under work conditions. Selection and use of resources

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Features may include:	<ul style="list-style-type: none"> <li>structures including paths, driveways, edgings, footings, floors, steps, walls, fences, pool surrounds, entertaining areas and ornamental garden elements.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Landscape
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSC303A Construct brick and/or block structures and features

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of constructing brick and/or block structures and features and defines the standard required to: interpret site plans and specifications; set out and prepare a landscape construction site; construct landscape structures; check quality of work and clean up site.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to constructing brick and/or block structures and features as a component of landscape project works.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and prepare work	<p>1.1.Plans and specifications are interpreted and clarified with the supervisor.</p> <p>1.2.The quantity and quality of materials are checked to ensure they conform to design drawings and specifications.</p> <p>1.3.Tools and equipment are selected and checked for serviceability according to enterprise guidelines.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</p> <p>1.5.Environmental implications of erecting brick and/or block structures are identified and reported to the supervisor.</p>
2. Set out and prepare the site	<p>2.1.Services are determined and located from site plans.</p> <p>2.2.The position of the structure or feature is marked out according to design drawings and specifications.</p> <p>2.3.Profiles are established to conform to the tolerances nominated within the design drawings and specifications.</p> <p>2.4.Subsoil is prepared by removing all debris, vegetable matter and topsoil to provide a solid foundation for construction.</p> <p>2.5.Drainage systems are installed according to design drawings and specifications.</p> <p>2.6.Sub-base material is placed and compacted to the required finished levels.</p>
3. Construct structure or feature	<p>3.1.Mortar is mixed to determined ratio and appropriate admixes including bonding and colouring agents are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>added, as required, and in accordance with specifications.</p> <p>3.2. Damp proofing and base course of brick and/or block work is laid according to design drawings and specifications.</p> <p>3.3. Courses of brick and/or block work are laid using designated bond(s) in a manner that will ensure the viability and stability of the structure, and according to design drawings and specifications.</p> <p>3.4. Finishes are applied to brick or block work in accordance with specifications.</p>
4. Check quality of work and clean up site	<p>4.1. Quality of finished works is inspected to ensure the standard of the finished structure or feature is in accordance with design drawings and specifications.</p> <p>4.2. Brick and/or block work surfaces are cleaned down in an environmentally safe and sensitive manner.</p> <p>4.3. Tools and equipment are cleaned and stored according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- measure and construct profiles using mathematical techniques
- use of levelling equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- comparative environmental implications associated with soil disturbance and the establishment of drainage systems

**REQUIRED SKILLS AND KNOWLEDGE**

- components of mortar, including admixes such as bonding and colouring agents, used in the construction of brick and/or block structures and features.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- interpret site plans and specifications
- set out and prepare a landscape construction site
- construct landscape structures
- check quality of work and clean up site.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Structures and features may include:

- stone, brick or block features such as walling, steps, edgings, walls, fences, BBQ and entertaining areas, and ornamental garden elements not covered by engineering specifications.

## Unit Sector(s)

Unit sector	Landscape
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## Co-requisite units

Co-requisite units	

## Competency field

Competency field	
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## AHCLSC304A Erect timber structures and features

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of erecting timber structures and features as a component of landscape project works and defines the standard required to: mark out the site for the structure according to design drawings and specifications; establish the levels and prepare footings where required; use a wide range of power tools efficiently and safely; fix, join or assemble timbers using a variety of recognised methods; apply a variety of surface finishes; ensure the completed structure or feature meets the quality standard in the specifications.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies workers engaged in the process of erecting timber structures and features as a component of landscape project works.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare work	<p>1.1.Plans and specifications are interpreted.</p> <p>1.2.The quantity and quality of materials are checked for conformation to design drawings and specifications.</p> <p>1.3.Tools and equipment are selected and checked for serviceability according to industry practice.</p> <p>1.4.Personal Protective Equipment (PPE) is selected, used and maintained according to procedures.</p> <p>1.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed, and controls are implemented.</p>
2. Position the structure and prepare the profile and footings	<p>2.1.Services are identified and located from site plans.</p> <p>2.2.The position of the structure is marked out according to design drawings and specifications.</p> <p>2.3.Profiles are established to conform to the tolerances nominated within the design drawings and specifications.</p> <p>2.4.Footings are excavated and prepared according to the type of structure to be erected.</p>
3. Prepare and cut timber components	<p>3.1.Components are prepared for assembly to the requirements contained in the design drawings and specifications.</p> <p>3.2.The length of components and the positions of cuts and joints are marked out with a pencil according to designated specifications in design drawings.</p> <p>3.3.Cutting tools are selected, used and maintained</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to manufactures recommendations and OHS specifications.</p> <p>3.4.Components are cut, checked out and drilled accurately in preparation for joining and assembly.</p>
4. Assemble and erect structure	<p>4.1.Timber components are fixed, joined or assembled into position and fixed into place according to design drawings and specifications.</p> <p>4.2.Remaining components are installed and fixed into position according to design drawings and specifications.</p> <p>4.3.Structure is finished off to ensure all components are secure and complete.</p> <p>4.4.Coatings are applied according to specifications and manufacturer's recommendations.</p>
5. Check quality of work and clean up site	<p>5.1.Quality of finished works is checked for compliance with design drawings and specifications.</p> <p>5.2.Debris is cleaned from structure and site according to industry practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- measure and mark lengths of timber accurately
- fix, join or assemble timbers using a variety of recognised methods
- apply surface finishes
- use surveyors' instruments
- excavate footings
- use hand and power tools according to OHS requirements
- estimate quantities
- demonstrate safe working practices
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening,

**REQUIRED SKILLS AND KNOWLEDGE**

clarifying information and consulting with supervisors as required

- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- levelling principles and techniques
- timber properties and characteristics
- common timber joints
- timber fixing methods and product
- footings and their construction used for timber structures
- OHS requirements associated with erecting structures and features
- environmental implications associated with excavation and construction activity.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- mark out the site for the structure according to design drawings and specifications
- establish the levels and prepare footings where required
- use a wide range of power tools efficiently and safely
- fix, join or assemble timbers using a variety of recognised methods
- apply a variety of surface finishes
- ensure the completed structure or feature meets the quality standard in the specifications.

**Context of and specific resources for**

Competency requires the application of work practices



<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Structures and features may include:	<ul style="list-style-type: none"> <li>• timber structures and features such as:                             <ul style="list-style-type: none"> <li>• fences</li> <li>• pergolas</li> <li>• trellises</li> <li>• lattices</li> <li>• gazebos</li> <li>• small bridges</li> <li>• handrails</li> <li>• boardwalks</li> <li>• steps</li> <li>• decking</li> <li>• sheds</li> <li>• playhouses</li> <li>• screens</li> </ul> </li> <li>• site furniture.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSC305A Construct stone structures and features

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of constructing stone structures and features as a component of landscape project works and defines the standard required to: interpret plans and specifications; prepare the site and install drainage systems; construct stone work with correct mortar ratio; set out base for paving.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the construction of stone structures and features as a component of landscape project works.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and prepare work	<p>1.1.Plans and specifications are interpreted and clarified with the supervisor.</p> <p>1.2.The quantity and quality of materials are checked to ensure they conform to design drawings and specifications.</p> <p>1.3.Tools and equipment are selected and checked for serviceability according to enterprise guidelines.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</p> <p>1.5.Environmental implications of erecting stone structures are identified and reported to the supervisor.</p>
2. Set out and prepare the site	<p>2.1.Services are determined and located from site plans.</p> <p>2.2.The position of the structure or feature is marked out according to design drawings and specifications.</p> <p>2.3.Profiles are established to conform to the tolerances nominated within the design drawings and specifications.</p> <p>2.4.Subsoil is prepared by removing all debris, vegetable matter and topsoil to provide a solid foundation for construction.</p> <p>2.5.Drainage systems are installed according to design drawings and specifications.</p> <p>2.6.Sub-base material is placed and compacted to the required finished levels.</p>
3. Construct structure or feature	<p>3.1.Mortar is mixed to determined ratio and appropriate admixes including bonding and colouring agents are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>added as required, and in accordance with specifications.</p> <p>3.2. Damp proofing and base course of stone work is laid according to design drawings and specifications.</p> <p>3.3. Courses of stone work are laid using designated bond/s in a manner that will ensure the viability and stability of the structure, and according to design drawings and specifications.</p>
4. Install stone paving	<p>4.1. Set out and prepare area to be paved according to the site plan.</p> <p>4.2. The area is excavated to shape, depth and dimensions to sub base level according to industry standards.</p> <p>4.3. The sub base is trimmed to the designated level and falls, and base material is placed and compacted to the required finished level.</p> <p>4.4. Bedding material is spread over the area and levelled to the designated level and falls.</p> <p>4.5. Stone is placed and fitted to accurately fill gaps in the pattern within tolerances nominated within the site plan.</p> <p>4.6. Edge constraints are installed as required by the site plan.</p>
5. Check quality of work and clean up site	<p>5.1. Quality of finished works is inspected to ensure the standard of the finished structure or feature is in accordance with design drawings and specifications.</p> <p>5.2. Stone work surfaces are cleaned down in an environmentally safe and sensitive manner.</p> <p>5.3. Tools and equipment are cleaned and stored according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- measure and construct profiles using mathematical techniques

**REQUIRED SKILLS AND KNOWLEDGE**

- use levelling equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- comparative environmental implications associated with soil disturbance and the establishment of drainage systems
- components of mortar including admixes such as bonding and colouring agents used in the construction of stone structures and features.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- interpret plans and specifications
- prepare the site and install drainage systems
- construct stone work with correct mortar ratio
- set out base for paving.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Structures and features may include:	<ul style="list-style-type: none"> <li>• the range of stonework construction techniques and equipment, and structures and features including:                             <ul style="list-style-type: none"> <li>• edgings</li> <li>• steps</li> <li>• walls</li> <li>• retaining walls</li> <li>• fences</li> <li>• barriers</li> <li>• BBQ and entertaining areas</li> <li>• ornamental garden elements.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSC306A Implement a paving project

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a paving project and defines the standard required to: determine project requirements from plans; conduct a site hazard identification and risk control assessment; organise work and use tools and equipment for paving project; set out and prepare paving site according to plan specifications; implement a paving project; and clean up, store and maintain associated tools, machinery and equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies landscapers involved in the process of installation and construction of a paved surface to a prepared base within a documented scope of works incorporated in a commercial project across a range of situations and environments, including amenity and natural resource areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for paving project	1.1. Requirements of the paving project are clarified with client/supervisor and enterprise guidelines. 1.2. Equipment and material resource requirements are identified according to the scope of the construction work and the supervisor's instructions. 1.3. The environmental implications of the proposed work are identified. 1.4. Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented. 1.5. Personal protective equipment (PPE) is selected, used, maintained and stored. 1.6. Delivery of materials to site is organised according to workplace priorities.
2. Set out and prepare the site	2.1. Site and hazards are identified, risks assessed and suitable controls implemented. 2.2. Site bunting is erected, pedestrian access is controlled, and safety signage is placed where appropriate. 2.3. Services are determined and located from site plans. 2.4. Provision for irrigation lines to cross paved areas is made, where applicable. 2.5. The paving pattern is marked out according to plans and specifications. 2.6. Sub-base material is placed and compacted to the

ELEMENT	PERFORMANCE CRITERIA
	<p>required finished levels.</p> <p>2.7.Surface drainage is incorporated according to design drawings and specifications.</p>
3. Coordinate paving project installation	<p>3.1.Paving project is constructed according to plan.</p> <p>3.2.Appropriate drainage is installed according to plan.</p> <p>3.3.Tools, equipment and machinery are used safely according to enterprise operating procedures and OHS requirements.</p>
4. Check quality of work and clean up site	<p>4.1.Quality of finished works is inspected to ensure the standard of the finished project is in accordance with design drawings and specifications.</p> <p>4.2.Paved surfaces are cleaned down in an environmentally safe and sensitive manner.</p> <p>4.3.Tools and equipment are cleaned and stored according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- calculate material and resource requirements
- conduct a site hazard identification and risk control assessment
- coordinate a team to achieve optimum performance
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- landscape paving materials
- landscape paving techniques
- set-out techniques

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• work schedule programming</li> <li>• possible causes of disruption to work activities and their effect on quality and time schedules</li> <li>• methods and practices for maintaining and repairing paved areas</li> <li>• the range, use and availability of required materials, equipment and machinery</li> <li>• hazard identification and risk control assessment</li> <li>• OHS legislative requirements and codes of practice.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine project requirements from plans</li> <li>• organise work and use tools and equipment for paving project</li> <li>• conduct a site hazard identification and risk control assessment</li> <li>• set out and prepare paving site according to plan specifications</li> <li>• implement a paving project</li> <li>• clean up, store and maintain associated tools, machinery and equipment.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Implementation may include:	<ul style="list-style-type: none"> <li>• paving plans</li> <li>• materials</li> <li>• equipment and machinery.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCLSC307A Implement a retaining wall project

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a retaining wall project and defines the standard required to: set out and prepare site according to plan specifications; establish survey benchmarks; excavate and profile soil levels; install and assemble components of a retaining wall; use tools and equipment for retaining wall projects; verify completed works meet the design plan and specifications. This standard forms a part of the training and assessment necessary to obtain the industry license.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to landscapers involved in the process of implementation of a retaining wall project. The work is likely to be under limited supervision, with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for retaining wall project	<p>1.1. Requirements of the retaining wall project are clarified with client/supervisor.</p> <p>1.2. Equipment and material resource requirements are identified according to the scope of the construction work.</p> <p>1.3. The environmental implications of the proposed work are identified.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.5. Personal Protective Equipment (PPE) is selected, used and maintained according to procedures</p> <p>1.6. Delivery of materials to site is organised according to workplace priorities.</p>
2. Mark out site for retaining wall	<p>2.1. Site bunting is erected and safety signage is placed where appropriate.</p> <p>2.2. Services are determined and located from site plans.</p> <p>2.3. The position of the retaining wall is marked out according to site and construction plans.</p> <p>2.4. The location and depth of excavations are determined from site and construction plans.</p> <p>2.5. Profiles are established to conform to the tolerances designated by the construction plans.</p> <p>2.6. Survey benchmarks are established.</p>
3. Construct retaining	3.1. Retaining wall components are assembled /installed

ELEMENT	PERFORMANCE CRITERIA
wall	<p>according to plan specifications.</p> <p>3.2. Appropriate drainage is installed according to plan.</p> <p>3.3. Tools, equipment and machinery are used safely in accordance with enterprise safe operating procedures and OHS requirements.</p>
4. Check quality of work and clean up site	<p>4.1. Quality of finished works is inspected to ensure the standard of the finished project is in accordance with design drawings and specifications.</p> <p>4.2. The work site is cleaned down in an environmentally safe and sensitive manner</p> <p>4.3. Tools and equipment are cleaned and stored according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- read and interpret documentation associated with retaining wall projects
- calculate material and resource requirements
- establish survey benchmarks
- install and assemble components of a retaining wall
- coordinate a team to achieve optimum performance
- document results clearly and concisely
- identify hazards and assess risk
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- landscape retaining wall materials
- landscape retaining wall construction techniques
- set out techniques
- work schedule programming



**REQUIRED SKILLS AND KNOWLEDGE**

- possible causes of disruption to work activities and their effect on quality and time schedules
- methods and practices for maintaining and repairing retaining walls
- the range, use and availability of materials, equipment and machinery that may be required for the project
- OHS issues, legislative requirements and codes of practice
- state based licensing
- local council regulations
- WorkCover regulations.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- set out and prepare site according to plan specifications
- establish survey benchmarks
- excavate and profile soil levels
- install and assemble components of a retaining wall
- use tools and equipment for retaining wall projects
- verify completed works meet the design plan and specifications.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Implementation may include:	<ul style="list-style-type: none"> <li>• materials</li> <li>• tools</li> <li>• equipment</li> <li>• machinery and techniques used to construct retaining walls.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Landscape
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSC308A Install metal structures and features

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing metal structures and features as a component of landscape project works and defines the standard required to: plan and set out a site for the installation; prepare and cut metal components; assemble and erect structure; check quality of work and clean up site.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the installation of metal structures and features as a component of landscape project works.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and prepare work	<p>1.1.Plans and specifications are interpreted and clarified with the supervisor.</p> <p>1.2.The quantity and quality of materials are checked to ensure they conform to design drawings and specifications.</p> <p>1.3.Tools and equipment are selected and checked for serviceability according to enterprise guidelines.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</p> <p>1.5.Environmental implications of installing metal structures are identified and reported to the supervisor.</p>
2. Set out the site for the structure	<p>2.1.Services are determined and located from site plans.</p> <p>2.2.The position of the structure or feature is marked out according to design drawings and specifications.</p> <p>2.3.Profiles are established to conform to the tolerances nominated within the design drawings and specifications.</p> <p>2.4.Footings are excavated and prepared according to the type of structure or feature to be installed.</p>
3. Prepare and cut metal components	<p>3.1.Components are laid out ready for assembly to the requirements contained in the design drawings and specifications.</p> <p>3.2.The length of components and the positions of joins are marked out according to designated specifications in design drawings.</p> <p>3.3.Cutting tools are selected, used and maintained</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to manufacturer's recommendations and OHS specifications.</p> <p>3.4.Components are cut and joined in preparation for assembly.</p>
4. Assemble and erect structure	<p>4.1.Metal components are assembled into position and fixed into place according to design drawings and specifications.</p> <p>4.2.Remaining components are installed and fixed into position according to design drawings and specifications.</p> <p>4.3.Structure is finished off to ensure all components are secure and complete.</p> <p>4.4.Coatings are applied according to specifications, manufacturer's recommendations and OHS guidelines.</p>
5. Check quality of work and clean up site	<p>5.1.Quality of finished work is inspected to ensure the standard of the finished structure or feature is in accordance with design drawings and specifications.</p> <p>5.2.Debris is cleaned from structure and site according to enterprise guidelines.</p> <p>5.3.Waste material is disposed of in an environmentally aware and sensitive manner.</p> <p>5.4.Unused metal components are stored for future re-use according to enterprise guidelines.</p> <p>5.5.Tools and equipment are cleaned and stored according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- measure and mark lengths of metal components accurately
- join and cut metal components using different techniques and methods
- use some surveyor's instruments
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible

**REQUIRED SKILLS AND KNOWLEDGE**

- information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
  - use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- surveying principles and techniques
- the correct use of hand and power tools and other OHS requirements associated with installing structures and features
- comparative environmental implications associated with excavation and construction activity.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- plan and set out a site for the installation
- prepare and cut metal components
- assemble and erect structure
- check quality of work and clean up site.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Installation may include:	<ul style="list-style-type: none"> <li>• fences</li> <li>• handrails</li> <li>• screens</li> <li>• seats</li> <li>• bollards</li> <li>• playground equipment</li> <li>• rubbish bins</li> <li>• plant surrounds</li> <li>• sculptures</li> <li>• other ornamental features.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCLSC309A Install water features

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing water features and defines the standard required to: prepare site for water feature installation; construct/assemble, install and commission water feature/s.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the installation of water features which may include waterfalls, ponds, waterways and fountains. They may be prefabricated water features as supplied by irrigation suppliers and garden centres, or they may be formed 'in situ' with the appropriate waterproof membrane and medium.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and prepare work	<p>1.1.Plans and specifications are interpreted and clarified with the supervisor.</p> <p>1.2.The quantity and quality of materials are checked to ensure they conform to design drawings and specifications.</p> <p>1.3.Tools and equipment are selected and checked for serviceability according to enterprise guidelines.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</p> <p>1.5.Environmental implications of constructing concrete structures are identified and reported to the supervisor.</p>
2. Set out and prepare the site	<p>2.1.Services are determined and located from site plans.</p> <p>2.2.The exact location and depth of excavations is determined from design drawings and specifications, and marked out accordingly.</p> <p>2.3.Site is excavated to the shape, depth and dimensions as marked out.</p> <p>2.4.Drainage systems are constructed according to design drawings and specifications.</p> <p>2.5.Bedding material is placed and compacted to the required finished levels.</p> <p>2.6.Soil and waste material is sorted and stockpiled ready for removal, reuse or recycling.</p>
3. Install water feature and accessories	<p>3.1.A waterproof membrane, prefabricated shell or formed 'in situ' feature is installed according to design drawings, specifications and/or manufacturer's</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>instructions.</p> <p>3.2.All accessories to the feature are installed according to design drawings, specifications and/or manufacturer's instructions, and with due consideration to safety issues.</p> <p>3.3.The feature is filled with water, tested for leaks and repaired accordingly.</p> <p>3.4.Water is treated to remove or neutralise contaminants resulting from excavation and installation work.</p>
4. Check quality of work and clean up site	<p>4.1.Any mechanical features are checked and adjusted to ensure they operate according to manufacturer's specifications.</p> <p>4.2.Quality of finished works is inspected to ensure the standard of the finished feature is in accordance with design drawings and specifications.</p> <p>4.3.Debris is cleaned from feature and site according to enterprise guidelines.</p> <p>4.4.Soil and waste material is disposed of in an environmentally aware and sensitive manner.</p> <p>4.5.All tools and equipment are cleaned and stored according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- measure and calculate area, depth and volume
- use some surveyors instruments
- install various types of prefabricated water features and/or form them 'in situ'
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural,

**REQUIRED SKILLS AND KNOWLEDGE**

social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- regulations regarding water use and safety in public places
- pumping systems and accessories associated with water features
- pipe sizes, types and applications
- plant materials, fish and water animals suitable for various types of water features
- water treatment methods
- comparative environmental implications associated with soil excavation and the establishment of drainage systems and water catchment features
- legislative and regulatory requirements with water feature installation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare site for water feature installation
- construct/assemble, install and commission water feature/s.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Water feature may include:	<ul style="list-style-type: none"> <li>• waterfalls</li> <li>• ponds</li> <li>• waterways</li> <li>• fountains which may be prefabricated or formed 'in situ'.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCLSC310A Implement a tree transplanting program

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a tree transplanting program and defines the standard required to: determine tree transplanting requirements from specifications; prepare tools and equipment; tree and new site for tree transplanting; calculate tree mass and size for safe removal; bind and/or wrap root balls and crowns; lift, reinstall and stabilise tree; organise work according to program requirements; record transplanting activities.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of transplanting trees.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for tree transplantation	<p>1.1. Occupational Health and Safety (OHS) hazards associated with transplanting operations are identified, risks assessed and suitable controls implemented.</p> <p>1.2. Liaison with local authorities and information services is undertaken to determine location of services and utilities, and legislation, local by-laws and regulations governing the transplanting/transporting of trees.</p> <p>1.3. Tree is inspected to ensure the appropriate transplanting operations are implemented according to an identified program, and to ensure the safety of personnel, the public and property is maintained throughout and upon completion of work.</p> <p>1.4. Root ball and crown treatments are selected, prepared and used according to the requirements of the species to ensure the tree remains viable throughout the transplanting process.</p> <p>1.5. Site is prepared for transplanting activities including notification of local residents and authorities where necessary.</p> <p>1.6. Surrounding property/vegetation is relocated, secured and/or protected from potential damage during tree transplanting.</p> <p>1.7. Tools, equipment and machinery necessary to implement tree transplanting activities are selected, prepared and used according to enterprise guidelines and manufacturers' recommendations.</p>

ELEMENT	PERFORMANCE CRITERIA
2. Implement transplanting operations	<p>2.1. Soil around the root zone is excavated and root ball is undercut with minimum stress to the plant according to documented work procedures.</p> <p>2.2. Roots are pruned where required to meet AS4373 Pruning of amenity trees.</p> <p>2.3. Tree is stabilised as the root system is undercut and anti-transpirants applied as a root soak or foliar spray to ensure viability of the plant is maintained.</p> <p>2.4. Root ball is bound with appropriate material to ensure adequate soil is retained and kept moist prior to transportation and installation.</p> <p>2.5. Tree is lifted and secured for potential storage and/or transportation using safe lifting techniques and in accordance with documented guidelines.</p> <p>2.6. Tree or shrub is prepared and handled to minimise damage during handling and transportation.</p> <p>2.7. Appropriate drainage and soil improvements are implemented and the tree is re-installed and stabilised.</p> <p>2.8. Tools, equipment and machinery are cleaned and stored according to enterprise guidelines and manufacturers' recommendations.</p> <p>2.9. Completed transplanting program is recorded and communicated to management and/or the client according to enterprise guidelines.</p>
3. Maintain health and viability of transplanted tree	<p>3.1. Water is applied to the reinstalled tree over a sustained period to ensure minimal leaf loss and that new growth is apparent.</p> <p>3.2. Anti-transpirants are applied and any nutritional requirements of the species are provided.</p> <p>3.3. Tree protection devices are installed to ensure adequate support and protection is provided.</p> <p>3.4. Tree condition and site is monitored to ensure the plant remains healthy.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- calculate tree mass and size for safe removal
- bind and/or wrap root balls and crowns
- locate existing services
- monitor and minimise environmental impacts of transplanting operations
- dispose of plant debris in an environmentally safe and sensitive manner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- tree anatomy and physiology
- tree transplanting techniques
- principles and methods of operating tree moving equipment
- causes of stress in trees resulting from transplanting, storage and transportation
- safety procedures and potential hazards of removing and transplanting trees
- requirements for securing and signage when transporting trees on road vehicles
- problems and methods relating to the aftercare of trees during their establishment period
- environmental impact of tree removal and transplantation
- relevant legislation that may impact on a tree transplant program
- local government tree protection and preservation regulations
- AS4373-2007 Pruning of amenity trees
- relevant Code of Practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the



<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine tree transplanting requirements from specifications</li> <li>• prepare tools and equipment, tree and new site for tree transplanting</li> <li>• calculate tree mass and size for safe removal</li> <li>• bind and/or wrap root balls and crowns</li> <li>• lift, reinstall and stabilise tree</li> <li>• organise work according to program requirements</li> <li>• record transplanting activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Transplanting may include:	<ul style="list-style-type: none"> <li>• all species of trees suitable for transplanting in an amenity or landscape context.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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# AHCLSC401A Supervise landscape project works

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising landscape project works and defines the standard required to: develop a project plan and apply for planning approvals if required; calculate and obtain quotes for materials and receive on site; supervise the work team and ensure a safe work environment; minimise environmental risks and impacts; monitor the landscape works through to completion and rectify problems; complete a landscape works report and present to management and client.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes the coordination and supervision of planting programs, turf installations and cultivation, the construction and installation of landscape structures and features, installation of drainage and irrigation and garden maintenance or restoration projects across a range of situations and environments including amenity and natural resource areas.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify scope of landscape project works	<p>1.1.Nature of landscape project works and extent of responsibilities are identified and checked against relevant landscape documentation.</p> <p>1.2.Personnel and other resources required to undertake landscape project works are identified according to the scope of the project and relevant landscape documentation.</p> <p>1.3.A work program is developed according to the needs of management and/or the client to ensure that project outcomes are reached within designated time lines.</p> <p>1.4.The environmental impact of the proposed landscape project works is considered.</p> <p>1.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</p>
2. Coordinate the supply of materials/ equipment	<p>2.1.Material quantities and equipment requirements are calculated to ensure an on-going work program is maintained according to the scope of the project.</p> <p>2.2.Material quantities are ordered, checked for quantity and quality, and stockpiled where required.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Any specific delivery instructions are conveyed and confirmed with suppliers to ensure materials are delivered according to the work program.</p> <p>2.4. Any material rejected is sent back to supplier and re-ordered.</p>
3. Monitor project works	<p>3.1. Work program is monitored and adjusted to ensure the site is developed according to the needs of management and/or the client, and to ensure that project outcomes are reached within designated time lines</p> <p>3.2. Variations to the work program, issues likely to cause delays, and contingencies beyond the scope of the project are identified, recorded and reported to management and/or the client.</p> <p>3.3. The work site is monitored to ensure it remains in a clean, tidy and safe condition throughout and on completion of landscape project works.</p>
4. Complete site works	<p>4.1. Site is inspected prior to practical completion to ensure all works have been undertaken according to management and/or client needs and the relevant landscape documentation.</p> <p>4.2. Any works not complying are noted and rectified.</p> <p>4.3. A completed landscape project works report is produced, recorded and communicated to management and/or the client.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- calculate material and resource requirements
- control quality of supplied materials
- coordinate a team to achieve optimum performance
- demonstrate safe working practices
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly

**REQUIRED SKILLS AND KNOWLEDGE**

- information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
  - use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
  - use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- environmental awareness associated with undertaking landscape project works to ensure the impact on the environment is minimal
- project contracts, documentation, plans and specifications
- possible causes of disruption to work programs and their effect on quality and time schedules
- site assessment and work site establishment
- supervision of labour and sub-contractors
- job reporting including format, frequency and documentation
- issuing of instructions, variations and RFI
- legislative requirements and legal responsibilities (including OHS)
- OHS responsibilities of employers and employees
- hazard identification, assessment and control.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- develop a project plan and apply for planning

<b>EVIDENCE GUIDE</b>	
	<p>approvals if required</p> <ul style="list-style-type: none"> <li>• calculate and obtain quotes for materials and receive on site</li> <li>• supervise the work team and ensure a safe work environment</li> <li>• minimise environmental risks and impacts</li> <li>• monitor the landscape works through to completion and rectify problems</li> <li>• complete a landscape works report and present to management and client.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Landscape project works may include:	<ul style="list-style-type: none"> <li>• planting programs</li> <li>• turf installation and cultivation</li> <li>• the erection of landscape structures and features</li> <li>• installation of drainage and irrigation</li> <li>• garden maintenance or restoration</li> <li>• construction of walking tracks</li> <li>• boardwalks and safety rails</li> <li>• earthworks involving land shaping and stabilisation of slopes and embankments.</li> </ul>
Landscape project works may include:	<ul style="list-style-type: none"> <li>• amenity and/or natural areas.</li> </ul>

## Unit Sector(s)

Unit sector	Landscape
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSC501A Survey and establish site levels

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers surveying and establishing site levels and defines the standard required to: determine the survey items from a client brief; record the levels of survey items and site features; orient the landscape site; map the levels on a scale plan.
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### Application of the Unit

<b>Application of the unit</b>	This competency standard applies to landscapers and landscape designers and covers the process of undertaking site surveys, mapping levels and issues of levels in gardens and using a magnetic compass.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Undertake the site survey	1.1.Survey items are determined from the existing plan or client brief. 1.2.Survey items and relevant landscape features are measured. 1.3.Measurements are taken and reduced with reference to the design. 1.4.Measurements are checked and recorded according to industry practice and documented procedures.
2. Read maps and plans	2.1.Current magnetic declinations and magnetic bearings are taken. 2.2.Differences between true and magnetic north and place north points on plans are determined. 2.3.Magnetic bearings to true north points are transferred on plans.
3. Record site details	3.1.Orientation and levels are recorded on a site plan. 3.2.Scale plan is produced for a garden design. 3.3.Plan of site is presented to the client.

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>

## REQUIRED SKILLS AND KNOWLEDGE

- use survey equipment
- map levels and issues of levels in gardens
- use and care for relevant surveying equipment
- booking and logging results
- analyse surveying and levelling results
- determine surveying protocols
- capture survey data
- maintain data records
- exhibit professional work practices
- produce scale drawings for designs and costings
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- current magnetic declinations and take magnetic bearings
- transference of magnetic bearings to true north points on plans
- terminology of surveying and levelling
- different techniques for dealing with different garden shapes
- differences between true and magnetic north and place north points on plans
- map and plan reading.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the survey items from a client brief</li> <li>• record the levels of survey items and site features</li> <li>• orient the landscape site</li> <li>• map the levels on a scale plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Survey equipment may include:	<ul style="list-style-type: none"> <li>• GPS instruments</li> <li>• automatic levels</li> <li>• laser levels</li> <li>• Staffs</li> <li>• Magnetic compass</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Landscape
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSC502A Manage landscape projects

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the process of managing landscape projects and defines the standard required to: receive/prepare landscape project documentation; develop and cost a bill of quantities; develop a schedule of works; order and arrange for purchase and delivery of goods and services; organise and manage works program and works team; identify sub-contracted work and program and manage sub-contractors; identify, negotiate and implement variations to the contract; identify and rectify non-conforming elements to the contract; prepare and manage on-going maintenance program until handover. This standard is linked to licencing regulations in local jurisdictions.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to landscape managers in a management role as part of an enterprise or as a contractor and covers the process of managing landscape projects.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify issues relating to the landscape project	<p>1.1.The goals and objectives of the project are identified and discussed with the client and/or management.</p> <p>1.2.Landscape documentation is analysed to determine the nature and scope of the project.</p> <p>1.3.Potential constraints to the success of the project are identified.</p> <p>1.4.The environmental impact of the proposed landscape project works is considered at this stage.</p> <p>1.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</p>
2. Maintain effective client liaison	<p>2.1.Responsibilities of all parties involved in the project are clarified according to the contract.</p> <p>2.2.Procedures to vary the contract are clarified to the satisfaction of all parties involved in the project.</p> <p>2.3.Emergency procedures are identified to the satisfaction of all parties involved in the project according to contract terms and conditions.</p> <p>2.4.Communication obligations in respect of the work program are established according to contractual obligations and sound business practice.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Develop work schedule	<p>3.1. Work schedules and timelines of operations are identified and documented in a form that is accessible and understandable to all relevant personnel.</p> <p>3.2. Resources required for the landscape project are identified according to the contract and landscape design.</p> <p>3.3. Quantity, quality and timing of supply of each input and service are identified and documented.</p> <p>3.4. Key performance outcomes and indicators are established to measure performance of all operations and personnel.</p>
4. Manage contractors	<p>4.1. Standard contracts are prepared for specific works in line with the landscape design and contract.</p> <p>4.2. Progress of works against contract is monitored according to enterprise standards.</p> <p>4.3. Variations are identified, negotiated, implemented and recorded.</p> <p>4.4. Non-conforming elements of the contract are identified, rectified and recorded.</p> <p>4.5. Progress payments and final payments are initiated according to the terms of contract.</p>
5. Submit works for hand over	<p>5.1. Site inspection is undertaken with relevant personnel at completion of works and prior to hand over according to enterprise guidelines.</p> <p>5.2. All items below specification are noted, recorded and rectified according to enterprise guidelines and contract terms and conditions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- monitor and minimise adverse environmental impacts by contractors
- report on and document clearly all aspects related to landscape project works
- interpret or prepare estimates, quotes and tenders
- use literacy skills to fulfil job roles as required by the organisation. The level of



**REQUIRED SKILLS AND KNOWLEDGE**

skill may range from reading and understanding documentation to completion of written reports

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- contract preparation and administration
- estimation, quotation and tender process
- project management principles
- regulations having possible bearing on landscape projects
- public liability and legal responsibilities
- personal and professional liability
- duty of care
- environmental awareness to identify, manage and minimise any environmental risks
- landscape machinery and equipment such as earthmoving and earth forming machinery.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- receive/prepare landscape project documentation
- develop and cost a bill of quantities

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• develop a schedule of works</li> <li>• order and arrange for purchase and delivery of goods and services</li> <li>• organise and manage works program and works team</li> <li>• identify sub-contracted work and program and manage sub-contractors</li> <li>• identify, negotiate and implement variations to the contract</li> <li>• identify and rectify non-conforming elements to the contract</li> <li>• prepare and manage on-going maintenance program until handover.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Landscape projects may include:	<ul style="list-style-type: none"> <li>• all installations</li> <li>• renovations and development works for residential and commercial landscape and civil projects.</li> </ul>
Landscape project management may include:	<ul style="list-style-type: none"> <li>• all contractual and administration requirements</li> <li>• legislative</li> <li>• regulatory and legal constraints</li> <li>• risk management</li> <li>• OHS</li> <li>• Quality Assurance (QA)</li> <li>• EMP best practice.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Landscape
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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# AHCLSC503A Manage a tree transplanting program

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing a tree transplanting program and defines the standard required to: assess the transplant trees; assess the lifting and transplant sites; determine the transplant and transportation requirements and removal method; implement the transplanting operation; document the tree transplanting program, budget and monitoring procedures; document the contingency planning and after-care plan.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the management a tree transplanting program and is likely to be undertaken without supervision, with only general guidance on progress sought by management and/or the client.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess the sites and trees	<p>1.1.Site assessments are undertaken to identify site conditions which may impact upon transplanting activities at the lifting site and the transplant site.</p> <p>1.2.Occupational Health and Safety (OHS) hazards are identified, risks assessed and suitable controls recommended.</p> <p>1.3.Liaison with local authorities and information services is undertaken to determine location of services and utilities, and legislation, local by-laws and regulations governing the transplanting/transporting of trees.</p> <p>1.4.Trees are assessed for viability for transplanting to ensure the best time and conditions are chosen according to tree species characteristics.</p>
2. Determine transplanting requirements	<p>2.1.The appropriate tools, equipment, machinery and specialist contractors are identified in accordance with the site assessment and tree species to be transplanted.</p> <p>2.2.Excavation methods and root ball preparation is determined according to the characteristics of the species.</p> <p>2.3.Crown reduction/protection tasks are determined according to the characteristics of the species and are planned to meet AS4373 Pruning of amenity trees.</p> <p>2.4.Root ball and tree mass is calculated to determine appropriate lifting and transport requirements.</p> <p>2.5.Personnel/contractor requirements are negotiated to ensure trees are prepared, lifted, transported and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>re-installed with minimum stress to the trees, and with regard to safety and environmental factors.</p> <p>2.6.A transport route is identified with regard to the size and shape of the tree and road transport vehicle requirements.</p> <p>2.7.An aftercare plan outlining monitoring frequency and methods to maintain the health and viability of the transplanted tree(s) is determined and documented in the program.</p>
3. Document a tree transplanting program	<p>3.1.Transplanting program is documented according to management and/or client needs.</p> <p>3.2.Resources and costing details are documented and presented to management and/or the client.</p> <p>3.3.Transplanting program is communicated to the relevant personnel for implementation.</p> <p>3.4.Transplant operations are performed as per standard Implement a tree transplanting program.</p> <p>3.5.Completed tree transplanting program is assessed to ensure that transplantation was undertaken according to the identified program and budget guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess tree viability
- calculate root ball and tree mass and size
- calculate project resources and costs and develop a budget
- assess crown and root reduction requirements
- accurately document a transplanting program and communicate these plans and instructions to clients and other personnel
- plan the transplanting program in an environmentally sensitive manner
- negotiate and manage contracts
- liaise with local authorities to determine location of services and relevant legislation
- assess and control risks

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• tree anatomy, physiology and biochemistry</li> <li>• current practices and techniques in tree preparation, lifting, transportation and replanting</li> <li>• methods of managing tree moving operations</li> <li>• tree transplanting techniques appropriate to the specific requirements of the species</li> <li>• causes of stress in trees resulting from resulting from transplanting, storage and transportation</li> <li>• requirements for securing and signing trees for road transportation</li> <li>• planning considerations and environmental implications of transplanting activities</li> <li>• aftercare management</li> <li>• OHS risks associated with transplanting trees</li> <li>• the effect of adverse climatic conditions</li> <li>• relevant legislation that may impact on a tree transplant program</li> <li>• local government tree protection and preservation regulations</li> <li>• AS4373-2007 Pruning of amenity trees</li> <li>• relevant Code of Practice.</li> </ul>

**Evidence Guide**

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and</b></p>	<p>The evidence required to demonstrate competency in this</p>

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess the transplant trees</li> <li>• assess the lifting and transplant sites</li> <li>• determine the transplant and transportation requirements and removal method</li> <li>• implement the transplanting operation</li> <li>• document the tree transplanting program, budget and monitoring procedures</li> <li>• document the contingency planning and after-care plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Transplanting program may include:</p>	<ul style="list-style-type: none"> <li>• location and site plans</li> <li>• site assessment details</li> <li>• location of services</li> <li>• relevant legislation</li> <li>• tree characteristics</li> <li>• OHS risks and controls</li> <li>• tools</li> <li>• equipment and machinery requirements</li> <li>• transplanting methods</li> <li>• transportation details</li> <li>• aftercare requirements</li> <li>• personnel requirements</li> <li>• timeframes</li> <li>• budgets</li> <li>• environmental considerations</li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"><li>• organic waste disposal</li><li>• recycling or re-use guidelines.</li></ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Landscape
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCLSK101A Support extensive livestock work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting extensive livestock work and defines the standard required to: use safe animal handling techniques; use livestock handling tools and equipment; assist in monitoring livestock health and welfare; assist others repair and maintain facilities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking extensive livestock production.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Prepare materials, tools and equipment for extensive livestock work</p>	<p>1.1. The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2. Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3. Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4. Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5. Work support is provided according to Occupational Health and Safety (OHS) requirements and according to workplace information.</p> <p>1.6. OHS hazards are identified and reported to the supervisor.</p>
<p>2. Undertake extensive livestock work as directed</p>	<p>2.1. Instructions and directions provided by supervisor are followed and clarification sought when necessary.</p> <p>2.2. Work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3. Interactions with other staff and customers are carried out in a positive and professional manner.</p> <p>2.4. Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.</p> <p>2.5. Problems or difficulties in completing work to required standards or timelines are reported to supervisor.</p>
<p>3. Handle materials and</p>	<p>3.1. Waste material produced during work is stored in a</p>

ELEMENT	PERFORMANCE CRITERIA
equipment	<p>designated area according to supervisor's instructions.</p> <p>3.2. Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines.</p> <p>3.3. A clean and safe work site is maintained while working.</p>
4. Clean up on completion of work	<p>4.1. Materials are returned to store or disposed of according to supervisor's instructions.</p> <p>4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions.</p> <p>4.3. Work outcomes are reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safe work practices
- participate in teams and contribute to team objectives
- understand instructions
- read labels, site plan measurements and OHS symbols
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- safe work practices
- animal handling techniques including animal welfare requirements
- tools and equipment
- maintenance practices for planted areas
- repair and maintenance of features
- OHS and environmental protection legislation and enterprise procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• use safe animal handling techniques</li> <li>• use livestock handling tools and equipment</li> <li>• assist in monitoring livestock health and welfare</li> <li>• assist others repair and maintain facilities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep</li> <li>• pigs</li> <li>• alpacas</li> <li>• goats</li> <li>• deer.</li> </ul>
Work tasks may include:	<ul style="list-style-type: none"> <li>• assistance with moving livestock</li> <li>• caring for animals</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• distributing stockfeed</li> <li>• loading and unloading goods and materials</li> <li>• carrying out routine maintenance on:                             <ul style="list-style-type: none"> <li>• buildings</li> <li>• roads</li> <li>• troughs</li> <li>• fences</li> <li>• cleaning yards</li> <li>• sheds</li> <li>• fixtures and fittings.</li> </ul> </li> </ul>
Hazards may include:	<ul style="list-style-type: none"> <li>• solar radiation</li> <li>• dust</li> <li>• noise</li> <li>• air- and soil-borne micro-organisms</li> <li>• chemicals and hazardous substances</li> <li>• sharp hand tools and equipment</li> <li>• manual handling</li> <li>• holes</li> <li>• slippery and uneven surfaces.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK102A Support intensive livestock work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting intensive livestock work and defines the standard required to: use safe animal handling techniques; use livestock handling tools and equipment; assist in the repair and maintenance of features and apply basic animal husbandry techniques.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking intensive livestock production.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Prepare materials, tools and equipment for intensive livestock work</p>	<p>1.1. The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2. Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3. Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4. Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5. Work support is provided according to Occupational Health and Safety (OHS) requirements and according to workplace information.</p> <p>1.6. OHS hazards are identified and reported to the supervisor.</p>
<p>2. Undertake intensive livestock work as directed</p>	<p>2.1. Instructions and directions provided by supervisor are followed and clarification sought when necessary.</p> <p>2.2. Work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3. Interactions with other staff and customers are carried out in a positive and professional manner.</p> <p>2.4. Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.</p> <p>2.5. Problems or difficulties in completing work to required standards or timelines are reported to supervisor.</p>
<p>3. Handle materials and</p>	<p>3.1. Waste material produced during work is stored in a</p>

ELEMENT	PERFORMANCE CRITERIA
equipment	<p>designated area according to supervisor's instructions.</p> <p>3.2. Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines.</p> <p>3.3. A clean and safe work site is maintained while working.</p>
4. Clean up on completion of work	<p>4.1. Materials are returned to store or disposed of according to supervisor's instructions.</p> <p>4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions.</p> <p>4.3. Work outcomes are reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safe work procedures
- prepare materials, tools and equipment for work
- undertake work as directed
- handle materials and equipment
- clean up on completion of work
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- safe work practices
- animal handling techniques including animal welfare
- tools and equipment
- repair and maintenance of buildings, fixtures or fittings
- OHS, animal welfare and environmental protection legislation and enterprise

**REQUIRED SKILLS AND KNOWLEDGE**

procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- apply safe animal handling techniques
- use livestock handling tools and equipment
- repair and maintain features
- apply basic animal husbandry techniques.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Work tasks may include:

- regular checking of feed and water supplies for animals and/or birds
- mixing and milling standard stockfeed
- disposing of deceased animals
- loading and unloading animals for transport

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• carrying out routine maintenance on buildings, cages/pens</li> <li>• cleaning sheds, fixtures and fittings.</li> </ul>
Tools and equipment may include:	<ul style="list-style-type: none"> <li>• knives</li> <li>• spades</li> <li>• forks</li> <li>• rakes</li> <li>• hoes</li> <li>• spray equipment</li> <li>• augers</li> <li>• buckets</li> <li>• brooms</li> <li>• wheelbarrows</li> <li>• hoses and hose fittings.</li> </ul>
Hazards may include:	<ul style="list-style-type: none"> <li>• solar radiation</li> <li>• dust</li> <li>• noise</li> <li>• air- and soil-borne micro-organisms</li> <li>• chemicals and hazardous substances</li> <li>• sharp hand tools and equipment</li> <li>• manual handling</li> <li>• holes</li> <li>• slippery and uneven surfaces.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK201A Assist with feeding in a production system

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing and providing feed and water for livestock in a production unit and defines the standard required to: recognise a range of feed types and qualities; prepare and distribute feed; check watering systems; report on feeding to supervisors; keep basic feeding records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under close supervision with regular checking within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Get and distribute feed	<p>1.1. Daily feeding program for livestock is checked with supervisor.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.3. Suitable personal protective equipment is selected, used and maintained.</p> <p>1.4. Assistance is provided for weighing and measuring feed.</p> <p>1.5. Feed is loaded into trolleys from silos or other storage bins and distributed, or where used, automatic/computerised feeders are checked for blockages and correct functioning.</p> <p>1.6. Supervisors are notified of any abnormalities or irregularities with feed stocks.</p> <p>1.7. Tools, machinery and equipment are maintained and stored after use.</p>
2. Check watering systems	<p>2.1. Where appropriate, watering systems are adjusted for height or position.</p> <p>2.2. Water flow is checked and adjustments are made accordingly.</p> <p>2.3. Watering containers or lines are emptied and cleaned where necessary.</p>
3. Keep workplace record	<p>3.1. Basic feeding records are kept and supervisor informed.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions
- identify a range of feed types and qualities
- identify grain contaminants
- recognise and rectify minor operational faults
- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets (MSDS)
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
- complete records and documentation of feed use and volumes for the shed
- use machinery and equipment associated with providing feed
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- silo operations, tractors and associated feeding machinery and equipment
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures
- grains, meals, pelleted and liquid feeds
- evidence of spoilage and handling spoilt feeds
- legislation and workplace procedures for OHS, animal welfare and environmental management.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment



<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise a range of feed types and qualities</li> <li>• prepare and distribute feed</li> <li>• check watering systems</li> <li>• report on feeding to supervisors</li> <li>• keep basic feeding records.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• pigs</li> <li>• poultry</li> <li>• shedded sheep</li> <li>• feedlot and dairy cattle.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSK202A Care for health and welfare of livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process required to monitor the health and welfare of livestock and defines the standard required to: monitor and assess livestock health and welfare; select, use and maintain specialised animal health equipment; prepare treatment site, facilities and equipment; administer drenches, vaccines and medication to livestock; monitor the effectiveness of treatments and report issues and keep and maintain records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under limited supervision. It will usually follow set routines, methods and procedures. Overall progress may be checked periodically. Some discretion and judgement is required in the selection of equipment and materials, organisation of work, and services.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor and assess livestock health and welfare	<p>1.1.Regular checks are taken to assess livestock health and welfare according to the requirements of the organisation.</p> <p>1.2.Symptoms of ill health and common diseases, disorders or parasite infestations are recognised and reported.</p> <p>1.3.Livestock are handled calmly and according to enterprise procedures.</p>
2. Implement livestock health and welfare procedures	<p>2.1.Occupational Health and Safety (OHS) hazards in the workplace are recognised and safety issues reported according to enterprise requirements.</p> <p>2.2.Quarantine and biosecurity procedures are maintained as instructed to minimise the risks of disease introduction.</p> <p>2.3.Thorough personal hygiene practices are maintained in all activities associated with handling livestock, including reducing risks from diseases transmissible to humans.</p> <p>2.4.Sick or dead livestock are safely treated and humanely destroyed, if necessary.</p> <p>2.5.Environmental implications associated with livestock husbandry practices are identified, assessed and relevant measures implemented.</p>
3. Administer drenches,	3.1.Livestock treatment site and facilities are prepared to

ELEMENT	PERFORMANCE CRITERIA
vaccines and prescribed medicines to livestock	<p>industry standards in line with enterprise requirements.</p> <p>3.2.Livestock treatments are prepared and confirmed against work plan in line with manufacturer's specifications and work plan.</p> <p>3.3.Livestock are mustered safely, yarded, controlled, inspected and identified for treatment in line with enterprise requirements.</p> <p>3.4.Safe workplace practices with regard to livestock handling are observed and implemented in line with OHS and enterprise requirements.</p> <p>3.5.Treatment is administered in accordance with manufacturer's specifications, enterprise and animal welfare legislative requirements.</p>
4. Prepare, maintain and store animal health equipment	<p>4.1.Equipment and materials for treating livestock are checked for safe and sound operation and confirmed against work plan.</p> <p>4.2.Syringes, needles and other veterinary medicine containers are placed in allocated disposal containers, with tips removed from needles prior to disposal.</p> <p>4.3.Equipment, materials and facilities used for treatments are cleaned, maintained and stored in line with manufacturer's specifications, OHS and enterprise requirements.</p> <p>4.4.Livestock residues and waste are disposed of in an environmentally responsible manner in line with OHS and enterprise requirements.</p>
5. Monitor treated livestock and maintain records	<p>5.1.Livestock are monitored post-treatment for signs of treatment effectiveness.</p> <p>5.2.Livestock health and condition abnormalities are recognised and reported in accordance with enterprise requirements.</p> <p>5.3.Disease information is reported to the manager so that prevention strategies can be planned and implemented.</p> <p>5.4.Disease incidence, livestock losses, and treatments are recorded accurately according to organisation practice and relevant regulations.</p> <p>5.5.All records made, kept and maintained are clear, accurate, and follow the guidelines laid down by industry and the organisation.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work practices
- apply biosecurity procedures
- accurately count and record livestock numbers
- complete worksheets clearly and accurately
- detect possibility of disease through parameters such as behaviour and length of time required to eat food
- use veterinary medicines and chemicals according to label and legislative requirements
- dispose of unused prepared chemicals or medications, sharps and other contaminated items safely and in an environmentally correct manner
- observe, identify and react appropriately to environmental implications and OHS hazards
- recognise clinical symptoms (normal vs. abnormal)
- recognise fear and aggression
- recognise heat stress
- survey workplace for hygiene and OHS issues
- tag livestock of varying ages
- use computing technology to create, maintain and amend workplace records
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- environmental controls and codes of practice applicable to the enterprise
- livestock handling principles
- water quality and animal requirements
- feed requirements and quality
- enterprise biosecurity and euthanasia procedures
- safe handling of sick and dead livestock
- signs of fear and aggression

**REQUIRED SKILLS AND KNOWLEDGE**

- signs of heat stress
- symptoms of ill-health in livestock
- the organisation's livestock production and management plans - sound management practices and processes to minimise noise, odours and debris from the livestock operations
- the range of diseases affecting the class and age of livestock
- vaccination programs, vaccines and mode of action in use in the organisation
- withholding periods for use of antibiotics
- zoonotic diseases and mode of transmission.
- relevant legislation and regulations relating to waste and environment management, livestock health, stock medicines and welfare
- relevant OHS legislation, regulations and codes of practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor and assess livestock health and welfare.
- select, use and maintain specialised animal health equipment
- prepare treatment site, facilities and equipment
- administer drenches, vaccines and medication to livestock.
- monitor the effectiveness of treatments and report issues
- keep and maintain records.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources

<b>EVIDENCE GUIDE</b>	
	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• sheep</li> <li>• goats</li> <li>• alpacas.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCLSK203A Carry out birthing duties

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assisting animals and their newborn at birthing and defines the standard required to: implement predator control strategies; recognise signs of imminent birthing of animals; apply contingency measures for birthing in the event of adverse weather conditions; monitor birthing and provide assistance if required, or refer on if birthing difficulties require veterinary assistance; recognise abnormalities in newborn animals and provide a non threatening environment and access to adequate feed and water immediately post birthing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in animal production enterprises that operate under limited supervision within enterprise guidelines. It requires the ability to make decisions based on a developing situation, including the need to ask for specialist assistance.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for birthing	1.1. Animal records are checked and anticipated birthing date confirmed where possible. 1.2. Condition and health status of pregnant animal is assessed and monitored prior to imminent birthing. 1.3. Birthing equipment, resources and materials are checked and prepared for use. 1.4. Females are given access to shelter to give birth in severe weather conditions. 1.5. Hazards in assisting with birthing are identified and safe work practices followed.
2. Assist at the birthing process	2.1. Environment and animals are monitored to ensure birth progresses normally. 2.2. Animals giving birth are handled calmly with minimal disruption to the process. 2.3. Animals experiencing birthing difficulties are identified and intervention is carried out within procedures. 2.4. Supervisor or veterinary advice is sought if birth complications cannot be resolved.
3. Provide post-birthing	3.1. Post-birthing health and bonding of female and

ELEMENT	PERFORMANCE CRITERIA
assistance	<p>newborn is monitored.</p> <p>3.2. Birthing environment, facilities and equipment are maintained in a safe, hygienic and operational state and faults are reported or fixed.</p> <p>3.3. Record of birth is kept if required.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- apply contingency measures for birthing in the event of birthing difficulties or adverse weather conditions
- assess and calculate animal numbers, feed measurement, rate and frequency of feeding, and animal gestation
- carry out animal husbandry procedures associated with birthing
- clean, maintain and store equipment and materials
- monitor animal condition and recognise abnormal behaviour
- recognise signs of imminent birthing of animals
- prepare birthing environment, materials and resources to industry standards
- provide due care and handle animals humanely
- provide feed and feed supplements to meet nutritional needs of pregnant animals as directed
- recognise abnormalities in newborn animals
- safely implement predator control strategies
- maintain a safe and secure post-birthing environment
- select birthing equipment and materials and check for operation
- demonstrate safe and environmentally responsible workplace practices
- identify hazards and use safe work practices in the birthing environment
- communicate abnormalities, equipment faults and workplace hazards, and report and maintain animal records
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures

**REQUIRED SKILLS AND KNOWLEDGE**

- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- animal behaviour and basic health and nutritional requirements as directed
- birthing environment requirements for animals
- birthing equipment and materials, their components and functions
- birthing intervention and non-intervention strategies
- effects of adverse weather conditions on birthing process and newborn animals
- effects of inadequate nutrition on animals and newborn
- enterprise policies with regard to treating animals, recording and reporting routines
- environmental impacts and minimisation measures associated with animal production
- hazards associated with handling animals
- livestock gestation and birthing and husbandry procedures
- personal protective clothing and equipment, and when and how it should be used
- problems associated with birthing and remedial treatment
- procedures for cleaning and maintaining treatment equipment and materials
- predator behaviour and control procedures
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace Occupational Health and Safety (OHS) and animal welfare.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- implement predator control strategies
- recognise signs of imminent birthing of animals

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• apply contingency measures for birthing in the event of adverse weather conditions</li> <li>• monitor birthing and provide assistance if required, or refer on if birthing difficulties require veterinary assistance</li> <li>• recognise abnormalities in newborn animals</li> <li>• provide a non threatening environment and access to adequate feed and water immediately post birthing.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock birthing may include:	<ul style="list-style-type: none"> <li>• pigs</li> <li>• goats</li> <li>• alpacas</li> <li>• sheep.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLSK204A Carry out regular livestock observation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of carrying out regular observation of livestock and dealing with sickness, injuries and emergencies when they occur and defines the standard required to: check livestock regularly; identify symptoms of ill health or injury; deal efficiently and calmly with livestock emergencies; complete basic livestock first aid procedures; record and report serious issues or injuries.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision within organisation guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to work with livestock	<p>1.1. Work to be undertaken is interpreted from work program where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the process.</p> <p>1.3. Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.</p> <p>1.4. Suitable personal protective equipment is selected, used and maintained.</p>
2. Carry out livestock checks	<p>2.1. All livestock are routinely checked for signs of ill health.</p> <p>2.2. Livestock are examined for signs of illness, injuries and abnormalities, and signs of these are reported in the methods prescribed in the organisations work procedures.</p> <p>2.3. While handling livestock, the potential for Occupational Health and Safety (OHS) hazards is continually monitored, risks assessed, and suitable controls implemented.</p> <p>2.4. Livestock are handled safely and all required restraints are within the organisations and industry guidelines for animal health and welfare.</p>
3. Deal with livestock emergencies	<p>3.1. Common signs of livestock injury or life threatening conditions are detected and the situation quickly analysed before notification or action is taken.</p> <p>3.2. Life threatening livestock ailments requiring</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>emergency treatment are notified to the supervisor, manager or veterinarian and immediate assistance is called.</p> <p>3.3. Basic emergency and/or livestock first aid procedures are carried out until professional help arrives.</p> <p>3.4. Serious cuts and abrasions to livestock are promptly reported to the supervisor or to the veterinarian and assistance provided as required during professional treatment.</p>
4. Provide veterinary procedure support	<p>4.1. Cuts, abrasions and bruises are treated under instruction from the veterinarian, manager or foreman.</p> <p>4.2. Animals are examined for signs of distress or soreness after moving or mating procedures and all abnormalities are reported.</p> <p>4.3. Appropriate treatment is applied as instructed by the manager or supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe operating procedures
- handle livestock
- identify signs of ill health or injury or signs of injury or abnormality
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- the range of ailments that may occur or affect livestock
- the application of a range of basic treatments under veterinary supervision
- the behaviour of the relevant species
- environmental controls and codes of practice applicable to the enterprise
- the organisations livestock production and management plans
- sound management practices and processes to minimise noise, odours and debris
- relevant legislation and regulations relating to waste and environment management and animal health and welfare.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- check livestock regularly
- identify symptoms of ill health or injury
- deal efficiently and calmly with livestock emergencies
- complete basic livestock first aid procedures
- record and report serious issues or injuries.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep</li> <li>• pigs</li> <li>• alpacas</li> <li>• goats</li> <li>• deer.</li> </ul>
Livestock does not include:	<ul style="list-style-type: none"> <li>• horses</li> </ul>

## Unit Sector(s)

Unit sector	Livestock
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## Co-requisite units

Co-requisite units	

## Competency field

Competency field	
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## AHCLSK205A Handle livestock using basic techniques

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to move, draft and control livestock using basic methods and procedures in an agricultural enterprise and defines the standard required to: prepare handling areas, gates and access routes for livestock movement; monitor and anticipate livestock behaviour; identify and draft livestock for handling operations; move and control livestock and minimise undue stress and risk to livestock and handlers.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the livestock industry who operate under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for handling livestock	<p>1.1.Livestock handling areas, gates and access routes are identified, prepared and maintained according to enterprise requirements.</p> <p>1.2.Livestock are located and identified for handling according to supervisor's instructions.</p> <p>1.3.Behavioural characteristics of livestock are observed, anticipated and appropriate handling methods selected.</p> <p>1.4.Handling equipment is selected, checked for soundness and prepared for use according to manufacturer's specifications and supervisor's instructions.</p> <p>1.5.Hazards in the workplace are recognised and safety concerns reported.</p>
2. Handle livestock	<p>2.1.Suitable personal protective equipment is selected, used and maintained according to Occupational Health and Safety (OHS) requirements.</p> <p>2.2.Procedures to control, draft and sort livestock are conducted with due care according to OHS and animal welfare requirements.</p> <p>2.3.Restraint procedures are carried out safely and with minimum stress and discomfort to livestock according to OHS and animal welfare requirements.</p> <p>2.4.Livestock behaviour is continually monitored and anticipated during moving and drafting processes to ensure wellbeing of livestock and safety of handlers.</p> <p>2.5.Livestock count is conducted and recorded according to enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.6.Environmental implications associated with livestock production are recognised and reported to the supervisor.
3. Complete handling procedure	3.1.Livestock handling operations are completed as instructed, and gates and access routes prepared for livestock departure according to enterprise requirements. 3.2.Handling areas and equipment are cleaned and maintained and surplus materials stored according to OHS and enterprise requirements. 3.3.Handling area maintenance requirements and equipment faults or malfunctions are detailed and reported according to enterprise requirements. 3.4.Livestock residues and waste are disposed of according to OHS and enterprise environmental practices. 3.5.Relevant information is recorded and reported according to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work practices
- provide due care in the handling of livestock
- recognise enterprise livestock identification systems
- safely drive vehicles, and ride horses and motorbikes without damage to person, property or environment
- recognise livestock abnormalities
- control environmental impacts associated with livestock production
- apply contingency measures for handling livestock in the event of adverse weather conditions
- observe and describe the behaviour of livestock
- read and comprehend oral and written information and instructions, write basic statements and maintain livestock handling records
- assess and calculate livestock numbers

**REQUIRED SKILLS AND KNOWLEDGE**

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- livestock breeds and basic nutritional and welfare requirements
- livestock behavioural characteristics and movement in handling areas
- components and functions of handling equipment
- handling techniques and restraint methods
- enterprise livestock identification systems
- environmental codes of practice with regard to livestock production
- OHS and animal welfare legislative requirements
- regulatory controls with regard to handling livestock on public roads.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare handling areas, gates and access routes for livestock movement
- monitor and anticipate livestock behaviour
- identify and draft livestock for handling operations
- move and control livestock
- minimise undue stress and risk to livestock and handlers.



<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• sheep</li> <li>• alpacas</li> <li>• goats.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK206A Identify and mark livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to prepare for and carry out the identification and marking of young animals and defines the standard required to: prepare appropriate identifying and marking sites and facilities to industry standards; operate and maintain equipment; determine identifying and marking methods; carry out identifying and marking operations; monitor animals behaviour post-marking for health and well-being.
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### Application of the Unit

<b>Application of the unit</b>	This unit involves workers in the livestock industry who normally operate under limited supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to identify and mark animals	<p>1.1. Equipment and materials for identifying and marking animals are selected and checked for correct operation according to manufacturer's specifications and enterprise requirements.</p> <p>1.2. Suitable marking sites and facilities are identified and prepared according to enterprise requirements.</p> <p>1.3. Animal preventative health treatments are prepared according to manufacturer's specifications and supervisor's instructions.</p> <p>1.4. Hazards to health and safety are identified and safety concerns reported to supervisor.</p>
2. Identify and mark animals	<p>2.1. Suitable Personal Protective Equipment (PPE) and clothing is selected, used and maintained according to Occupational Health and Safety (OHS) requirements.</p> <p>2.2. Animals are safely mustered and young animals are identified, drafted and moved to marking site in readiness for identifying and marking.</p> <p>2.3. Animal identifying and marking operations are safely carried out according to enterprise and animal welfare legislative requirements.</p> <p>2.4. Environmental implications associated with identifying and marking animals are recognised, assessed and reported to the supervisor.</p>
3. Complete identifying and marking operation	<p>3.1. Animal count is conducted and accurately recorded according to enterprise requirements.</p> <p>3.2. Animals are prepared and moved along a planned route without damage to person, livestock, property</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>or environment.</p> <p>3.3. Identifying and marking equipment, materials and facilities are cleaned and maintained according to OHS and enterprise requirements.</p> <p>3.4. Equipment faults or malfunctions are detailed and reported according to enterprise requirements.</p> <p>3.5. Animal residues and waste are disposed of according to OHS and enterprise environmental practices.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- handle animals in a safe and humane manner
- monitor animal behaviour and recognise abnormalities
- mother-up animals and their young
- apply contingency measures in the event of adverse weather conditions
- maintain identifying and marking sites, facilities and equipment to industry standards
- calculate and record animal numbers and marking operations
- demonstrate safe and environmentally responsible workplace practices
- read and interpret manufacturers specifications, work plans and Material Safety Data Sheets (MSDSs)
- communicate effectively and maintain accurate reports and records
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- components and functions of identifying and marking equipment and materials
- identifying and marking methods and techniques
- animal identification systems
- animal preventative health requirements and procedures
- animal behaviour and basic health and nutritional requirements
- environmental codes of practice with regard to animal production

**REQUIRED SKILLS AND KNOWLEDGE**

- relevant provisions of OHS and animal welfare legislation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare appropriate identifying and marking sites and facilities to industry standards
- operate and maintain equipment
- determine identifying and marking methods
- carry out identifying and marking operations
- monitor animal's behaviour post-marking for health and well-being.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Livestock may include:

- cattle
- horses

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• sheep</li> <li>• pigs</li> <li>• alpacas</li> <li>• goats.</li> </ul>
Identifying and marking may include:	<ul style="list-style-type: none"> <li>• tagging</li> <li>• tailing</li> <li>• notching</li> <li>• tattooing</li> <li>• micro-chipping</li> <li>• branding</li> <li>• dehorning</li> <li>• trimming eye teeth</li> <li>• identifying abnormalities or faults and identifying and marking animals for culling.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCLSK207A Load and unload livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of loading and unloading animals for transport and defines the standard required to: anticipate animal behaviour; check loading facilities for hazards to animals and workers; provide and maintain appropriate animal feed and water; complete documentation and affix individual tags if required; monitor animal health and welfare; load and unload animals.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the livestock industries that normally operate under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Check facilities and equipment for sound working conditions	<p>1.1.Required facilities and equipment are identified.</p> <p>1.2.The work site, facilities and equipment are checked for hazards and safety concerns are reported.</p> <p>1.3.Repairs and maintenance of facilities and equipment required for the loading or unloading of livestock are carried out where necessary.</p> <p>1.4.Personal protective clothing and equipment is used and stored.</p>
2. Load animals	<p>2.1.Animals are mustered, yarded/caught, prepared for transport, loaded and counted using safe working methods.</p> <p>2.2.Numbers of livestock are recorded according to enterprise procedures.</p> <p>2.3.Identification details of individual animals are recorded as required.</p> <p>2.4.Vendor declarations and any other required documentation are completed.</p> <p>2.5.Animal identification tags are fitted as required.</p> <p>2.6.Livestock are loaded in compliance with animal welfare and Occupational Health and Safety (OHS) requirements.</p>
3. Unload animals	<p>3.1.Animals are unloaded in safe manner to ensure no injury to personnel or animals.</p> <p>3.2.Numbers of livestock are recorded according to enterprise procedures.</p> <p>3.3.Agreement on condition of animals is reached with the receiving and/or dispatching party.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Perform appropriate animal health procedure	4.1. Stock is sorted if required. 4.2. Animal health treatments are performed off truck as instructed. 4.3. Animals are fed and watered to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- provide due care and handle animals safely and humanely
- prepare equipment and working dogs (when used) for handling animals
- monitor animal behaviour and recognise irregularities
- read and interpret muster plans and maps
- calculate animal numbers and assess and calculate feed and water requirements
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- animal handling and movement methods and techniques
- animal basic health and nutritional requirements
- animal herding/flocking behaviour
- animal welfare codes of practice
- working dogs' uses and techniques (where appropriate)
- relevant OHS and animal welfare legislative and enterprise requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• anticipate animal behaviour</li> <li>• check loading facilities for hazards to animals and workers</li> <li>• provide and maintain appropriate animal feed and water</li> <li>• complete documentation and affix individual tags if required</li> <li>• monitor animal health and welfare</li> <li>• load and unload animals.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep</li> <li>• goats</li> <li>• alpacas</li> <li>• pigs</li> <li>• horses.</li> </ul>

### Unit Sector(s)

Unit sector	Livestock
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCLSK208A Monitor livestock to parturition

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process required to monitor animal health, wellbeing and welfare during gestation and defines the standard required to: observe livestock health and wellbeing from joining; maintain appropriate nutritional and environmental requirements; recognise and report abnormalities for remedial action; provide a safe and secure environment for the promotion of the welfare and wellbeing of pregnant animals through to birthing.
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### Application of the Unit

<b>Application of the unit</b>	This unit normally involves working under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Check health status of animals	<p>1.1. Condition and health status of animals is checked and confirmed against enterprise health strategies and records.</p> <p>1.2. Signs of poor health and condition or abnormal behaviour are recognised and reported to the supervisor for remedial action.</p> <p>1.3. Preventative health treatments are arranged and administered according to manufacturer specifications and the supervisor's instructions.</p> <p>1.4. Existing and potential hazards in the workplace are identified and risk is assessed and controlled according to Occupational Health and Safety (OHS) requirements.</p> <p>1.5. Environmental implications associated with production are identified, assessed and reported to the supervisor.</p>
2. Identify pregnant animals	<p>2.1. Animals are identified and separated on basis of pregnancy status according to enterprise guidelines.</p> <p>2.2. Dry animals are identified and procedures implemented according to enterprise requirements.</p> <p>2.3. Additional assistance required for assessing pregnancy status is reported to the supervisor for remedial action.</p>
3. Feed pregnant animal	<p>3.1. Nutritional needs of pregnant animals are identified and confirmed against the feeding plan according to enterprise requirements.</p> <p>3.2. Animals with special feeding needs are identified and given preferential feeding, and are recorded</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to enterprise requirements.</p> <p>3.3. Supplementary feeding is implemented as required and recorded according to enterprise requirements.</p> <p>3.4. A safe and secure environment for pregnant animals is maintained according to enterprise requirements.</p> <p>3.5. Handling is conducted with minimum stress and discomfort to the animals without excessive yarding or shedding according to animal welfare and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions
- administer preventative health treatments
- calculate animal numbers, measure feed, assess rate and frequency of feeding, and calculate animal gestation
- carry out basic repairs to paddocks, shelter, and housing
- communicate orally and in writing, animal behaviour and identified abnormalities
- control environmental impacts associated with animal production
- dispose of sharps, other contaminated items and unused prepared chemicals or medication safely and in an environmentally correct manner
- handle pregnant animals with due care
- observe and accurately report animal behaviour
- observe local climatic conditions
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

## REQUIRED SKILLS AND KNOWLEDGE

- effects of adverse weather conditions and inadequate nutrition on pregnant animals and their newborn
- effect of local climatic conditions on the timing of shearing, separating and transporting pregnant animals
- environment codes of practice with regard to animal production
- handling techniques for dry and pregnant animals
- health and nutritional requirements for pregnant animals
- housing requirements for intensively produced animals
- livestock identification methods
- OHS and animal welfare legislative requirements
- pregnant animals behaviour and abnormalities
- pregnancy checking and confirmation procedures (including scanning)
- preventative health treatments, procedures and methods.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- observe livestock health and wellbeing from joining
- maintain appropriate nutritional and environmental requirements
- recognise and report abnormalities for remedial action
- provide a safe and secure environment for the promotion of the welfare and wellbeing of pregnant animals through to birthing.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources



<b>EVIDENCE GUIDE</b>	
	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep</li> <li>• goats</li> <li>• horses</li> <li>• alpacas.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCLSK209A Monitor water supplies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring the supply of potable water for livestock from water storages and sources and defines the standard required to: record and report water supply information, activities and system performance; read and follow manufacturer's procedures; identify blockages and clear them using safe working procedures; check flow rates and inspect and report on water supplies with only routine supervision.
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### Application of the Unit

<b>Application of the unit</b>	This unit is normally carried out through working independently within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor water supplies	<p>1.1. Routine inspections of water supplies are carried out in accordance with enterprise policy and procedures.</p> <p>1.2. High and low water levels are recognised and reported.</p> <p>1.3. Where water quality problems or pathogens are found, treatment is carried out in accordance with enterprise procedures.</p> <p>1.4. Information on water supplies is recorded and reported in accordance with enterprise policy and procedures.</p>
2. Inspect and clear intake and outlet points	<p>2.1. Intakes and outlets are inspected.</p> <p>2.2. Potential blockages are reported and actual blockages are cleared in accordance with safe working procedures.</p> <p>2.3. Water filters are checked and replaced as required.</p> <p>2.4. Intake lines are repositioned as necessary to ensure unobstructed suction.</p> <p>2.5. Strainers are cleared of debris and sludge.</p>
3. Operate water delivery equipment	<p>3.1. Water delivery equipment is prepared and checked in accordance with enterprise procedures.</p> <p>3.2. Water delivery equipment operated in accordance with manufacturer's procedures and Occupational Health and Safety (OHS) requirements.</p> <p>3.3. Outflow is checked to ensure water delivery equipment is operating correctly.</p> <p>3.4. Water delivery equipment is shut down as required in accordance with enterprise procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.5. Activities and water delivery equipment function are reported in accordance with enterprise procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety procedures
- record and report water supply information, activities and system performance
- read and follow manufacturers procedures
- problem solve to identify potential as well as actual blockages
- check outflow rates
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- water delivery systems and components and their operation
- enterprise procedures for carrying out inspections, recording and reporting water information and system performance
- OHS requirements for working outdoors, with water supplies
- environmental impacts and procedures for water supplies.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• record and report water supply information, activities and system performance</li> <li>• read and follow manufacturers procedures</li> <li>• identify blockages and clear them using safe working procedures</li> <li>• check flow rates</li> <li>• inspect and report on water supplies with only routine supervision.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Water supplies may include:	<ul style="list-style-type: none"> <li>• rivers</li> <li>• dams</li> <li>• ponds</li> <li>• bores</li> <li>• tanks</li> <li>• town or mains water</li> <li>• recycled water.</li> </ul>

## Unit Sector(s)

Unit sector	Livestock
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSK210A Muster and move livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of working as part of a team to muster and move livestock and defines the standard required to: implement directions for mustering; monitor and anticipate livestock behaviour; muster and move livestock along prepared routes in a calm and controlled manner; monitor welfare of mustered stock.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in livestock enterprises working independently within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for muster	<p>1.1. Mustering requirements are identified and confirmed.</p> <p>1.2. Transport requirements are arranged and checked and confirmed for operation.</p> <p>1.3. Additional information relevant to livestock movements is identified and accessed.</p> <p>1.4. Potential and existing hazards to health and safety are identified and safety concerns reported to the supervisor.</p>
2. Carry out muster	<p>2.1. Suitable personal protective equipment is selected, used and maintained according to Occupational Health and Safety (OHS) requirements.</p> <p>2.2. Livestock identified in the muster plan are located and aggregated in preparation for movement.</p> <p>2.3. Muster processes are conducted according to enterprise requirements.</p>
3. Move livestock	<p>3.1. Livestock movement is conducted with minimal stress to livestock and without damage to person, property or environment.</p> <p>3.2. Livestock welfare is monitored and maintained during movement with adequate provision of rest, water and feeding points.</p> <p>3.3. Livestock are confined and pastured at destination, counted and recorded according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work procedures
- handle livestock safely and humanely
- prepare equipment and working dogs (when used) for handling livestock
- monitor livestock behaviour and recognise abnormalities
- monitor and minimise impacts to the environment
- communicate effectively with the muster team
- read and interpret muster plans and maps
- calculate livestock numbers and assess and calculate feed and water requirements
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- mustering and movement methods and techniques
- livestock basic health and nutritional requirements
- livestock herding/flocking behaviour
- environmental codes of practice with regard to livestock production
- working dogs uses and techniques (where appropriate)
- legislative requirements for stock movement along public roads
- relevant OHS and animal welfare legislative requirements
- environmental impacts and procedures for mustering and moving livestock.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include

<b>EVIDENCE GUIDE</b>	
	evidence of the following: <ul style="list-style-type: none"> <li>• implement directions for mustering</li> <li>• monitor and anticipate livestock behaviour</li> <li>• muster and move livestock along prepared routes in a calm and controlled manner</li> <li>• monitor welfare of mustered stock.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• sheep</li> <li>• horses</li> <li>• goats.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK211A Provide feed for livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing and providing feed for livestock in an extensive agricultural environment and defines the standard required to: monitor and record livestock condition; apply methods and procedures to provide feed and feed supplements; safely handle livestock and report feeding abnormalities; maintain records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on non intensive livestock enterprises operating under close supervision with regular checking and within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for feeding	<p>1.1. Condition and health status of livestock is checked and recorded in line with enterprise requirements.</p> <p>1.2. Feed and feed supplements are confirmed and prepared in line with feeding plan.</p> <p>1.3. Water supply, quality and quantity is checked and maintained to meet livestock requirements and enterprise requirements.</p> <p>1.4. Occupational Health and Safety (OHS) hazards in the workplace are identified and reported to the supervisor.</p>
2. Feed livestock	<p>2.1. Suitable personal protective clothing and equipment is selected, used and maintained in accordance with OHS requirements.</p> <p>2.2. Feed and feed supplements are provided in accordance with feeding plan and enterprise requirements.</p> <p>2.3. Feeding process is monitored to ensure livestock are feeding effectively in accordance with feeding plan.</p> <p>2.4. Procedures to minimise feed wastage and spillage, and dispose and recycle feed waste are followed in line with enterprise requirements.</p> <p>2.5. Variations to individual eating and drinking patterns are noted and reported.</p>
3. Complete the feeding process	<p>3.1. Feeding process is evaluated and recorded in accordance with workplace procedures.</p> <p>3.2. Feeding abnormalities are recorded and reported to the supervisor in line with enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3.A clean and safe area is maintained during and on completion of feeding in accordance with OHS and enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- provide feed and feed supplements in accordance with feeding plan
- monitor livestock health and condition, and recognise abnormalities
- employ safe and environmentally responsible systems and procedures with regard to the handling of livestock and feed
- recognise and report environmental implications associated with livestock production
- read and interpret feeding plan, work plan and supervisors instructions
- communicate and report livestock feeding abnormalities and workplace hazards, and maintain livestock records
- assess and calculate herd/flock numbers, measure feed and rate and frequency of feeding
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- nutritional requirements for livestock (including water)
- types of feed and feed supplements (including pastures and grazing)
- types of noxious and toxic plants relevant to feeding areas
- livestock health and behaviour
- livestock scoring and weighing methods
- environmental impact of livestock on ground cover
- safe livestock handling techniques and procedures
- hazards associated with handling livestock and control measures
- personal protective clothing and equipment and when and how it should be used
- enterprise policies with regard to feeding livestock, recording and reporting routines

**REQUIRED SKILLS AND KNOWLEDGE**

- State/Territory legislation, regulations and codes of practice with regard to OHS and animal welfare.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include evidence of the following:

- monitor and record livestock condition
- apply methods and procedures to provide feed and feed supplements
- safely handle livestock
- report feeding abnormalities and maintain records.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Animals may include:

- cattle
- sheep
- horses



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• goats</li> <li>• deer</li> <li>• alpacas</li> <li>• pigs that are being run on a pasture-based system.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK212A Ride horses to carry out stock work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of performing basic horsemanship activities such as riding a horse for the first time and preparing a horse for work using basic methods and procedures and defines the standard required to: prepare horses for work; select and maintain equipment for riding; monitor and anticipate horse behaviour when riding; recognise and report hazards or movement problems for remedial action; care for saddlery and equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision within organisation guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare horses for work	<p>1.1. Occupational Health and Safety (OHS) hazards are continually identified when working with horses, risks are assessed and suitable controls implemented.</p> <p>1.2. Equipment suitable for the work to be undertaken is selected, checked, and maintained if necessary.</p> <p>1.3. Suitable personal protective equipment is selected, used and maintained.</p> <p>1.4. Feeds are mixed and offered in the quality and quantities instructed by the manager.</p> <p>1.5. Horses are groomed before and after work to ensure their coat condition and health are maintained.</p> <p>1.6. Hoof care and cleaning is completed before working the horses, according to the organisations procedures.</p> <p>1.7. Vices of horses are identified and corrective action is taken to maintain control of the horses.</p> <p>1.8. Horse education is carried out in association with stock working routines.</p>
2. Ride horses	<p>2.1. Stock horses suitable for the task and rider ability are identified and selected.</p> <p>2.2. Unhealthy or unsound horses are identified and reported to foreman or manager.</p> <p>2.3. Selected horses are approached, caught and restrained as instructed.</p> <p>2.4. Gear to manage and control the horse for the required work is selected and fitted.</p> <p>2.5. OHS procedures are followed for working with and riding horses.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.6. Horses are handled and restrained safely and within the organisation's and industry guidelines for animal health and welfare.</p> <p>2.7. Livestock are checked, mustered and moved by horseback.</p> <p>2.8. Educated horses are controlled and worked as an integral part of stock husbandry routines.</p> <p>2.9. Horses are handled safely and within the organisations and industry guidelines for animal health and welfare.</p>
3. Care for saddlery and equipment	<p>3.1. Basic working gear to suit the individual horse is selected and fitted.</p> <p>3.2. Working gear is cleaned and checked as a part of regular daily routines.</p> <p>3.3. Working gear is maintained or repaired as required to ensure safe horse working conditions.</p> <p>3.4. Working gear and saddlery is stored after use in line with organisation policy.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- horse handling skills
- ride horses
- complete basic hoof care procedures
- groom horses
- care for saddlery and equipment
- measuring quantities required for feed
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures

**REQUIRED SKILLS AND KNOWLEDGE**

- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- horses and horse husbandry
- horse riding and handling safety when riding
- horse health, behaviour and psychology
- anatomy and physiology of the horse
- care and maintenance of hooves and the lower limbs
- environmental controls and codes of practice applicable to the organisation
- the organisation's livestock production and management plans
- sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management, animal health and welfare
- relevant OHS legislation, regulations and codes of practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare horses for work
- select and maintain equipment for riding
- monitor and anticipate horse behaviour when riding
- recognise and report hazards or movement problems for remedial action
- care for saddlery and equipment.

**Context of and specific resources for**

Competency requires the application of work practices

**EVIDENCE GUIDE****assessment**

under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Horses may include:

- those suitable for beginning riders and novice handlers, but can be of any type and breed used for riding work.

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCLSK213A Clean out production sheds

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of cleaning out sheds used for the intensive production of livestock and defines the standard required to: raise or remove equipment from the shed to allow cleaning; remove litter, manure and dust from the shed; service filters and flush drinker lines and tanks; provide a disease free and hygienic environment for stock introduced to a shed; manage runoff according to enterprise procedures; dispose of wastes and cleaning materials in line with enterprise procedures; complete all records required including chemical usage and manifest.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under limited supervision from others, with checking only related to overall progress. It is usually done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services and actions, and the achievement of outcomes within time constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to clean shed	<p>1.1. Requirements for the work to be undertaken are interpreted and confirmed with supervisor.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified; risks assessed and suitable controls are implemented.</p> <p>1.3. Suitable personal protective equipment is selected, used and maintained.</p> <p>1.4. The environmental implications of cleaning the shed are identified, likely outcomes assessed and, if necessary, responsible action is taken.</p> <p>1.5. Equipment is raised, dismantled or removed from the shed for cleaning according to supervisor's instructions.</p> <p>1.6. Feed and watering equipment is raised or removed from shed and cleaned to remove contamination.</p> <p>1.7. Electrical switchboards and other equipment are covered or sealed to prevent entry of water if appropriate.</p>
2. Clean shed and surrounds	<p>2.1. OHS hazards relating to the cleaning process are identified; risks assessed and suitable controls are</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>implemented.</p> <p>2.2. Machinery is available, serviced and prepared for operation according to established operating practice.</p> <p>2.3. Where used, litter is removed and disposed of according to establishment hygiene practice.</p> <p>2.4. According to production circumstances, manure is removed and disposed of according to environmental codes, enterprise quality assurance requirements, and OHS guidelines.</p> <p>2.5. According to production circumstances and environment, dust and cobwebs are removed from all surfaces.</p> <p>2.6. Filters are serviced and drinker lines and tanks are flushed.</p> <p>2.7. Where appropriate, silos are emptied and cleaned as required by hygiene and production programs.</p> <p>2.8. Cleaning agents are prepared and used according to manufacturer's instructions and in line with established safe working procedures.</p> <p>2.9. Shed is aired to ensure evacuation of cleaning agent's toxicants prior to re-entry of staff and re-installation of equipment.</p> <p>2.10. Chemical agents are safely handled and applied in compliance with OHS standards, and in line with property quality assurance program.</p> <p>2.11. Electrical equipment is dry-cleaned.</p> <p>2.12. Run-off from cleaning activity is managed according to the organisations effluent and waste management procedures.</p> <p>2.13. Checks are made to ensure that all cleaning and hygiene processes are completed to standard.</p>
3. Complete hygiene and administration task	<p>3.1. Equipment is cleaned in accordance with manufacturer's specifications, and organisational procedures and regulations.</p> <p>3.2. Attachments and other ancillary equipment are cleaned and stored to minimise damage and to maximise hygiene according to manufacturers' specifications, and organisational procedures and regulations.</p> <p>3.3. All containers, leftover fluids, waste and debris from the cleaning operations are disposed of safely and appropriately.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. All required records and documentation are completed accurately and promptly in accordance with organisational requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work practices including Personal Protective Equipment (PPE)
- operate high pressure washing equipment
- handle cleaning agents and disinfectants according to directions
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs, job performance audits, and Material Safety Data Sheets (MSDSs)
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- observe, identify and react appropriately to environmental implications and OHS hazards
- make shed environment secure to prevent accidental entry of personnel until environment safe
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types of sheds and equipment in them
- relevant OHS legislation, regulations, and codes of practice
- chemical spillage management and safety equipment and clothing
- environmental procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• raise or remove equipment from the shed to allow cleaning</li> <li>• remove litter, manure and dust from the shed</li> <li>• service filters and flush drinker lines and tanks</li> <li>• provide a disease free and hygienic environment for stock introduced to a shed</li> <li>• manage runoff according to enterprise procedures</li> <li>• dispose of wastes and cleaning materials in line with enterprise procedures</li> <li>• complete all records required including chemical usage and manifest.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Production sheds may include:	<ul style="list-style-type: none"> <li>• sheds and facilities used for the intensive production of pigs and poultry.</li> </ul>

## Unit Sector(s)

Unit sector	Livestock
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSK214A Maintain production growing environments

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of routine maintenance of growing environments for livestock under production and defines the standard required to: administer vaccines if required; calculate and administer feeds of varying rates; recognise variations from normal in mortality, and behaviour; perform routine hygiene maintenance activities; adjust and monitor environmental lighting, temperature/humidity and air quality.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Maintain environment systems	<p>1.1. Biosecurity procedures, including access to sheds and boot washing, are implemented and monitored.</p> <p>1.2. Shed heating, cooling and ventilation systems are monitored in accordance with the standards of the establishment.</p> <p>1.3. Litter and manure conditions are regularly monitored and changes reported.</p> <p>1.4. Lighting programs specified for the production unit are maintained and variations notified.</p> <p>1.5. Light globes are regularly cleaned and malfunctions notified.</p> <p>1.6. Feed program is monitored, and feeding times and feed rate monitored when restricted feeding is practised. Malfunctions are recognised and notified.</p> <p>1.7. Maintenance work is carried out according to enterprise Occupational Health and Safety (OHS) hazards identification, risk assessment and risk control measures.</p> <p>1.8. Waterers in sheds are monitored and malfunctions are recognised and reported to supervisor in accordance with enterprise procedures.</p>
2. Observe and assess livestock health	<p>2.1. Livestock are checked regularly.</p> <p>2.2. Incidence of ill health is recognised and appropriate action taken to notify and record according to establishment practice.</p> <p>2.3. Disease prevention strategies appropriate to the unit are carried out as instructed, and in line with</p>

ELEMENT	PERFORMANCE CRITERIA
	establishment practice and the Biosecurity Code.
3. Handle livestock	<p>3.1.Livestock is handled in accordance with animal welfare code of practice, counted and identified accurately.</p> <p>3.2.Injured, malformed and non-productive livestock is recognised and disposed of humanely according to establishment practice and the welfare code of practice.</p> <p>3.3.Livestock is treated under direction of the unit supervisor and according to enterprise procedures.</p> <p>3.4.Effects of treatment are assessed and reported according to enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work practices
- follow biosecurity procedures
- calibrate feed weigh cells
- recognise variations from normal in mortality, and behaviour
- perform routine hygiene maintenance activities as required by the employer or unit manager, and more frequently on demand
- adjust and monitor environmental lighting, temperature/humidity, and air quality
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- temperature/humidity and light requirements of different classes of livestock
- light control programs and equipment
- temperature/humidity control equipment

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• ventilation control equipment</li> <li>• feed programs for different classes and types of livestock</li> <li>• hygiene practices and awareness</li> <li>• enterprise and industry codes of practice</li> <li>• OHS, environmental and animal welfare legislation and enterprise procedures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• administer vaccines if required</li> <li>• calculate and administer feeds of varying rates</li> <li>• recognise variations from normal in mortality, and behaviour</li> <li>• perform routine hygiene maintenance activities</li> <li>• adjust and monitor environmental lighting, temperature/humidity, and air quality.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>
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<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Environments may include:	<ul style="list-style-type: none"> <li>those for intensive poultry and pig production.</li> </ul>
Livestock checks may include:	<ul style="list-style-type: none"> <li>visually checked during a floor walk, picking up or handling stock for closer investigation.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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# AHCLSK215A Carry out alpaca handling and husbandry operations

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of moving and controlling alpacas using basic handling methods and procedures and defines the standard required to: prepare handling areas, gates and access routes for alpaca movement; monitor and anticipate alpaca behaviour in handling operations; identify, sort, move and control alpacas for handling and husbandry operations; use correct equipment and calming and humane methods to minimise undue stress and risk to alpacas or handlers; recognise and report signs of unusual behaviour, unhealthy animals or abnormal conditions.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision within enterprise guidelines.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for handling alpacas	<p>1.1. Alpaca handling areas, gates and access routes are identified, prepared and maintained according to enterprise requirements.</p> <p>1.2. Alpacas are located and identified for handling according to supervisor instructions.</p> <p>1.3. Behavioural characteristics of alpacas are observed and anticipated, and appropriate handling methods are selected.</p> <p>1.4. Handling equipment is selected, checked for soundness and prepared for use according to manufacturer and supervisor instructions.</p> <p>1.5. Occupational Health and Safety (OHS) hazards in the workplace are recognised and reported to supervisor, and action is taken to minimise risks to self and others.</p> <p>1.6. Hazards to animals are recognised and reported to supervisor, and action is taken to minimise risks to animals.</p> <p>1.7. Site quarantine and other biosecurity protocols are observed.</p>
2. Handle alpacas	<p>2.1. Suitable Personal Protective Equipment (PPE) is selected, used and maintained according to OHS requirements.</p> <p>2.2. Procedures to control and sort alpacas are followed according to OHS and animal welfare requirements.</p> <p>2.3. Alpacas are classified according to age, sex and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>husbandry tasks to be performed.</p> <p>2.4. Restraint procedures are carried out with minimum stress and discomfort to alpacas, and according to OHS and animal welfare requirements.</p> <p>2.5. Alpacas are transported when required according to animal welfare requirements.</p> <p>2.6. Alpaca behaviour is continually monitored and anticipated during moving and handling processes to ensure wellbeing of alpacas and safety of handlers.</p> <p>2.7. Alpaca count is conducted and recorded according to enterprise requirements.</p> <p>2.8. Environmental impacts of alpaca handling and husbandry tasks are recognised and reported to supervisor.</p>
3. Carry out basic alpaca husbandry tasks	<p>3.1. All basic alpaca husbandry is carried out according to enterprise, OHS and animal welfare requirements.</p> <p>3.2. Unhealthy stock and abnormal conditions and/or behaviour are identified and reported to supervisor.</p> <p>3.3. Stock is fed and adequate clean water is provided.</p> <p>3.4. Plants poisonous to alpacas are recognised and reported to supervisor.</p>
4. Complete alpaca handling activities	<p>4.1. Alpaca husbandry tasks are completed as instructed, and gates and access routes are prepared for alpacas' departure according to enterprise requirements</p> <p>4.2. Handling areas and equipment are cleaned and maintained and surplus materials are stored according to OHS and enterprise requirements.</p> <p>4.3. Handling area maintenance requirements and equipment faults or malfunctions are detailed and reported according to enterprise requirements.</p> <p>4.4. Alpaca residues and waste are disposed of according to OHS and enterprise environmental practices.</p> <p>4.5. Relevant information about particular animals and the husbandry tasks performed is recorded and reported according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- identify hazards and apply safe work practices
- assessing and calculating alpaca numbers
- carrying out typical basic alpaca husbandry tasks
- controlling environmental impacts associated with alpaca handling and husbandry
- feeding and providing adequate clean water to alpacas
- identifying a range of plants poisonous to alpacas
- providing due care in the handling of alpacas
- reading and comprehending oral and written information and instructions, writing basic statements and maintaining alpaca handling records
- recognising abnormal behaviour and signs of ill health in alpacas
- using enterprise alpaca identification systems
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- alpaca behavioural characteristics and movement in handling areas
- classes of alpacas and their basic nutritional and welfare requirements
- components and functions of handling equipment
- enterprise identification systems for alpacas
- environmental codes of practice with regard to alpaca production
- handling techniques and restraint methods
- OHS, environment and animal welfare legislative and enterprise requirements
- plants poisonous to alpacas
- range of typical basic alpaca husbandry tasks and why they are carried out
- regulatory controls relating to the transport of animals on public roads.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare handling areas, gates and access routes for alpaca movement</li> <li>• monitor and anticipate alpaca behaviour in handling operations</li> <li>• identify, sort, move and control alpacas for handling and husbandry operations</li> <li>• use correct equipment, and calming and humane methods to minimise undue stress and risk to alpacas or handlers</li> <li>• recognise and report signs of unusual behaviour, unhealthy animals or abnormal conditions.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Alpacas may include:	<ul style="list-style-type: none"> <li>• all types and strains.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSK301A Administer medication to livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of applying preventative health treatments and other medications to livestock and defines the standard required to: select, use and maintain specialised animal health equipment; muster, move and handle livestock for health treatments; prepare treatment site; facilities and equipment; carry out livestock treatments; monitor effectiveness of treatments and provide follow up if required; maintain records of treatments.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in livestock enterprises that operate with some judgement and discretion, and would normally be carried out under minimal supervision within enterprise requirements and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for treatment of livestock	<p>1.1. Equipment and materials for treating livestock are selected, checked for safe and sound operation and confirmed against work plan.</p> <p>1.2. Livestock treatment site and facilities are prepared to industry standards in line with enterprise requirements.</p> <p>1.3. Livestock treatments are prepared and confirmed against work plan</p> <p>1.4. Occupational Health and Safety (OHS) hazards in the workplace are identified, risk assessed and risk controls are implemented.</p>
2. Treat livestock	<p>2.1. Livestock are mustered safely, yarded, controlled, inspected and identified for treatment in line with enterprise requirements.</p> <p>2.2. Low risk operating procedures with regard to livestock handling are observed and implemented in line with enterprise requirements.</p> <p>2.3. Dose rates are calculated and equipment calibrated and checked</p> <p>2.4. Treatment is administered in accordance with manufacturer's specifications and enterprise requirements including animal welfare.</p> <p>2.5. Environmental impacts associated with livestock husbandry practices are identified and minimised according to enterprise procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Complete treatment process	<p>3.1.Livestock are prepared and moved along planned route without damage to person, property or environment.</p> <p>3.2.Equipment, materials and facilities used for treatments are cleaned, maintained and stored in line with manufacturer's specifications, OHS and enterprise requirements.</p> <p>3.3.Livestock residues and waste are disposed of in line with enterprise requirements for OHS and environmental management.</p>
4. Monitor effectiveness of treatment	<p>4.1.Livestock are monitored post-treatment for signs of treatment effectiveness.</p> <p>4.2.Abnormalities in livestock health and condition are recognised and treated appropriately.</p> <p>4.3.Livestock treatment process and outcomes including withholding periods are detailed and recorded in line with enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- select and utilise equipment and materials appropriate for treating requirements and match to work tasks
- assess and calculate herd/flock numbers, measure dosage and quantities.
- monitor livestock behaviour and recognise abnormalities
- administer preventative health treatments in accordance with work plan
- prepare, clean and maintain treatment site, facilities and equipment to industry standards
- muster, move and control livestock
- apply contingency measures for administering treatments in the event of adverse weather conditions
- carry out animal husbandry procedures
- provide due care and handle livestock humanely
- clean and maintain treatment equipment, site and facilities to industry standards

## REQUIRED SKILLS AND KNOWLEDGE

- communicate abnormalities, equipment faults and workplace hazards, report and maintain treatment records
- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs)
- monitor and minimise impacts to the environment associated with livestock production, and the use and disposal of hazardous substances
- comply with OHS and animal welfare requirements
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- equipment and materials for treating livestock, their components and functions
- livestock health treatments, procedures and methods
- livestock identification methods
- mustering and moving techniques
- livestock husbandry practices
- withholding periods for residues in meat, milk or wool
- livestock behaviour and basic health and nutritional requirements
- environmental impacts and minimisation measures associated with livestock production, and the use and disposal of hazardous substances
- hazards associated with handling livestock and veterinarian medicines and chemicals
- personal protective clothing and equipment and when and how it should be used and maintained
- enterprise policies with regard to treating livestock, recording and reporting routines relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, animal welfare, and the use and control of hazardous substances
- procedures for cleaning and maintaining treatment equipment and materials.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select, use and maintain specialised animal health equipment</li> <li>• muster, move and handle livestock for health treatments</li> <li>• prepare treatment site, facilities and equipment</li> <li>• carry out livestock treatments</li> <li>• monitor effectiveness of treatments and provide follow up if required</li> <li>• maintain records of treatments.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• all types and breeds of livestock.</li> </ul>
Treatments may include:	<ul style="list-style-type: none"> <li>• medication including drenches, vaccines, supplements and prescribed medicines.</li> </ul>
These may be administered by	<ul style="list-style-type: none"> <li>• pour on liquids</li> <li>• oral drenching</li> <li>• bolus or capsule injection</li> <li>• vaccinating</li> <li>• injection with syringe.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSK302A Mate and monitor reproduction of alpacas

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of mating and monitoring the reproduction of alpacas and defines the standard required to: monitor the condition of female and male alpacas; recognise ovulation and detect oestrus in females; supervise mating; conduct and commission pregnancy tests; identify and implement action required as a result of pregnancy tests.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to alpaca farm or stud workers and is likely to be carried out with limited supervision within enterprise guidelines. It may require working with or under the direction of more experienced personnel, including veterinarians.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare animals for mating	<p>1.1. Male and female animals to be mated are selected according to stud's mating plan.</p> <p>1.2. Condition of animals selected for mating is accurately determined and body scores are recorded according to recognised industry practices.</p> <p>1.3. Nutritional program is adjusted where required and monitored to produce optimum condition for mating.</p> <p>1.4. Where females are over-fleeced, preparations are made to ensure that tail and vulva area are clean and free of fleece.</p> <p>1.5. Animals are checked for any signs of infection or other reason not to proceed with the planned mating and remedial action is taken as appropriate.</p>
2. Facilitate mating	<p>2.1. Receptive females are identified according to industry practice.</p> <p>2.2. Paddock or pen mating areas are secure and provide access for handlers during joining.</p> <p>2.3. Mating procedures and handling techniques are used that minimise stress and discomfort to animals and meet Occupational Health and Safety (OHS) and animal welfare requirements.</p> <p>2.4. Pen mating is supervised and, when required, intervention is undertaken or obtained to maximise conception rates.</p>
3. Complete mating procedures	<p>3.1. Pregnancy testing is undertaken or commissioned at earliest opportunity to identify pregnancy status of animals and suitable action is taken as required.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.2. Records of mating are recorded accurately, legibly and according to enterprise and industry requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe operating procedures
- accurately scoring alpaca condition
- assisting with ultrasonography and/or blood collection if requested by professional service providers
- cleaning up work site and safely disposing of waste
- communicating effectively with other team members and veterinarians
- conducting a spit off
- employing safe work practices
- supervising alpaca mating and assisting as appropriate
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- alpaca handling and assisted joining techniques
- alpaca health and abnormalities
- alpaca movement and behavioural characteristics
- anatomy and physiology of male and female alpaca reproductive systems
- enterprise and industry identification system for alpaca
- enterprise and industry policies regarding recording and reporting routines for matings
- female and male body conditioning through nutrition programs
- Johne's disease status mating procedures
- mobile mating procedures
- Personal Protective Equipment (PPE) and when and how it should be used



**REQUIRED SKILLS AND KNOWLEDGE**

- pregnancy testing techniques, including detection of ovulation
- relevant state and territory animal welfare legislation and codes of practice
- relevant state and territory legislation, regulations and codes of practice with regard to workplace OHS.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor the condition of female and male alpacas
- recognise ovulation and detect oestrus in females
- supervise mating
- conduct and commission pregnancy tests
- identify and implement action required as a result of pregnancy tests.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Types may include:	<ul style="list-style-type: none"> <li>mating and monitoring reproduction in all types and strains of alpacas.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK303A Carry out feedlot operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of providing feed for livestock and monitoring their health and welfare in a small scale or opportunity feedlot and defines the standard required to: identify a range of grain and feed types and qualities; identify premixes and weigh out, mix feeds and ingredients and identify basic mixing problems; recognise clinical symptoms (normal vs. abnormal) of disease or injuries; remove sick or injured animals and dispose of or treat in hospital pens; relate herd performance data to ration consistency; and maintain clean feed and water at all times.
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### Application of the Unit

<b>Application of the unit</b>	This unit involves working under limited supervision across the full range of feedlot operations. Overall progress may be checked periodically.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to work with livestock feed	1.1. Work to be undertaken is interpreted from work program, where necessary, and confined with supervisor. 1.2. Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented. 1.3. Suitable personal protective equipment (PPE) is selected, used and maintained. 1.4. Tools and equipment suitable for the work to be undertaken are selected, checked and maintained, if necessary. 1.5. Environmental implications of undertaking work are identified, likely outcomes assessed and, if necessary, responsible action taken.
2. Mix feed	2.1. Scales and containers to be used for measurements are calibrated according to manufacturer instructions. 2.2. Ingredients are identified from instructions and obtained from storage locations. 2.3. Ingredients are measured in the specified ratios and quantities. 2.4. Ingredients are blended adequately and hygienically in the manner specified and using the appropriate equipment. 2.5. Where grinding is required, it is done in the manner

ELEMENT	PERFORMANCE CRITERIA
	<p>specified and using the appropriate equipment.</p> <p>2.6.OHS hazards are identified, risk assessed and suitable controls implemented.</p> <p>2.7.Suitable PPE is selected, used and maintained.</p>
3. Feed livestock	<p>3.1.Feed is stored according to organisational procedures and standards.</p> <p>3.2.Feed physical quality, quantity and type are checked on their arrival to the shed.</p> <p>3.3.Livestock are fed at scheduled time, rate and frequency according to organisation plans and procedures and the codes of welfare.</p> <p>3.4.Quality and hygiene of feed is maintained throughout the feeding process.</p>
4. Establish and maintain feedlot hygiene and biosecurity	<p>4.1.Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of PPE.</p> <p>4.2.Livestock entering feedlot are examined, their documentation checked and quarantined for a period.</p> <p>4.3.Cleanliness and hygiene are maintained by selecting and using appropriate cleaning methods according to organisation practices and relevant regulations.</p> <p>4.4.Thorough personal hygiene practices are maintained in all activities associated with handling livestock, including reducing risks from diseases transmissible to humans.</p> <p>4.5.Equipment and fittings are dismantled, cleaned and replaced correctly.</p> <p>4.6.All waste and debris are placed in allocated areas and disposed of, and run-off is dealt with according to the Feedlot Code of Practice, environmental legislation and public health standards.</p> <p>4.7.Visitors to feedlot are checked and signed in according to protocols.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- identify hazards and implement safe work procedures
- detect possibility of disease through parameters, such as behaviour and appetite
- recognise clinical symptoms (normal vs. abnormal)
- identify a range of grain and feed types and qualities
- identify grain contaminants
- identify premixes and weigh out
- mix feeds and ingredients and identify basic mixing problems
- relate herd performance data to ration consistency
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
- measure and calculate volumes and consumption requirements
- maintain records for all aspects of livestock on feed
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- relevant OHS legislation, regulations and codes of practice
- environmental and animal welfare codes of practice and procedures
- the organisations livestock production and management plans
- sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management
- organisation and industry guidelines for the preparation of feed and mixes
- raw ingredients (grains, meals, vitamins, minerals and premix formulations).

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify a range of grain and feed types and qualities</li> <li>• identify premixes and weigh out</li> <li>• mix feeds and ingredients and identify basic mixing problems</li> <li>• recognise clinical symptoms (normal vs. abnormal) of disease or injuries</li> <li>• remove sick or injured animals and dispose of or treat in hospital pens</li> <li>• relate herd performance data to ration consistency and maintain clean feed and water at all times.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Type of feedlot may include:	<ul style="list-style-type: none"> <li>• small scale or opportunity lot feeding of grazing animals including: <ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep and goats as part of farm or processing operations.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK304A Carry out post-mortem examination of livestock

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of conducting a post-mortem examination of an animal or bird under limited supervision and following established procedures, and defines the standard required to: use knives and other cutting equipment safely; handle dead animals and birds without risk to self or others; accurately cut open an animal or bird for post mortem examination; collect relevant and useable data and biological samples before and as part of the post mortem to enable an accurate diagnosis of the cause of death; carry out preparation, labelling and packaging of biological and potentially hazardous samples.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit is likely to be carried out under minimal supervision, with further checking required in some cases by a veterinarian. Post-mortems are applied at a basic level and observations are referred on where veterinary advice or a definitive diagnosis is required.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to conduct post-mortem	<p>1.1.Site for post-mortem is selected, taking into account proximity to other facilities and environmental implications.</p> <p>1.2.The site to be used for the post-mortem is prepared by cleaning, and by ensuring that it is located away from other livestock, and that blood and fluids will not be able to contaminate surrounding areas or facilities.</p> <p>1.3.All relevant preliminary information about the animal or bird to be examined is collated or obtained.</p> <p>1.4.Occupational Health and Safety (OHS) hazards associated with the procedure are identified and appropriate action is taken.</p> <p>1.5.Correct clothing, equipment and resources are obtained and prepared for use</p> <p>1.6.The animal to be examined is moved to the post mortem area using appropriate manual lifting techniques and/or equipment.</p> <p>1.7.Expert assistance is sought if required.</p>
2. Carry out	2.1.External assessment is carried out and outward signs

ELEMENT	PERFORMANCE CRITERIA
post-mortem examination	<p>of disease or injury are noted.</p> <p>2.2. Where unusual symptoms are present, expert advice and assistance is sought before proceeding.</p> <p>2.3. Animal or bird is cut open without cutting stomach cavity or organs using appropriate techniques and equipment.</p> <p>2.4. Organs, tissues and joints are examined.</p> <p>2.5. Samples of organs and other tissues are taken where appropriate, and placed in labelled containers to meet enterprise and laboratory requirements.</p> <p>2.6. Details of all features examined and the possible cause of death are recorded according to enterprise procedures.</p>
3. Prepare samples and maintain hygiene and biosecurity	<p>3.1. Carcass is disposed of using appropriate equipment according to enterprise quarantine and other procedures.</p> <p>3.2. Correctly labelled and packaged samples are sent to the laboratory for analysis.</p> <p>3.3. All preliminary information about the animal or bird examined and the records of observations made during the post-mortem are collated and forwarded to supervisor or veterinarian for analysis and diagnosis.</p> <p>3.4. All equipment used is cleaned and disinfected after use and before putting away.</p> <p>3.5. Area used for the post-mortem is cleaned and, where appropriate, disinfected.</p> <p>3.6. Disposable gloves are disinfected before being disposed of according to enterprise procedures</p> <p>3.7. Hands are thoroughly washed.</p> <p>3.8. Clothing is changed and placed in appropriate bin for laundering and boots are disinfected if appropriate.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

## REQUIRED SKILLS AND KNOWLEDGE

- identify hazards and implement risk controls
- accurately cut open an animal or bird for post mortem examination
- handle and sharpen knives
- handle dead animals and birds without risk to self or others.
- use appropriate Personal Protective Equipment (PPE) and hygiene procedures
- comply with biosecurity protocols
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- typical causes of death for the species being examined
- sequence of actions in conducting a post mortem examination
- requirements for correct preparation, labelling and packaging of biological and potentially hazardous samples
- position and features of major organs in normal animal or bird of the species being examined
- symptoms of exotic and notifiable diseases listed as a threat in the animal health plan
- procedures for OHS, hygiene and biosecurity.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• use knives and other cutting equipment safely</li> <li>• handle dead animals and birds without risk to self or others</li> <li>• accurately cut open an animal or bird for post mortem examination</li> <li>• collect relevant and useable data and biological samples before and as part of the post mortem to enable an accurate diagnosis of the cause of death</li> <li>• carry out preparation, labelling and packaging of biological and potentially hazardous samples.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Post-mortems may include:</p>	<ul style="list-style-type: none"> <li>• those carried out on livestock on the farm or conducted in a separate work area or laboratory.</li> <li>• post-mortems can be carried out on:                             <ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep</li> <li>• goats</li> <li>• alpacas</li> <li>• pigs</li> <li>• poultry.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK305A Maintain livestock water supplies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to perform maintenance procedures on a range of water supply systems and equipment where specialist skills of another trade are not warranted or available and defines the work practices required to: carry out routine servicing and minor repairs on a range of water supply systems and equipment; recognise minor and major faults; estimate water requirements based on average and peak demand for water; carry out water quality testing and analysis; test and monitor machinery and equipment for correct operation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm workers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify maintenance requirements	<p>1.1.Livestock water supplies are checked for quality and inspected for signs of contamination or deterioration, and low or interrupted supply.</p> <p>1.2.Components of water supply systems are checked for wear, deterioration or malfunctions.</p> <p>1.3.Identified maintenance requirements are checked and confirmed according to the maintenance plan.</p>
2. Prepare for maintenance	<p>2.1.Tools, equipment and materials appropriate to the job requirements are selected and checked for serviceability according to manufacturer's specifications.</p> <p>2.2.Faulty or unsafe tools are identified and segregated for repair or replacement and reported according to enterprise requirements.</p> <p>2.3.Existing and potential hazards to health and safety are identified and reported according to Occupational Health and Safety (OHS) requirements.</p>
3. Carry out maintenance procedures	<p>3.1.Suitable personal protective equipment is selected, used and maintained according to OHS requirements.</p> <p>3.2.Maintenance to water systems and equipment are carried out to manufacturer's specifications and according to the maintenance plan.</p> <p>3.3.Maintenance and repair of motors where necessary, including fault finding, is carried out under the supervisor's direction.</p> <p>3.4.More complex faults and repair requirements are reported to the supervisor according to enterprise</p>



ELEMENT	PERFORMANCE CRITERIA
	requirements.
4. Complete maintenance activities	<p>4.1. Worksite, tools and materials are cleaned, returned to operating order and stored according to OHS and enterprise requirements.</p> <p>4.2. Malfunctions, faults, and wear or damage to tools is reported for repair or replacement according to enterprise requirements.</p> <p>4.3. Unwanted materials and waste from maintenance activities is collected, treated and disposed or recycled according to enterprise environmental requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- operate vehicles safely and efficiently
- use hand and power tools safely
- arrange water supply system components and materials
- rectify minor faults and report major faults
- work as part of a contract team as required
- demonstrate safe and positive environmental working practices
- identify the components of a range of water supply systems
- test water quality as directed
- read and interpret a water supply plan
- measure and calculate lubrication requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- livestock requirements and average and peak demand for water
- operational principles of various pumps and pumping systems
- functions and components of a range of water supply systems
- operation and maintenance of diesel and petrol engines
- factors which affect water quality, various water contaminants and remedial action
- advantages and disadvantages of different types of water supply systems
- OHS legislative requirements
- relevant legislative requirements with regard to property water supply systems
- Environmental Code of Practice associated with maintenance activities.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out routine servicing and minor repairs on a range of water supply systems and equipment.
- recognise minor and major faults
- estimate water requirements based on average and peak demand for water
- carry out water quality testing and analysis
- test and monitor machinery and equipment for correct operation.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Maintenance may include:	<ul style="list-style-type: none"> <li>• maintenance procedures on a range of water supply systems and equipment where specialist skills of another trade are not warranted or available.</li> </ul>
Water supply systems may include:	<ul style="list-style-type: none"> <li>• external reticulated water supply</li> <li>• dams or storage tanks</li> <li>• troughs</li> <li>• channel supply</li> <li>• rivers</li> <li>• pumped or flowing bores.</li> </ul>
Water supply components may include:	<ul style="list-style-type: none"> <li>• pumps</li> <li>• windmills and bores</li> <li>• pipes</li> <li>• troughs</li> <li>• timber dividing structures</li> <li>• air bleeders in long lines</li> <li>• line junctions or connections</li> <li>• stone flagged areas around troughs.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLSK306A Coordinate and monitor production performance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of coordinating resources and monitoring the work of others within an intensive production process and defines the standard required to: read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs; prepare and present production and other information in a manner that is readily accessible for both management and operators; prepare, update and amend spread-sheeted information using a software package; plan and implement the activities contained in livestock production plans; recognise when performance standards are not met, and investigate and report findings in written form; provide leadership for staff including feedback on performance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the coordinating and monitoring intensive production performance is likely to be under management supervision, with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for work in the production area	<p>1.1. Work to be undertaken is interpreted from work program where necessary, and confirmed with management.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.3. Suitable personal protective equipment is selected, used and maintained.</p> <p>1.4. Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.</p> <p>1.5. The personal protective equipment and other safety requirements are clearly communicated to staff and contractors, and confirmation of that clear communication is sought.</p>
2. Coordinate work activities	<p>2.1. Work required of staff and contractors is clear, unambiguous and follows the production plans and programs.</p> <p>2.2. Work schedules, plans and priorities are met</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to the needs of the organisation or situation.</p> <p>2.3.The allocation of work optimises resources and the existing competencies of staff.</p> <p>2.4.Feedback is provided to staff and management on request, or as necessary in accordance with established industry standards.</p>
3. Monitor daily operations	<p>3.1.Manure and litter consistency is assessed and treated to prevent deterioration, where appropriate.</p> <p>3.2.The designated lighting and internal environment programs for the unit are implemented.</p> <p>3.3.Checks are made to ensure that effluent storage and disposal systems are operated according to the production program and manufacturer's instructions.</p> <p>3.4.Checks are made to ensure that all rubbish and used consumables are removed from production site according to the requirements of the production program.</p> <p>3.5.Herd/flock and shed conditions are regularly observed for signs of ill health, and changes recorded and reported.</p> <p>3.6.Checks are made to ensure that the OHS requirements are being observed and followed.</p> <p>3.7.Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress.</p>
4. Monitor herd/flock health	<p>4.1.Herd/flock and shed conditions are regularly observed for signs of ill health and changes recorded and reported.</p> <p>4.2.Livestock is examined for evidence of disease through correct post-mortem techniques in line with individual unit standard and veterinary advice.</p> <p>4.3.Disease status of unit stock is assessed and evaluated, and serviceman or veterinary assistance notified when required.</p> <p>4.4.Components of quarantine procedures are regularly checked for compliance.</p>
5. Complete records and documentation	<p>5.1.Information gathered throughout production operations is gathered and collated.</p> <p>5.2.Collated information is graphed where required, and prepared for presentation to supervisor or manager ready for easy recognition and extraction of data.</p>

ELEMENT	PERFORMANCE CRITERIA
	5.3. Information gathering, collation and presentation are undertaken promptly, efficiently and accurately.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- maintain biosecurity procedures and report concerns immediately
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- monitor temperature and adjust as required
- prepare, update and amend spread-sheeted information using a software package
- discuss production performance, risk and hazard potential, quality of output, and methods of production with both management and operators
- plan and implement the activities contained in livestock production plans
- observe, identify and react appropriately to OHS hazards and environment risks
- recognise when performance standards are not met and investigate and report findings in written form
- provide supervision of staff including allocating duties and feedback on performance
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- biosecurity procedures and codes of practice
- common livestock diseases and clinical signs
- relevant industry, environmental and quality standards (inc ISO9002:1094)
- animal welfare codes of practice and procedures
- types of sheds and equipment
- costs, depreciation, measuring livestock performance economically



**REQUIRED SKILLS AND KNOWLEDGE**

- interpreting raw data to determine issues and problems
- recording and reporting requirements
- fundamentals of quarantine and control methods
- feed ingredients and additives.
- water reticulation systems and quality.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- prepare, update and amend spread-sheeted information using a software package
- plan and implement the activities contained in livestock production plans
- recognise when performance standards are not met, and investigate and report findings in written form
- provide leadership for staff including feedback on performance.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of productions may include:	<ul style="list-style-type: none"> <li>intensive production of pigs or poultry.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSK307A Euthanase livestock

### Modification History

Release	TP Version	Comments
2	AHC10v5	Change to broaden application of the unit
1	AHC10	Initial release. Supersedes and is equivalent to RTE3119A

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of destroying livestock without distress or suffering prior to cessation of their vital life functions and defines the standard required to: prepare for euthanasia; carry out euthanasia of animal using method that minimises pain and distress; dispose of carcass; clean and store equipment and materials.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires the application of judgment and discretion, and is likely to be carried out independently within own area of responsibility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

Prerequisite units		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for euthanasia	<p>1.1. Criteria for decision to destroy livestock conform to enterprise euthanasia action plan and approval of supervisor where required.</p> <p>1.2. Method selected to destroy livestock conforms to enterprise euthanasia action plan.</p> <p>1.3. Equipment and materials required to complete the euthanasia are prepared.</p> <p>1.4. Hazards associated with the euthanasia are identified in accordance with Occupational Health and Safety (OHS) standards.</p> <p>1.5. Environmental and public safety risks associated with the euthanasia are identified in accordance with statutory and local authority requirements.</p> <p>1.6. Licences and permits required to complete euthanasia are obtained where necessary.</p> <p>1.7. Equipment and materials for euthanasia are checked and prepared in accordance with statutory requirements and industry practice.</p>
2. Carry out euthanasia of animal	<p>2.1. Personal protective and safety equipment is used in accordance with OHS standards and statutory requirements.</p> <p>2.2. Equipment is handled and transported safely at all times in accordance with statutory requirements and industry practices.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Animal is physically restrained in a way that minimises pain and distress.</p> <p>2.4. Animal is killed in a quick and painless way in accordance with animal welfare regulations and statutory requirements.</p> <p>2.5. Animal is checked to ensure it is dead.</p> <p>2.6. Animals that have not been killed immediately are destroyed in a humane manner in accordance with animal welfare regulations and statutory requirements.</p> <p>2.7. Carcasses that are required for research or commercial use are handled as required, in accordance with the animal management strategy and action plan.</p> <p>2.8. Animal carcasses that are not required for research or other purposes are disposed of as required, in accordance with statutory requirements and industry practice.</p>
3. Clean and store equipment and materials	<p>3.1. Carcasses for research or commercial use are cleaned and stored in accordance with relevant policies and procedures and industry practice.</p> <p>3.2. Equipment and materials are cleaned and stored in accordance with relevant standards and policies.</p> <p>3.3. Job completion is reported or recorded in accordance with relevant policies and procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- apply animal welfare requirements and OHS procedures
- prepare for euthanasia
- carry out euthanasia of animal
- clean and store equipment and materials.
- dispose of animals in line with environmental policies
- use literacy skills to read, interpret and follow organisational policies and

## REQUIRED SKILLS AND KNOWLEDGE

procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- OHS regulations and safe practice in euthanasing animals
- statutory legislation and requirements related to euthanasing livestock
- enterprise euthanasia action plans
- animal handling and behaviour
- anatomy and physical features of the animal
- animal welfare legislation, code of practice and enterprise requirements
- where firearms are used, procedures appropriate to the firearms safety and handling.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare for euthanasia
- carry out euthanasia of animal using method that minimises pain and distress
- dispose of carcass
- clean and store equipment and materials.

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Reasons for euthanasing may include:	<ul style="list-style-type: none"> <li>• irreparable fracture limbs causing severe trauma</li> <li>• loss of production</li> <li>• poor quality of life</li> <li>• inability to stand or walk</li> <li>• diagnostic reasons such as potential to cause human disease</li> <li>• debilitating or toxic condition (cost of treatment prohibitive and poor prognosis).</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK308A Identify and draft livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of identifying and drafting or sorting of animals for sale, breeding or for other enterprise requirements and defines the standard required to: identify criteria for animal selection; control and sort livestock; safely and humanely apply identification devices; appraise and grade animals; provide due care in the handling of livestock; and recognise livestock abnormalities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to livestock workers who operate under directions from others with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify animals	<p>1.1.Criteria for animal selection are identified and clarified from production and marketing information and supervisor or management instructions.</p> <p>1.2.Procedures to control and sort livestock are conducted with due care in accordance with Occupational Health and Safety (OHS) and animal welfare requirements.</p> <p>1.3.Animals are identified and separated according to unit selection criteria.</p> <p>1.4.Identification devices are safely and humanely applied and used on animals according to industry practice and the code of welfare.</p> <p>1.5.OHS hazards in the workplace are recognised, risks are assessed and controls implemented.</p>
2. Assess and select animals	<p>2.1.Animals are accurately assessed according to industry and/or enterprise criteria and guidelines.</p> <p>2.2.Procedures to control and sort livestock are conducted with due care in accordance with OHS and animal welfare requirements.</p> <p>2.3.Animals are correctly ranked and selected using performance records, weight, sex or other organisational criteria.</p> <p>2.4.Selection is reliably and accurately recorded and reported to unit management.</p> <p>2.5.Suitable personal protective equipment (PPE) is selected, used and maintained in accordance with OHS requirements.</p> <p>2.6.All accepted guidelines and industry norms for</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>prescribed medication withholding periods are observed when selecting animals.</p> <p>2.7. Records and documentation required by the enterprise are completed clearly, accurately and promptly.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify OHS hazards and implement safe work practices
- recognise animals unfit for transport
- provide due care in the handling of livestock
- recognise livestock abnormalities
- select animals according to criteria
- draft livestock
- read and comprehend oral and written information and instructions, write basic statements and maintain livestock handling records
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs, and job performance audits
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- handling techniques and restraint methods
- animal movement and drafting
- livestock characteristics relevant to drafting
- selection criteria for breeding stock
- livestock identification systems and devices
- livestock behaviour

**REQUIRED SKILLS AND KNOWLEDGE**

- environmental codes of practice with regard to livestock production
- enterprise and industry grading/selection animal identification procedures
- OHS and animal welfare legislative and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify criteria for animal selection
- control and sort livestock
- safely and humanely apply identification devices
- appraise and grade animals
- provide due care in the handling of livestock
- recognise livestock abnormalities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Livestock may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• sheep</li> <li>• goats</li> <li>• pigs</li> <li>• for the purpose of sorting of animals for sale, breeding or for other enterprise requirements.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSK309A Implement animal health control programs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to implement animal health control programs in animals and defines the standard required to: monitor animal health status and refer to the production plan for intervention strategies; accurately diagnose the type and severity of infection or parasite infestation; determine the type and scope of treatment; administer treatments and observe withholding periods; monitor animals for treatment effectiveness.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in livestock based enterprises that operate under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess animal health status and treatment options	<p>1.1. Information on animal health program is sourced from the livestock production plan.</p> <p>1.2. Animal health status is assessed and potential health issues identified for different mobs and classes of livestock.</p> <p>1.3. Prevention and treatment strategies are identified to resolve health issues, including rotational grazing, exclusion from infected areas, allowing the national development of immunity, genetic selection and treatment with drugs.</p> <p>1.4. Information on parasite immunity to different classes of chemicals is sourced and rotation of chemical families is planned for.</p>
2. Prepare for treatment of animals	<p>2.1. Animals affected by infection or parasites, or requiring treatment under the animal health plan, are identified.</p> <p>2.2. The type and severity of infestation is determined through faecal egg counts or other tests if required.</p> <p>2.3. The need for treatment and the type and scope of treatment is determined and prepared according to manufacturer's specifications or veterinary advice.</p> <p>2.4. Equipment and materials and treatment site are prepared to industry standards according to enterprise requirements.</p> <p>2.5. Occupational Health and Safety (OHS) hazards in the workplace are recognised, risk assessed and controlled according to OHS requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Treat animals	<p>3.1. Suitable personal protective equipment is selected, used and maintained according to OHS requirements.</p> <p>3.2. Animals are safely handled and restrained without causing harm or injury to animal or handler.</p> <p>3.3. Treatment is administered hygienically and consistently according to manufacturer's specifications or veterinary advice.</p> <p>3.4. Withholding periods and other details of treatment are recorded.</p> <p>3.5. Treated animals are identified to ensure WHP compliance and isolation from non-treated animals where required.</p> <p>3.6. Animals are counted out, prepared and moved along a planned route without damage to person, property or environment.</p>
4. Complete treatment process	<p>4.1. Animal health and condition are monitored post-treatment and abnormalities reported according to enterprise requirements.</p> <p>4.2. Environmental implications associated with the treatment of animals are identified, assessed and controlled according to enterprise requirements.</p> <p>4.3. Equipment and worksite are cleaned and waste, including animal residues, is disposed of according to OHS and enterprise requirements.</p> <p>4.4. Health treatments are stored to manufacturers recommendations, industry and enterprise requirements.</p> <p>4.5. Relevant information is documented according to industry and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices for animal health treatment
- collect faecal, tissue or blood samples for laboratory analysis samples



**REQUIRED SKILLS AND KNOWLEDGE**

- identify the symptoms of parasite infestation and other diseases
- select livestock prone to infection for culling
- arrange and co-ordinate equipment and resources
- drench and vaccinate livestock
- select apply chemicals appropriate to treat infections and infestations
- assemble, check and calibrate drenching and vaccinating equipment
- calculate animal numbers and measure treatment dosage and rates demonstrate safe and environmentally responsible workplace practices
- provide due care and humanely handle animals
- return animals to prepared and clean environments
- read and interpret chemical and veterinary health labels, manufacturer's specifications and Material Safety Data Sheets (MSDSs)
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- the relationship between livestock health nutrition
- types of parasite infestation and their symptoms
- the parasite resistance of different classes of livestock
- application procedures and effects of veterinary chemicals
- types of health preparation treatments
- enterprise vaccination program and procedures
- identification of and prescribed treatments for infections and infestations
- livestock health and nutritional requirements
- types of parasite infestation and their symptoms
- grazing management strategies used in internal parasite control
- requirements for the preparation and transportation of faecal samples
- drenching equipment, drenches and their efficiency
- relevant codes of practice with regard to the safe use and handling of hazardous substances
- withholding periods for treated animals
- animal handling and restraint techniques
- OHS and animal welfare legislative and enterprise requirements
- relevant codes of practice with regard to environmental protection.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• monitor animal health status and refer to the production plan for intervention strategies</li> <li>• accurately diagnose the type and severity of infection or parasite infestation</li> <li>• determine the type and scope of treatment</li> <li>• administer treatments and observe withholding periods</li> <li>• monitor animals for treatment effectiveness.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• pigs</li> <li>• alpacas</li> <li>• dairy cattle</li> <li>• beef cattle.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK310A Implement feeding plans for intensive production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing feeding plans in an intensive animal production enterprise and defines the standard required to: measure and calculate volumes and consumption requirements; relate livestock performance data to ration and consistency; interpret and apply task instructions and communicate with work team and supervisor; complete records and documentation of feed use, feed stored and animal health and treatments; take and prepare feed samples for dispatch to the laboratory.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be under limited supervision from others with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for feeding	<p>1.1. Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.2. Livestock condition is assessed and recorded according to industry standards and enterprise requirements.</p> <p>1.3. Livestock production status or stage of production is identified according to enterprise requirements.</p> <p>1.4. Environmental implications of undertaking work are identified, likely outcomes assessed and, if necessary, responsible action taken.</p> <p>1.5. Feed distribution system and feeders are checked and maintained.</p>
2. Carry out feeding and watering	<p>2.1. Automatic/computerised feeders are checked for blockages and correct functioning.</p> <p>2.2. Any abnormalities or irregularities with feed stocks are rectified.</p> <p>2.3. Feed consumption and wastage is monitored and adjustments made.</p> <p>2.4. Watering systems are adjusted for height or position.</p> <p>2.5. Water flow is checked and adjustments are made accordingly.</p> <p>2.6. Watering containers or lines are emptied and cleaned where necessary.</p>
3. Conduct hygiene and administration activities	<p>3.1. Feeding equipment is cleaned according to manufacturer's specifications and organisational procedures to maintain hygiene standards.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Information gathering, collation and presentation is undertaken promptly, efficiently and accurately.</p> <p>3.3. All required records and documentation are completed accurately and promptly according to organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify grain contaminants
- mix feeds and ingredients
- relate flock performance data to ration consistency
- recognise and rectify minor operational faults
- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs)
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
- measure and calculate volumes and consumption requirements
- complete records and documentation of feed use and volumes for the shed
- take and prepare feed samples for dispatch to the laboratory
- take silo readings
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- silo operations and configuration, machinery and operating practices
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures
- safe operation of machinery
- contaminants of raws and meals that could reduce performance - seeds, moulds, nutritional and disease factors which can influence product quality
- evidence of spoilage and handling spoiled feeds.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• measure and calculate volumes and consumption requirements</li> <li>• relate livestock performance data to ration and consistency</li> <li>• interpret and apply task instructions and communicate with work team and supervisor</li> <li>• complete records and documentation of feed use, feed stored and animal health and treatments</li> <li>• take and prepare feed samples for dispatch to the laboratory.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
Feeding may include:	<ul style="list-style-type: none"> <li>• the feeding of pigs and poultry in intensive in all production systems</li> <li>• shedded sheep</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>dairy cattle.</li> </ul>
Information relating to feeding plans may include	<ul style="list-style-type: none"> <li>supplementary feeding pattern</li> <li>feed purchases</li> <li>minimum livestock condition levels</li> <li>production requirements.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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# AHCLSK311A Implement feeding plans for livestock

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring the available pasture for grazing and implementing a feeding plan and defines the standard required to: monitor the availability of pasture; assess herd/flock health and condition; read and implement a feeding plan; identify livestock nutritional requirements and estimate livestock feed requirements; calculate feed requirements.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on livestock grazing enterprises and requires judgment in monitoring pasture, selecting method of feeding and assessing supplementary feed requirements. Coordinating the feeding of livestock involves responsibility for the welfare of livestock, reporting to management and coordinating feeding with other staff and operations.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine livestock condition and nutritional requirements	<p>1.1.Livestock condition is monitored and reported according to industry standards and enterprise requirements.</p> <p>1.2.Livestock production status is identified according to enterprise requirements.</p> <p>1.3.Livestock nutritional requirements and the nutritional value of feedstuffs are sourced from the feeding plan.</p> <p>1.4.Feeding plan is referred for adjustment in response to the monitoring of livestock condition and pasture growth.</p> <p>1.5.Animals that are in atypical condition, injured or diseased, are reported or separated.</p>
2. Assess pasture feed	<p>2.1.Quantity and quality of available pasture is assessed.</p> <p>2.2.Grazing management is implemented and monitored to ensure the sustainable stocking capacity of pasture.</p> <p>2.3.Grazing behaviour of livestock is monitored and shy or problem feeders identified.</p> <p>2.4.Livestock feeding methods and level of supplementary feeding is determined, according to the feeding plan.</p>
3. Manage the feeding of livestock	<p>3.1.Livestock are grazed on pasture according to the guidelines described in the feeding plan.</p> <p>3.2.Required supplementary feed is obtained according</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>to the guidelines described in the feeding plan.</p> <p>3.3. Supplementary feed is provided to livestock in the manner, and at the times described in the feeding plan.</p> <p>3.4. Indications of any negative environmental impacts are identified and assessed, and amendments are made to the feeding method as required</p> <p>3.5. Condition and liveweight response to feeding is monitored and reported for review of the feeding plan.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess pasture health and condition
- assess herd/flock health and condition
- assess livestock condition and liveweight
- respond to or report negative environmental impacts of feeding
- order feed if requested in line with feeding plan
- handle livestock humanely and monitor animal welfare
- identify livestock nutritional requirements
- identify feeding problems and animals that require individual treatment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the nutrient and feeding requirements of a range of livestock
- indicators to monitor the level of feeding

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• different types of agricultural feeds</li> <li>• the factors that affect feed supply and demand for a farming operation</li> <li>• grazing practices which maximise pasture growth and quality to best match herd/flock feed requirements</li> <li>• the purpose of feed conservation in relation to enterprise feed supply and livestock requirements</li> <li>• different types of pasture grazing systems, e.g. rotation, strip or block grazing</li> <li>• ways of determining a feed surplus</li> <li>• the role of spelling subdivision in effective pasture and animal management</li> <li>• different supplementary feeding options for livestock</li> <li>• environmental controls and codes of practice applicable to the enterprise</li> <li>• nutrient values of pasture and supplementary feedstuffs</li> <li>• nutritive disorders in livestock and preventative measures</li> <li>• enterprise livestock identification systems</li> <li>• OHS legislative requirements</li> <li>• codes of practice with regard to animal welfare and environmental protection.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• monitor the availability of pasture</li> <li>• assess herd/flock health and condition</li> <li>• read and implement a feeding plan</li> <li>• identify livestock nutritional requirements</li> <li>• estimate livestock feed requirements, and calculate feed requirements.</li> </ul>
<b>Context of and specific resources for</b>	Competency requires the application of work practices

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Feeding may include:	<ul style="list-style-type: none"> <li>• feeding plans for horses, cattle, sheep, goats, alpacas and deer running on pasture</li> </ul>
Information relating to feeding plans may include:	<ul style="list-style-type: none"> <li>• seasonal supplementary feeding pattern</li> <li>• fodder conservation plan</li> <li>• feed purchases, drought reserves</li> <li>• minimum livestock condition levels</li> <li>• production requirements</li> <li>• use of agistment.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK312A Coordinate artificial insemination and fertility management of livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of undertaking the monitoring and mating of animals and defines the standard required to: prepare females for insemination; detect females in oestrus; sterilise equipment and prepare hygienic worksite prior to insemination procedures; arrange for the collection or ordering of semen; coordinate the artificial insemination of animals; store and maintain an inventory of commercial semen; coordinate and record the results of pregnancy testing.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out with limited supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify animal condition	<p>1.1. Condition of females is accurately determined and scores are recorded according to recognised industry practices.</p> <p>1.2. Females are ranked according to scores and nutritional requirements adjusted to facilitate optimum condition.</p> <p>1.3. Feeding strategies and supplementation are appropriate to animals' environment and seasonal conditions.</p> <p>1.4. Assessment of animal condition is made accurately and consistently.</p> <p>1.5. Females can be guaranteed not pregnant before commencing the AI program.</p>
2. Facilitate artificial insemination	<p>2.1. Oestrus inducement and detection procedures are carried out according to established industry practice.</p> <p>2.2. Artificial insemination equipment and facilities are prepared, and semen obtained.</p> <p>2.3. Handling techniques that minimise stress and discomfort to livestock and meet Occupational Health and Safety (OHS) requirements are used.</p> <p>2.4. Artificial insemination techniques are carried out, when required, according to recognised industry codes of practice</p> <p>2.5. Hygiene procedures are applied to minimise risk of infection.</p>



ELEMENT	PERFORMANCE CRITERIA
3. Review the process based on pregnancy testing	3.1. Females are monitored for signs of early abortion or return to oestrus. 3.2. Pregnancy detection techniques are applied at earliest opportunities 3.3. Records of mating, insemination and pregnancy status are recorded accurately, legibly and according to enterprise and industry requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- accurately condition score dry females
- supervise animal mating and assist as appropriate
- sterilise equipment and prepare hygienic worksite prior to insemination procedures
- store and thaw commercial semen
- arrange and record the results of pregnancy tests
- clean up work site and safely dispose of waste
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- female conditioning
- oestrus cycles
- anatomy and physiology of male and female reproductive systems in animals
- factors affecting semen viability
- pregnancy testing
- animal health and abnormalities

## REQUIRED SKILLS AND KNOWLEDGE

- semen thawing techniques
- preparation requirements for artificial insemination of animals
- livestock movement and behavioural characteristics
- handling and assisted joining techniques, restraint methods and when to use them
- enterprise and industry identification system for livestock
- personal protective equipment and when and how it should be used
- relevant State/Territory legislation, regulations, codes of practice and enterprise requirements with regard to workplace OHS and animal welfare
- legislative and regulatory controls with regard to artificial insemination
- enterprise and industry policies with regard to artificial insemination and recording and reporting routines.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare females for insemination
- detect females in oestrus
- sterilise equipment and prepare hygienic worksite prior to insemination procedures
- arrange for the collection or ordering of semen
- coordinate the artificial insemination of animals
- store and maintain an inventory of commercial semen
- coordinate and record the results of pregnancy testing.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• alpacas</li> <li>• sheep</li> <li>• goats.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCLSK313A Monitor livestock production growing environments

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring livestock production growing environments and defines the standard required to: monitor livestock health and welfare; monitor the environment; monitor feed systems and water supplies; perform routine maintenance checks.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on livestock grazing enterprises and involves responsibility for the welfare of livestock, reporting to management.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor livestock health and welfare	<p>1.1. Workplace information is interpreted and clarified with the supervisor.</p> <p>1.2. Slow growing livestock are identified and reported per enterprise requirements.</p> <p>1.3. Animals are assessed for overall health and welfare according to enterprise procedures.</p>
2. Monitor the growing environment	<p>2.1. Environmental parameters are monitored according to the production plan and adjustments made as required.</p> <p>2.2. Hygiene and welfare procedures are monitored and adjusted according to enterprise guidelines.</p> <p>2.3. Disposal of waste and debris is monitored to ensure it follows enterprise guidelines, and with due consideration of the environmental implications.</p>
3. Monitor feed	<p>3.1. Feed is monitored to ensure the correct diet is offered to livestock for optimum growing conditions according to enterprise procedures.</p> <p>3.2. Feed is monitored to ensure fresh palatable feed is available to livestock according to enterprise procedures.</p>
4. Perform routine maintenance checks	<p>4.1. All buildings, structures and production areas are inspected and checked for wear and tear.</p> <p>4.2. Equipment for delivering water and feed is checked according to enterprise guidelines.</p> <p>4.3. Equipment controlling the atmospheric environment is checked according to enterprise guidelines.</p> <p>4.4. Occupational Health and Safety (OHS) hazards are</p>

ELEMENT	PERFORMANCE CRITERIA
	identified, risk assessed and suitable controls implemented according to enterprise guidelines.
5. Complete monitoring activities	5.1. Any significant problems are reported to the manager and/or owner operator. 5.2. All checks are recorded according to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- monitor livestock health and welfare
- monitor the environment
- monitor feed systems and water supplies
- perform routine maintenance checks
- carry out routine repairs and maintenance
- use of hand held and electrical tools such as welders, grinders and drills
- sampling techniques
- complete monitoring activities
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- code of practices for industry sectors and animal welfare
- equipment used in intensive growing systems
- environmental control mechanisms and ventilation and heating systems
- light programs
- feeding programs for different sexes, classes and types of livestock

**REQUIRED SKILLS AND KNOWLEDGE**

- basic animal anatomy
- methods to analyse results of feed and water sampling
- hygiene practices and awareness
- normal behaviour of animals and symptoms of distress
- enterprise industry and animal welfare codes of practice
- environmental implications of the disposal of chemicals or chemical containers and animal wastes.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor livestock health and welfare
- monitor the environment.
- monitor feed systems and water supplies
- perform routine maintenance checks.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**



<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Production environments may include:	<ul style="list-style-type: none"> <li>intensive and free range growing environments including feed and water supply for pigs and poultry.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK314A Prepare animals for parturition

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of feeding and caring for animals through the latter stages of pregnancy to birthing, and defines the standard required to: assess animals' health status; provide appropriate nutritional and environmental requirements for pregnant animals; perform husbandry procedures with pregnant animals; implement measures for the survival and health of newborn animals; recognise and report abnormalities.
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### Application of the Unit

<b>Application of the unit</b>	This unit involves the application of some judgment and discretion. It is likely to be carried out under minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify and provide animal nutritional needs	<p>1.1.Nutritional needs of pregnant animals are identified and confirmed against the enterprise feeding plan.</p> <p>1.2.Feed and feed supplements are determined and provided in accordance with the feeding plan and local conditions.</p> <p>1.3.Procedures to minimise feed wastage and spillage, and dispose and recycle feed waste are implemented in line with enterprise requirements.</p> <p>1.4.Existing and potential Occupational Health and Safety (OHS) hazards in the workplace are identified, risk assessed and controlled in line with enterprise requirements.</p>
2. Monitor feeding process	<p>2.1.Grazing and supplementary feeding is monitored to ensure animals are maintained in the required condition.</p> <p>2.2.Feeding abnormalities are recorded and reported in line with enterprise requirements.</p> <p>2.3.Environmental implications associated with animal production are identified, assessed and relevant measures implemented.</p>
3. Maintain a secure environment for animals	<p>3.1.Condition and security of paddocks, shelter and/or housing is monitored and maintained in line with enterprise requirements.</p> <p>3.2.Basic repair work is carried out and reported as required in line with OHS and enterprise requirements.</p> <p>3.3.Risk of predators to newborn animals is assessed and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>reported in line with workplace procedures.</p> <p>3.4.Environmentally responsible measures to eradicate or control identified predators are implemented safely in accordance with relevant legislative requirements.</p>
4. Carry out animal husbandry procedures	<p>4.1.Animals are prepared for birthing in accordance with enterprise requirements.</p> <p>4.2.Preventative health treatments are determined and administered to animals to manufacturer's specifications and recorded in line with enterprise requirements.</p> <p>4.3.Contingency measures are prepared and implemented as required.</p> <p>4.4.Protection from weather is provided for newborn.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- match supply of grazing or predetermined rations to nutritional requirements for pregnant animals
- monitor animal health and condition and recognise abnormalities
- carry out animal husbandry procedures, and provide due care and handle animals humanely
- maintain animal shelter and housing where applicable
- administer preventative health treatments
- collect, store and administer colostrum
- implement contingency measures in the event of adverse weather or birthing difficulties
- employ safe and environmentally responsible systems and procedures with regard to the handling of animals, feed, hazardous substances and firearms
- safely implement predator control strategies
- read and interpret manufacturers specifications, work and feeding plans, and material safety data sheets
- assess and calculate herd/flock numbers, measure feed, assess rate and frequency of feeding, and calculate animal gestation
- use oral communication skills/language competence to fulfil the job role as

**REQUIRED SKILLS AND KNOWLEDGE**

specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required

- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- physiological and behavioural signs of impending birth
- animal behaviour and nutritional requirements of pregnant animals
- pasture and animal grazing management
- feed and feed supplements for pregnant animals and when to provide them
- effects of weather conditions, and inadequate nutrition on pregnant animals and their newborn
- preventative health treatments, procedures and methods
- animal husbandry procedures
- environmental impact of animals on ground cover and minimisation measures
- environmental impact of the use and disposal of hazardous substances and minimisation measures
- hazards associated with handling animals and veterinarian medicines and chemicals
- sustainable land management practices
- State/Territory legislation, regulations and codes of practice with regard to OHS, animal welfare, poisons and firearm safety
- relevant licensing and permit requirements (firearms)
- predators and behaviour patterns, and control and eradication measures
- personal protective clothing and equipment and when and how it should be used
- enterprise policies with regard to birthing animals, recording and reporting routines.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess animals health status</li> <li>• provide appropriate nutritional and environmental requirements for pregnant animals</li> <li>• perform husbandry procedures with pregnant animals</li> <li>• implement measures for the survival and health of newborn animals</li> <li>• recognise and report abnormalities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• cows and heifers (beef and dairy cattle)</li> <li>• ewes</li> <li>• does (goats)</li> <li>• hembra (alpacas)</li> <li>• sows</li> <li>• mares.</li> </ul>
Factors to be considered may include:	<ul style="list-style-type: none"> <li>• weather protection (wind, rain, snow, heat) and the availability of feed and water supplies</li> <li>• the provision of "lamb or kid proof" water troughs</li> <li>• paddocks that are suitable to the size of herd or flock</li> <li>• adequate shelter and housing</li> <li>• safe fencing and yards.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK315A Prepare for and implement natural mating of livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing for and implementing natural mating procedures for livestock and defines the standard required to: prepare joining paddocks; assess the serving capacity and fertility of males pre joining; ensure females are above minimum body weights to exhibit oestrus; use sufficient males for the number of females to be mated in the group; use back up sires where single sire mating is practised; record mating details.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in livestock enterprises that are tasked with the preparation for and implementation of natural mating of livestock.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare paddocks or yards	<p>1.1.Particular livestock mating plan is determined according to supervisor instructions or enterprise procedures.</p> <p>1.2.Paddocks or yards are selected and stocked to appropriate levels.</p> <p>1.3.Predator control program is planned and implemented where appropriate.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and safety concerns reported to the supervisor.</p> <p>1.5.Suitable safety and Personal Protective Equipment (PPE) is selected, used and maintained.</p>
2. Prepare dams for joining	<p>2.1.Live weight of dams is monitored through weighing and/or condition scoring.</p> <p>2.2.Nutrition levels are adjusted to achieve targeted joining weights in line with feeding strategy.</p> <p>2.3.Dam health and husbandry operations are carried out according to enterprise procedures.</p> <p>2.4.Mobs are drafted for joining.</p>
3. Prepare sires for joining	<p>3.1.Physical examination of sires is carried out prior to joining.</p> <p>3.2.Veterinary advice is sought where appropriate.</p> <p>3.3.Mating ratios are determined.</p> <p>3.4.Replacement sires are selected in time to allow</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>adjustment to new environment.</p> <p>3.5.Sire health and husbandry operations are carried out in line with individual requirements</p> <p>3.6.Sires are test mated to assess libido and serving capability if required</p> <p>3.7.Sires environment is managed for optimum mating performance.</p>
4. Join sires to dam mobs	<p>4.1.If appropriate, dates are selected for joining according to the mating plan.</p> <p>4.2.Test joinings for new sires are undertaken if appropriate.</p> <p>4.3.Sires are introduced to herds or individual dams to ensure good contact.</p> <p>4.4.Sires are removed from herds at the scheduled time if in line with enterprise requirements.</p>
5. Monitor mating activity	<p>5.1.Mating activity is observed and recorded in line with enterprise standards.</p> <p>5.2.Distribution of sires is observed within each mob.</p> <p>5.3.Remedial action is taken if required.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe work practices
- managing dams and sires during joining
- preparing dams and sires for joining
- appraising breeding soundness in animals
- estimating liveweights
- monitoring joining activity
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening,

**REQUIRED SKILLS AND KNOWLEDGE**

- clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
  - use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- mating behaviour of sires and dams
- optimum live weights and condition for mating
- physical abnormalities and mating problems in males and females
- environmental influences on joining
- OHS and animal welfare legislation, codes of practice and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare joining paddocks
- assess the serving capacity and fertility of males pre joining
- ensure females are above minimum body weights to exhibit oestrus
- use sufficient males for the number of females to be mated in the group
- use back up sires where single sire mating is practised
- record mating details.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep</li> <li>• goats</li> <li>• alpacas.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCLSK316A Prepare livestock for competition

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing and training livestock for competitive showing and defines the standard required to: plan for and provide livestock feed and water requirements; prepare livestock to competition standards; train livestock for showing, parade and present livestock for show.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Follow instructions to prepare livestock for showing	<p>1.1.Livestock are identified and prepared for showing according to enterprise instructions.</p> <p>1.2.Feed and water supplies are monitored and replenished, as required and feed records are maintained to enterprise requirements.</p> <p>1.3.Health and welfare status of livestock is monitored and abnormalities are promptly reported according to enterprise requirements.</p> <p>1.4.Facilities are monitored and maintained, and existing and potential Occupational Health and Safety (OHS) hazards are recognised, risk assessed and reported to the supervisor.</p>
2. Handle and groom livestock prior to competition	<p>2.1.Appropriate handling and grooming equipment is selected, checked and used according to instructions and manufacturer's specifications.</p> <p>2.2.Livestock are groomed for showing to competition standard according to instructions and enterprise requirements.</p> <p>2.3.Livestock are conditioned to human handling and trained to the standard required for show handling and performance.</p> <p>2.4.Handling procedures are conducted with minimum stress and discomfort to livestock, and maximum safety for livestock, handlers and other parties according to OHS and animal welfare requirements.</p>
3. Present livestock	<p>3.1.Equipment to be used in showing is checked for correct operation and prepared for presentation requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2.Livestock are presented using handling techniques to exhibit livestock to best advantage according to competition and enterprise requirements.</p> <p>3.3.Instructions and requests from competition officials are complied with.</p> <p>3.4.Relevant information is reported and recorded according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- comply with animal welfare requirements
- calculate livestock numbers and measure feed and water quantities
- demonstrate safe workplace practices
- groom livestock to competition standards
- maintain livestock facilities and handling equipment
- observe and describe the behaviour of livestock
- read and interpret written information, receive and comprehend oral information, write basic statements and maintain livestock records
- restrain, handle and groom livestock using safe and humane methods and procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- competition requirements for grooming, handling and presentation
- components and functions of handling equipment
- handling techniques, restraint methods and when to use them
- livestock grooming and training techniques (to lead and stand correctly)
- livestock health and nutritional requirements
- preparation and maintenance requirements for livestock facilities and equipment

**REQUIRED SKILLS AND KNOWLEDGE**

- livestock movement and behavioural characteristics in handling and confined areas
- OHS and animal welfare legislative requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- plan for and provide livestock feed and water requirements
- prepare livestock to competition standards
- train livestock for showing
- parade and present livestock for show.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Animals may include:

- sheep
- cattle
- horses



**RANGE STATEMENT**

	<ul style="list-style-type: none"><li>• goats</li><li>• alpacas</li><li>• pigs.</li></ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCLSK317A Plan to exhibit livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of planning to exhibit livestock and/or fleece and defines the work practices required to: identify potential exhibits against selection criteria to accurately select livestock; train animals to be led and presented in competition if required; organise entries, resources and facilities for showing; arrange and prepare for transport; present exhibits to best advantage; promote the product to clients and pursue sales opportunities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working with limited or no supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select potential exhibits	<p>1.1. Selection criteria are determined.</p> <p>1.2. Potential exhibits are chosen against selection criteria and according to enterprise and industry exhibit expectations.</p> <p>1.3. Faults in potential exhibits are identified and remedial action taken.</p>
2. Determine preparation requirements	<p>2.1. Preparation requirements are identified.</p> <p>2.2. Resources and facilities are identified and organised to allow for adequate preparation prior to exhibition.</p> <p>2.3. Preparation requirements, including Occupational Health and Safety (OHS) requirements, are communicated clearly and accurately to staff.</p> <p>2.4. Arrangements are made to ensure necessary resources and facilities at the exhibition are available and will be ready.</p>
3. Supervise preparation	<p>3.1. Potential exhibits are checked and progress monitored.</p> <p>3.2. Staff is monitored against established preparation procedures and realistic time-lines.</p> <p>3.3. Contingency plans are implemented to meet preparation shortfalls as required.</p> <p>3.4. Staff are advised of any changes in preparation procedures and instructed accordingly.</p>
4. Present exhibition	<p>4.1. Checks on transport arrangements are made to ensure that transport is suitable and that exhibit will arrive in time.</p> <p>4.2. Entries meet exhibition schedule requirements and</p>

ELEMENT	PERFORMANCE CRITERIA
	procedural rules. 4.3. Exhibits are displayed to their best advantage and according to exhibition guidelines. 4.4. Promotional and sales opportunities are optimised and pursued as required.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- select livestock
- prepare animals for exhibition
- present livestock to best advantage
- promote the product to clients
- pursue sales opportunities
- communicate with staff during preparations, exhibit officials and potential customers
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- criteria for competition judging
- preparation procedures
- requirements for entry of competitors
- transportation requirements
- feeding and nutrition requirements
- supervision techniques
- communication styles
- observation methods
- relevant legislative health and OHS requirements, especially as they relate to livestock and fleece exhibitions, and animal transportation, animal welfare and safe livestock handling techniques

**REQUIRED SKILLS AND KNOWLEDGE**

- enterprise and industry policies and codes of practice with regard to livestock exhibitions, sales, livestock transportation, and recording and reporting requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Competency is demonstrated in this standard if the candidate is able to:

- identify potential exhibits against selection criteria to accurately select livestock/fleeces
- train animals to be led and presented in competition
- organise entries, resources and facilities for showing
- arrange and prepare for transport
- present exhibits to best advantage
- promote the product to clients and pursue sales opportunities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Animals may include:

- beef cattle
- dairy cattle

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• sheep</li> <li>• pigs</li> <li>• poultry</li> <li>• goats.</li> </ul>
Procedure may include:	<ul style="list-style-type: none"> <li>• halter training</li> <li>• leading</li> <li>• grooming</li> <li>• clipping</li> <li>• care of hooves and horns</li> <li>• special feed supplementation</li> <li>• presentation techniques</li> <li>• use of show equipment</li> <li>• special transport requirements</li> <li>• avoidance of stress,</li> <li>• show protocols.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCLSK318A Rear newborn and young livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of rearing newborn and young animals and defines the standard required to: weigh and assess condition of newborn and young animals; handle and care for newborn and young animals; recognise signs of stress or ill health in newborn and young animals; provide support as needed to veterinarians attending to sick newborn and young animals; wean animals humanely; provide the necessary feed and shelter.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in livestock industries and is likely to be carried out with minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for care of newborn and young	<p>1.1. Facilities, equipment and supplies needed to provide care are identified selected and prepared.</p> <p>1.2. Needs of newborn and young animals are assessed and prepared.</p> <p>1.3. Feeding routines are implemented and observed.</p> <p>1.4. Hygiene, health and environmental requirements are identified and maintained according to enterprise and legislative requirements.</p> <p>1.5. Newborn and young are appropriately identified and humanely handled as required according to enterprise requirements and industry standards.</p>
2. Provide care for newborn and young	<p>2.1. Feed and feed supplements are provided as required and according to enterprise and nutritional requirements.</p> <p>2.2. Relationship between mother and young is monitored where appropriate and strategies are implemented to address any problems.</p> <p>2.3. Feeding, water and shelter areas are maintained and monitored for correct operation, cleanliness and hygiene.</p> <p>2.4. Routine health and feeding problems, including digestive upsets and infections, are treated promptly.</p>
3. Monitor health of newborn and young	<p>3.1. Newborn and young are monitored against benchmarks for growth, health and development.</p> <p>3.2. Appropriate action is taken for sick, weak, orphaned and injured, newborn and young.</p> <p>3.3. Assistance is sought for more complex health and</p>

ELEMENT	PERFORMANCE CRITERIA
	feeding problems. 3.4. Newborn and young requiring routine husbandry and health procedures are separated, treated and returned. 3.5. Treatments and checks are carried out according to hygiene, enterprise, industry and legislative requirements.
4. Meet ongoing requirements	4.1. Young animals ready for weaning are identified and weaned according to enterprise procedures and weaning programs. 4.2. Feeding requirements are identified and met. 4.3. Animals are handled regularly as required. 4.4. Records are kept and updated to meet enterprise and legislative requirements. 4.5. All work is conducted safely and according to enterprise requirements, Occupational Health and Safety (OHS), industry and animal welfare regulations.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- weigh and assess condition of newborn and young animals
- work within animal welfare legislative requirements and enterprise and industry guidelines
- identify abnormal conditions and report or react promptly
- safely and humanely handle and care for newborn and young animals
- recognise signs of stress or ill health in newborn and young animals
- communicate with other personnel
- provide support as needed to veterinarians attending to sick newborn and young animals
- collect samples
- identify the young and their parent
- use feed, shelter and ventilation equipment
- calculate feed and dose rates

## REQUIRED SKILLS AND KNOWLEDGE

- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- newborn and young animals development and growth
- newborn and young animals feed, shelter and environmental requirements
- common deformities
- infection controls and treatment programs (working knowledge)
- significance of colostrum to livestock
- feeding systems
- shelter requirements
- weaning strategies
- husbandry procedures
- hygiene and cleanliness requirements
- relevant legislative animal welfare health and OHS requirements especially as they relate to safe animal handling techniques, feeding, animal treatments, and rearing and caring for newborn and young animals
- enterprise requirements for rearing of newborn and young animals and recording and reporting requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- weigh and assess condition of newborn and young animals
- handle and care for newborn and young animals
- recognise signs of stress or ill health in newborn and young animals

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• provide support as needed to veterinarians attending to sick newborn and young animals</li> <li>• wean animals humanely and provide the necessary feed and shelter.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• lambs</li> <li>• calves</li> <li>• kids</li> <li>• pigs (suckers)</li> <li>• alpacas (cria)</li> </ul> <p>This standard does not cover foals and chickens.</p>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK319A Slaughter livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of slaughtering livestock and defines the standard required to: identify and select livestock for slaughter; prepare slaughterhouse and equipment; conduct safe and humane slaughter of livestock; dress carcass and store in suitable facility for cold storage.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires some judgement and discretion. It is likely to be carried out under minimal supervision, with checking only related to overall progress. Note: Where firearms are used appropriate licences must be held.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for slaughter operation	<p>1.1.Reasons for slaughter are identified.</p> <p>1.2.Equipment is prepared and transported to slaughter site.</p> <p>1.3.Livestock to be slaughtered are selected and prepared for slaughter according to enterprise regulatory and animal welfare requirements.</p> <p>1.4.Slaughter method is determined and killing facility identified.</p>
2. Slaughter animal	<p>2.1.Slaughter is conducted humanely, with a minimum of stress to the animal and according to Occupational Health and Safety (OHS) requirements.</p> <p>2.2.Carcass is dressed, hung and protected.</p> <p>2.3.Where necessary, reasons for slaughter are investigated.</p> <p>2.4.All relevant environmental and health requirements and OHS, public health, hygiene and animal welfare legislation are followed and complied with during slaughter operations.</p>
3. Complete slaughter operations	<p>3.1.Offal and waste products are disposed of or destroyed in an environmentally responsible manner and according to State/Territory and local authority health standards.</p> <p>3.2.Equipment and slaughterhouse is hygienically cleaned and stored for re-use.</p> <p>3.3.Intended end-use of slaughtered meat is identified.</p> <p>3.4.Meat is prepared for end-use.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- kill and cut up livestock carcasses
- use equipment in a slaughterhouse
- clean and sterilise facilities and equipment
- store meat
- disposal of offal
- package cuts
- identify and select animals for slaughter
- comply with animal welfare requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the health restrictions and laws applying to the slaughter of livestock for sale, i.e. by registered abattoirs, not by other avenues
- relevant legislative health and OHS requirements, especially as they relate to livestock and slaughter, animal handling and safe livestock handling techniques
- enterprise and industry policies and codes of practice with regard to livestock slaughter, licensing, and recording and reporting requirements
- animal welfare legislation and withholding periods
- offal disposal regulations
- human health and hygiene
- health issues affecting both humans and livestock
- cattle diseases
- carcass hanging methods
- codes of practice for the welfare and husbandry of cattle, sheep and goats.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify and select livestock for slaughter</li> <li>• prepare slaughterhouse and equipment</li> <li>• conduct safe and humane slaughter of livestock</li> <li>• dress carcass and store in suitable facility for cold storage.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• goats</li> <li>• sheep.</li> </ul>

## Unit Sector(s)

Unit sector	Livestock
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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# AHCLSK320A Coordinate and monitor livestock transport

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of safely and efficiently transport livestock to a destination within a specified timeframe, and defines the standard required to: ensure documentation and livestock identification is in place; coordinate the transport of livestock; load and unload animals; distribute animals on transport to prevent overcrowding and minimise risk of injury; ensure load is within specifications; review health and condition of livestock after transit.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to transporting livestock and requires some judgement and discretion In placing and checking the welfare of animals.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for the transport of livestock	<p>1.1.Directions for transport are checked and load is calculated.</p> <p>1.2.Transport requirements are determined and a suitable carrier is engaged.</p> <p>1.3.Equipment and resources are identified and livestock are moved to loading facility for transport.</p> <p>1.4.Livestock are assembled and prepared for transport.</p>
2. Load livestock	<p>2.1.Workplace safety policies and procedures are observed and followed according to Material Safety Data Sheets (MSDSs) and enterprise requirements.</p> <p>2.2.Documentation is signed by relevant person and required animal identification is in place.</p> <p>2.3.Prepared livestock are loaded and secured safely and humanely according to animal welfare, OHS and enterprise requirements.</p> <p>2.4.Existing and potential hazards are identified and managed according to OHS, animal welfare and enterprise requirements.</p>
3. Monitor transport and unload livestock	<p>3.1.Carrier is briefed to ensure livestock are transported with minimal stress and discomfort according to animal welfare requirements.</p> <p>3.2.Livestock are regularly checked throughout the journey and unloaded for feeding and watering if necessary.</p> <p>3.3.Livestock are unloaded safely and humanely using appropriate equipment and facilities according to manufacturer's specifications.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Livestock condition and welfare is monitored post transport and appropriate feed and water requirements are provided according to enterprise requirements.
4. Complete transportation operations	4.1. Vehicle, equipment and facilities are cleaned, maintained and secured according to OHS and enterprise requirements. 4.2. Relevant information is documented according to legislative and enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- demonstrate safe and humane handling of livestock according to animal welfare code of practice
- safely, load and unload livestock
- demonstrate safe and environmentally responsible workplace practices
- obtain relevant permits and comply with movement restrictions
- read and comprehend manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs)
- interpret transport plan requirements
- communicate verbally to advise and anticipate conditions
- maintain records
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- industry and legislative requirements for the transport of livestock
- animal welfare and OHS legislative requirements
- environmental codes of practice with regard to vehicle operation and livestock transport
- market requirements in relation to the quality and condition of livestock
- sourcing and costing transportation alternatives

**REQUIRED SKILLS AND KNOWLEDGE**

- enterprise policies with regard to the use of vehicles and equipment
- relevant documentation requirements and procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- ensure documentation and livestock identification is in place
- coordinate the transport of livestock
- load and unload animals
- distribute animals on transport to prevent overcrowding and minimise risk of injury
- maintain load within specifications
- review health and condition of livestock after transit.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

**RANGE STATEMENT**

Animals to be transported may include:

- sheep
- cattle
- horses
- goats
- alpacas
- pigs.

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCLSK321A Service and repair bores and windmills

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining bores and windmills and defines the standard required to: maintain all components of bores and windmills; carry out testing procedures to determine correct operation; recognise and rectify mechanical faults; carry out repairs to bore, mill heads and pumps to ensure the full function and flow of water supplies; dismantle and assemble windmills and mechanical components; source and apply specialist direction; and refer to bore histories for troubleshooting.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under routine supervision with intermittent checking within enterprise guidelines. It requires the application of discretion and judgement to assess and determine requirements for specialist direction, and refer more complex faults for specialist advice.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish bore history and enterprise policy	<p>1.1. Enterprise records are accessed, inspected and bore history is established.</p> <p>1.2. Enterprise policy regarding service and repairs to bores and windmills is established in consultation with the supervisor.</p> <p>1.3. Specialist instructions and assistance are sought as required from recognised industry sources according to enterprise requirements.</p>
2. Prepare to carry out service and repairs	<p>2.1. Tools, equipment and materials appropriate to job requirements are selected and inspected for serviceability.</p> <p>2.2. Dismantling and stripping of windmill is carried out to industry standards and according to enterprise requirements.</p> <p>2.3. Existing and potential Occupational Health and Safety (OHS) hazards in the workplace are identified, and risks assessed and controlled according to enterprise requirements.</p>
3. Carry out service and repairs	<p>3.1. Suitable personal protective equipment (PPE) is selected, used and maintained according to OHS and enterprise requirements.</p> <p>3.2. Service and repairs to bores, windmills, motors and pumps are carried out according to manufacturer specifications, operator manuals and enterprise</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>requirements.</p> <p>3.3. Complex faults and repairs are reported and referred for specialist advice and remedial action according to enterprise requirements.</p> <p>3.4. Lost equipment is safely retrieved according to OHS guidelines and enterprise requirements.</p>
4. Complete service and repair activities	<p>4.1. Bore and windmill components are reassembled and tested for operation according to manufacturer specifications to ensure the restoration of full function and flow.</p> <p>4.2. Work site, tools and equipment are cleaned, returned to operating order and stored according to OHS and enterprise requirements.</p> <p>4.3. Waste from service and repair activities is collected, treated and disposed or recycled according to enterprise environmental requirements.</p> <p>4.4. Relevant information is documented according to industry and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- apply basic diagnostic techniques
- recognise faults and deterioration of components and carry out mechanical repairs
- select and match tools and equipment with work requirements
- apply hand-eye coordination
- apply safe workplace and positive environmental procedures
- read and interpret enterprise policy, maintenance plans, manufacturer specifications and material safety data sheets (MSDS)
- effectively communicate with contractors and supervisor, and record and report maintenance details and outcomes
- calculate volumes, and measure speed, flow rates and distance
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural,

**REQUIRED SKILLS AND KNOWLEDGE**

social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- construction of bores and windmills and maintenance requirements
- diesel engine components, maintenance requirements and repair procedures
- working principles of diesel engines
- drive systems and components
- types and uses of lubricants and other servicing materials
- servicing characteristics of bores and windmills
- types, characteristics, uses and limitations of hand and power tools
- basic diagnostic processes and techniques
- environmental codes of practice with regard to maintenance activities
- OHS legislative requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- maintain all components of bores and windmills
- carry out testing procedures to determine correct operation
- recognise and rectify mechanical faults
- carrying out repairs to bore, mill heads and pumps to ensure the full function and flow of water supplies
- dismantle and assemble windmills and mechanical components
- source and apply specialist direction and refer to bore histories for troubleshooting.

**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Service requirements may include:

- the pulling of the bore which includes fitting clamps, removing rods and columns
- the laying out of rods and columns
- replacing worn or faulty parts
- checking rods for straightness and checking spacers for wear
- examining for and noting lime deposits.

Programmed procedures for the checking of the bore head may include:

- checking of the belt condition, glands, pulleys, vibration or noise, slipping, throwing or loose belts, low flows, correct rotation, worn parts and bearings.

The service and repair of windmills may include:

- stripping the windmill, carrying out checks and repairs to mill blades, fan structure, mill head, differential head and gearbox.

**Unit Sector(s)**

**Unit sector**

Livestock

**Co-requisite units**

**Co-requisite units**

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCLSK322A Transport farm produce or bulk materials

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of legally, safely, and efficiently operating a truck and its componentry to transport farm produce or bulk materials to a required location according to a specified schedule and defines the standard required to: plan, load, unload and move a range of loads over a full range of road conditions in accordance with Road Traffic Regulations; conduct pre-start and post-operational checks; manoeuvre truck in difficult sites and conditions, load, unload and transport livestock safely and according to industry codes; maintain the quality and integrity of transported produce; complete time sheets and other maintenance records; maintain and store records, reports, and log books.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under limited supervision. Overall progress may be checked periodically. Loading and unloading equipment and procedures are also used. It includes the pre and post-operational checking of the vehicle as well as the basic post-operational maintenance of the vehicle, and of organisational records.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Organise for the transport of farm produce	<p>1.1. Briefing, hand-over details, authorisation and clearances are received, interpreted and clarified in accordance with organisational procedures and regulations.</p> <p>1.2. Equipment and authorised personnel requirements are organised on time according to transportation schedule.</p> <p>1.3. Operational delays are minimised through the adherence to schedule specifications.</p> <p>1.4. Potential risks and hazards are identified and managed according to the work plan and within organisational procedures and regulations, Occupational Health and Safety (OHS) and other relevant legislation.</p> <p>1.5. Equipment pre-operational checks are performed according to manufacturer's specifications, organisational procedures, regulations, OHS and other relevant legislation.</p>

ELEMENT	PERFORMANCE CRITERIA
	1.6.Site environmental concerns are adhered to according to relevant legislation.
2. Load, transport and/or unload farm produce	<p>2.1.Organisational OHS procedures, practices, policies and precautions are observed and followed.</p> <p>2.2.Start-up, park and shutdown procedures for plant and equipment are carried out in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>2.3.Load is determined in accordance with manufacturer's specifications to prevent damage to equipment or loss of load.</p> <p>2.4.Farm produce is loaded and secured in accordance with organisational procedures and regulations, manufacturer's specifications, and OHS and other legislation.</p> <p>2.5.Farm produce is transported to specified destination on time, with their condition maintained, in accordance with organisational procedures and regulations, OHS and other relevant legislation.</p> <p>2.6.Vehicles follow approved transport routes and speed limits according to organisational procedures and regulations, and manufacturers specifications.</p> <p>2.7.Transport of farm produce is carried out ensuring the safety of personnel, the vehicle, other vehicles, equipment, and the surrounding environment.</p> <p>2.8.Farm produce or bulk materials are unloaded in accordance with manufacturers specifications, avoiding damage to equipment or personnel.</p> <p>2.9.Where required, transport of farm produce is co-ordinated with harvesting machinery.</p> <p>2.10. Transport of farm produce is completed to plan within the operating capacity of the equipment.</p> <p>2.11. Produce is dispatched and any documentation including weighbills is retained.</p>
3. Protect farm produce quality and integrity	<p>3.1.Hygiene of all surfaces in contact with farm produce is maintained.</p> <p>3.2.Farm produce is protected from loss, contamination, moisture and pests during transport.</p> <p>3.3.Farm produce is stored to prevent loss or deterioration, and in line with safe practice.</p> <p>3.4.Farm produce storage/holding areas are maintained in a clean condition and any potentially</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>hazardous substances are kept at a safe distance in accordance with industry practice and legislation.</p> <p>3.5. Transport environment is monitored using temperature data loggers if applicable.</p> <p>3.6. Quality of farm produce is checked at unloading.</p> <p>3.7. Batches of farm produce are monitored for isolation and product integrity where applicable.</p>
4. Carry out equipment maintenance	<p>4.1. Organisational OHS procedures, practices, policies and precautions are observed and followed.</p> <p>4.2. Visual inspection and fault finding are conducted in accordance with manufacturer's specifications and organisational requirements.</p> <p>4.3. Routine operational servicing is conducted to ensure peak performance of equipment and according to manufacturer's specifications, organisational procedures, regulations, OHS and other relevant legislation</p>
5. Maintain hygiene of equipment	<p>5.1. Equipment is cleaned in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>5.2. Attachments and other ancillary equipment are cleaned and stored in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>5.3. All required records and documentation are completed accurately and promptly in accordance with organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- plan, load, unload and move farm produce over a full range of road conditions
- operate data loggers and provide reports if applicable
- handle and load livestock

## REQUIRED SKILLS AND KNOWLEDGE

- monitor livestock health and welfare
- conduct pre-start and post-operational checks
- manoeuvre truck in difficult sites and conditions
- drive truck safely using all available controls
- clean and store vehicles and equipment
- identify operational faults
- complete time sheets and other maintenance records
- use communication methods to advise and anticipate conditions
- use communications equipment
- interpret plans, reports, maps, specifications
- read and interpret plans and documents
- maintain and store records, reports, and log books
- interpret ground conditions
- select, fit, and use personal and protective equipment
- operate and load a truck in accordance with Road Traffic Regulations
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- manufacturers and work site requirements including property conditions, and hazards on the property and on the open road
- road traffic laws
- organisational procedures for use of vehicles and equipment
- relevant OHS requirements for storage of materials and equipment
- OHS legislation, codes of practice, procedures, and principles, including manual handling
- animal welfare legislation, codes of practice (including transport), and procedures
- emergency procedures
- site safety requirements
- equipment safety requirements
- operational, start up, and shutdown procedures and checks
- equipment processes, technical capability and limitations
- hauling and towing procedures
- defensive driving techniques in varying traffic conditions, including urban, suburban, and rural environments
- receipt and document requirements at both ends of the transport operation
- differences in handling and operation with bagged and bulk loads.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• plan, load, unload and move a range of loads over a full range of road conditions in accordance with Road Traffic Regulations</li> <li>• conduct pre-start and post-operational checks</li> <li>• manoeuvre truck in difficult sites and conditions, load, unload and transport livestock safely and according to industry codes</li> <li>• maintain the quality and integrity of transported produce</li> <li>• complete time sheets and other maintenance records</li> <li>• maintain and store records, reports, and log books.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
Farm produce or bulk materials	<ul style="list-style-type: none"> <li>• the entire range produced or used by the enterprise and might include grains (cereals,</li> </ul>

**RANGE STATEMENT**

may include:

legumes, pulses, oilseeds, or pasture seeds),  
fertiliser and fodder.**Unit Sector(s)****Unit sector**

Livestock

**Co-requisite units**

Co-requisite units		

**Competency field****Competency field**

## AHCLSK323A Maintain and monitor feed stocks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining required quantities and quality of livestock feed stocks and defines the standard required to: undertake feed stocktake and update inventory; place orders and receive feed into store; clean and label feed containers and maintain storage area; dispose of spoiled feeds.
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### Application of the Unit

<b>Application of the unit</b>	This unit will usually follow set routines, methods and procedures. Overall progress needs to be checked periodically.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine quantities of stockfeed required	<p>1.1. Stocktake of stockfeed is undertaken and inventory updated.</p> <p>1.2. Livestock feed plans are checked and quantities required are compared with quantities in stock.</p>
2. Place orders with suppliers	<p>2.1. Orders for stockfeed are placed with suppliers.</p> <p>2.2. Orders specify quantity, quality, delivery date, delivery site and any special instructions.</p>
3. Receive feed into store	<p>3.1. Delivery manifest is checked and discrepancies reported to supplier and supervisor.</p> <p>3.2. Quality of stockfeed is checked and problems reported to supplier and supervisor.</p> <p>3.3. Stockfeed is transferred into appropriate storage containers.</p> <p>3.4. Records and labels are updated and filed according to enterprise requirements.</p>
4. Prepare and maintain feed storage area and containers	<p>4.1. Occupational Health and Safety (OHS) hazards are identified and action taken to minimise risk.</p> <p>4.2. Feed storage area and containers are cleaned according to enterprise cleaning schedule and procedures.</p> <p>4.3. Stocks of stockfeed are organised according to enterprise inventory management policy.</p> <p>4.4. Stockfeed is correctly labelled.</p> <p>4.5. Feed storage containers are cleaned before refilling.</p> <p>4.6. Feed storage area and containers are checked regularly for signs of pest infestation.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.7. Problems with feed storage facilities are identified, resolved or reported to supervisor for resolution.</p> <p>4.8. Stockfeed that does not meet quality standards are disposed of according to enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- access inventories and update them
- assess quality of stockfeed
- undertake manual lifting safely
- operate relevant machinery
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- enterprise purchasing procedures and arrangements with suppliers
- minimum and maximum quantities required to be held in stock
- quality parameters of feed ingredients
- nutritional values of various feed ingredients and acceptable substitutes
- OHS requirements
- environmental impacts and procedures for maintaining feed stocks.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• undertake feed stocktake and update inventory</li> <li>• place orders and receive feed into store</li> <li>• clean and label feed containers and maintain storage area</li> <li>• dispose of spoiled feeds.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Stock feeds may include:	<ul style="list-style-type: none"> <li>• grains</li> <li>• hay</li> <li>• pellets</li> <li>• feed additives</li> <li>• stock supplements</li> <li>• specialist feed mixes.</li> </ul>



**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK324A Care for and train working dogs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of selecting, training and caring for working dogs in the rural industry and defines the standard required to: select a working dog; develop training programs and apply effective training procedures; maintain health and welfare requirements and recognise abnormalities; provide a balanced diet, adequate water and housing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm workers who use dogs to handle stock and involves the application of some judgement and discretion.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify role and select working dog	<p>1.1. Working dog requirements for the enterprise are identified and confirmed.</p> <p>1.2. Suitable working dog breeders and bloodlines are researched and availability determined.</p> <p>1.3. Dogs are inspected for suitability and selected to meet role and enterprise requirements.</p>
2. Develop and implement training program	<p>2.1. Basic commands are taught.</p> <p>2.2. The dog is introduced to a small flock in a confined area.</p> <p>2.3. The dog is asked to handle larger numbers in more open areas.</p> <p>2.4. Specialist skills such as backing and forcing are taught.</p> <p>2.5. Existing and potential animal handling hazards in the workplace are identified, risk assessed and controlled in line with enterprise requirements.</p>
3. Maintain welfare of working dog	<p>3.1. Health, condition and status are monitored and maintained.</p> <p>3.2. Diet is provided to meet nutritional requirements in consideration of work/training program.</p> <p>3.3. Preventative health treatments are arranged and administered.</p> <p>3.4. Facilities and equipment needs are provided and maintained in line with animal welfare requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- select working dog to meet requirements
- develop training programs and apply effective training procedures
- maintain health and welfare requirements and recognise abnormalities
- arrange and administer preventative health treatments
- maintain clean and safe facilities and workplace environment
- assess and calculate work area dimensions, and measure dietary requirements and preventative health treatments.
- demonstrate safe workplace and animal handling practices
- dispose of waste according to enterprise procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- canine breeds and behaviour, health and nutritional requirements
- effective canine training systems and procedures
- safe animal handling methods and techniques
- canine preventative health treatments
- dietary requirements of working dogs
- enterprise policies with regard to working dogs and recording and reporting routines.
- hazards associated with training and caring for working dogs and appropriate control measures
- State/Territory legislative and regulatory requirements with regard to OHS, animal welfare, and the registration and care of domestic dogs.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select a working dog</li> <li>• develop training programs and apply effective training procedures</li> <li>• maintain health and welfare requirements and recognise abnormalities</li> <li>• provide a balanced diet, adequate water and housing.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• all working dogs.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSK325A Castrate livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of castrating young animals and describes the standard required to: handle animals humanely in line with animal welfare codes of practice; perform a recommended method of castration with attention to hygiene; administer pre or post operative treatments; monitor castrated animals.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm workers on livestock enterprises. It requires taking responsibility for own work output and using well-developed skills with some discretion and judgement under routine supervision.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for animal castration	<p>1.1. Work to be undertaken is interpreted from work program where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the production process.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed, and suitable controls implemented.</p> <p>1.4. Suitable personal protective equipment is selected, used, and maintained.</p> <p>1.5. Castration area is hygienically cleaned to minimise the risk of infection.</p> <p>1.6. Equipment, instruments and resources needed for castration operations are selected and assembled.</p> <p>1.7. Male animals are separated as required to facilitate ease of handling and to minimise stress.</p>
2. Castrate animals	<p>2.1. Individual animals are selected, caught and humanely restrained using industry standard techniques.</p> <p>2.2. Animals are checked for health and soundness according to organisation guidelines.</p> <p>2.3. Restrained animals are castrated in a humane and hygienic manner according to organisational guidelines, industry standards, and the code of animal welfare.</p> <p>2.4. Records are completed as instructed by</p>



ELEMENT	PERFORMANCE CRITERIA
	organisational guidelines.
3. Complete hygiene and administration activities	3.1. All debris, waste material and animal residues are removed from the site and disposed of in an environmentally aware and safe manner according to organisation work procedures. 3.2. Instruments and equipment are hygienically cleaned, maintained and stored according to organisation work procedures. 3.3. A clean and safe area is maintained throughout and on completion of work. 3.4. Work outcomes are documented or reported to the supervisor according to organisation work procedures.
4. Monitor castrates	4.1. Animals are monitored to identify post-castration complications. 4.2. Animals exhibiting signs of ill health or infection are identified and treated.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- carry out animal husbandry tasks in hygienic manner
- record the number and health of animals post castration
- work effectively as a part of a team
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural,

**REQUIRED SKILLS AND KNOWLEDGE**

social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- male anatomy as it relates to castration
- organisation castration, hygiene and animal welfare procedures and policies
- industry standards for the care and husbandry of animals
- the need to maximise hygiene practices and awareness
- sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant OHS legislation, codes of practice and enterprise requirements
- animal welfare requirements under the code of practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- handle animals humanely in line with animal welfare codes of practice
- perform a recommended method of castration with attention to hygiene
- administer pre or post operative treatments
- monitor castrated animals.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep</li> <li>• alpacas</li> <li>• goats</li> <li>• pigs.</li> </ul>
Castration methods include:	<ul style="list-style-type: none"> <li>• surgical, elastrators and/or emasculators.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCLSK326A Mix and mill standard stockfeed

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of ordering and storing ingredients and mixing feed for livestock being produced intensively and defines the standard required to: interpret and apply feeding instructions; measure and calculate volumes and consumption requirements; relate livestock performance data to ration consistency; mix feeds and ingredients in line with industry quality standards and requirements; recognise and rectify minor operational faults and perform routine maintenance; complete records and documentation of feed use and volumes for the shed; and take and prepare feed samples for dispatch to the laboratory.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under limited supervision from others with checking only related to overall progress. It is usually done within established routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services and actions to achieve outcomes within time and budgetary constraints. It requires an understanding of basic nutritional and animal requirements.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to work with livestock feed	<p>1.1. Work to be undertaken is interpreted from the work program, where necessary, and confirmed with the supervisor.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.3. Suitable personal protective equipment (PPE) is selected, used and maintained.</p> <p>1.4. Tools and equipment suitable for the work to be undertaken are selected, checked and maintained, if necessary.</p> <p>1.5. Environmental implications of undertaking work are identified, likely outcomes assessed and, if necessary, responsible action taken.</p>
2. Order and store feed and ingredients	<p>2.1. Ingredients previously selected are ordered from the supplier according to organisational protocols.</p> <p>2.2. Ingredients and feed are stored safely in the location</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and manner determined by the supervisor.</p> <p>2.3. Stock is rotated and replacements are ordered to arrive at the appropriate time to ensure optimum freshness.</p> <p>2.4. All required records and documentation are completed accurately and promptly according to organisational requirements.</p>
3. Mix feed	<p>3.1. Scales and containers to be used for measurements are calibrated according to manufacturer instructions.</p> <p>3.2. Ingredients are identified from instructions and obtained from storage locations.</p> <p>3.3. Ingredients are measured in the specified ratios and quantities.</p> <p>3.4. Ingredients are blended adequately and hygienically in the manner specified and using the appropriate equipment.</p> <p>3.5. Where milling is required, it is done in the manner specified and using the appropriate equipment.</p> <p>3.6. OHS hazards are identified, risk assessed and suitable controls implemented.</p> <p>3.7. Suitable PPE is selected, used and maintained.</p>
4. Conduct hygiene and administration activities	<p>4.1. Equipment is cleaned according to manufacturer specifications and organisational procedures to maintain hygiene standards.</p> <p>4.2. All required records and documentation are completed accurately and promptly according to organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- identify a range of grain types and qualities
- identify grain contaminants
- identify premixes and weigh out

## REQUIRED SKILLS AND KNOWLEDGE

- mix feeds and ingredients
- identify basic mixing problems
- relate livestock performance data to ration consistency
- recognise and rectify minor operational faults
- read and interpret manufacturers specifications, work and maintenance plans, and material safety data sheets (MSDS)
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
- measure and calculate volumes and consumption requirements
- complete records and documentation of feed use and volumes for the shed
- take and prepare feed samples for dispatch to the laboratory
- perform routine maintenance of milling and mixing equipment
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- silo operations and configuration, machinery and operating practices
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures
- raw ingredients (grains and meals)
- vitamins, minerals and premix formulations
- the implications of grain incorporating chemical, insect and fungal contamination. This includes an awareness of the industry process in place to monitor these contaminants - the National Residue Survey (NRS), the National Antibiotic Residue Minimisation (NARM) and programmed basket surveys
- contaminants of raw feed and meals that could reduce performance - seeds, moulds, nutritional and disease factors which can influence product quality
- evidence of spoilage and handling spoiled feeds
- OHS and environmental legislative and enterprise requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret and apply feeding instructions</li> <li>• measure and calculate volumes and consumption requirements</li> <li>• relate livestock performance data to ration consistency</li> <li>• mix feeds and ingredients in line with industry quality standards and requirements</li> <li>• recognise and rectify minor operational faults and perform routine maintenance</li> <li>• complete records and documentation of feed use and volumes for the shed</li> <li>• take and prepare feed samples for dispatch to the laboratory.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Mixing and milling may include:	<ul style="list-style-type: none"> <li>• the safe operation and maintenance of machinery and equipment, including hydraulics and guarding of exposed moving parts, including pumps, impellers and aeration equipment</li> <li>• precautions should also be in place to minimise exposure to noise and organics and other dusts.</li> </ul>



## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCLSK327A Collect, store and administer colostrum

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of collecting colostrum from lactating animals for obtaining and preparing artificial colostrum and defines the required standard to: filter colostrum; prepare artificial colostrum; handle animals after parturition; handle and feed new born animals; observe health and condition of newborn animals.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supporting new born animals in small and large enterprises.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Obtain colostrum	<p>1.1. Required equipment is obtained, checked and sterilised.</p> <p>1.2. Suitable donor animals are identified and colostrum is collected.</p> <p>1.3. Artificial colostrum is obtained from stocks held where required.</p> <p>1.4. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p>
2. Administer colostrum to newborn animals	<p>2.1. Identify newborn animals requiring supplementary colostrum.</p> <p>2.2. Obtain and prepare feeding equipment.</p> <p>2.3. Frozen colostrum is thawed at room temperature.</p> <p>2.4. Thawed colostrum is warmed to body temperature.</p> <p>2.5. Warmed colostrum is administered to newborn animals according to individual animal requirements and enterprise procedures.</p> <p>2.6. Newborn animals are checked regularly after administration of colostrum and repeat colostrum feeds are given as required.</p>
3. Store colostrum	<p>3.1. Colostrum is filtered according to enterprise procedures and placed in appropriate container.</p> <p>3.2. Surplus colostrum is frozen for future use and container is labelled with details of donor animal and date of collection.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- filter colostrum
- prepare artificial colostrum
- handle animals after parturition
- handle and feed new born animals
- observe health and condition of newborn animals
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the time periods after parturition in which colostrum can be collected from donor animals
- the time periods during which newborn animals must receive feeds of colostrum
- the nutrition requirements of newborn animals and the reasons for feeding colostrum
- the behavioural characteristics of animals that have just given birth.
- animal welfare requirements and safe work practices.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

Competency is demonstrated in this standard if the

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>candidate is able to:</p> <ul style="list-style-type: none"> <li>• filter colostrum</li> <li>• prepare artificial colostrum</li> <li>• handle animals after parturition</li> <li>• handle and feed new born animals</li> <li>• observe health and condition of newborn animals.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• sheep</li> <li>• horses</li> <li>• goats</li> <li>• alpacas</li> <li>• pigs.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLSK328A Remove and facilitate reuse of effluent and manure from an intensive production system

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating and maintaining the equipment used for effluent removal from the production shed, and monitoring its efficiency and defines the standard required to: operate machinery and equipment in a safe and efficient manner; dispose of effluent cleanly and efficiently resulting in minimal impacts on the surrounding environment; maintain equipment and site hygiene consistent with enterprise requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to removing and facilitating reuse of effluent and manure from an intensive production system.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to work with effluent disposal equipment	<p>1.1. Work to be undertaken is interpreted from work program where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the maintenance activities to ensure continued smooth operation of the production process.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.4. Suitable personal protective equipment is selected, used and maintained.</p> <p>1.5. Tools and equipment suitable for the work to be undertaken are selected, checked and maintained if necessary.</p>
2. Maintain and operate effluent storage and disposal system	<p>2.1. Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of personal protective equipment.</p> <p>2.2. Effluent removal and disposal equipment is correctly serviced and maintained.</p> <p>2.3. Effluent disposal systems are used according to system design in compliance with approval granted by local government and State environment protection authority.</p> <p>2.4. When liquid effluent storages are used, recognised techniques for irrigation are carried out according to</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>establishment practice.</p> <p>2.5. In-shed effluent pits are flushed and drained as required.</p> <p>2.6. When effluent is composted, turning is done in accordance with establishment practice, State environment protection authority recommendations, and OHS procedures.</p>
<p>3. Monitor effluent disposal system</p>	<p>3.1. Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of personal protective equipment.</p> <p>3.2. Flow rates, pit levels, compost temperatures and equipment are regularly checked to maintain effective operation of the system.</p> <p>3.3. Cleaning procedures and hygiene practice are carried out according to established practice.</p> <p>3.4. Monitoring reflects an understanding of the environmental duty of care.</p>
<p>4. Conduct hygiene and administration activities</p>	<p>4.1. Equipment is cleaned in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>4.2. Attachments and other ancillary equipment are cleaned and stored in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>4.3. All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately.</p> <p>4.4. All required records and documentation are completed accurately and promptly in accordance with organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- maintain production shed environment and system through an efficient effluent

## REQUIRED SKILLS AND KNOWLEDGE

handling program

- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs, job performance audits, and Material Safety Data Sheets (MSDSs)
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- maintain and monitor gauges and instruments that control the effluent disposal system
- observe, identify and react appropriately to environmental implications and OHS hazards
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- effluent handling systems
- factors affecting effluent degradation
- environmental codes of practice, and local and State government regulations
- environmental controls and codes of practice applicable to the enterprise
- the organisations livestock production and management plans - sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- OHS legislation, codes of practice and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• operate machinery and equipment in a safe and efficient manner</li> <li>• dispose of effluent cleanly and efficiently resulting in minimal impacts on the surrounding environment</li> <li>• maintain equipment and site hygiene consistent with enterprise requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Intensive production systems may include:	<ul style="list-style-type: none"> <li>• piggeries</li> <li>• poultry farms</li> <li>• dairies</li> <li>• feedlots.</li> </ul>
Disposal/recycling methods may include:	<ul style="list-style-type: none"> <li>• machine spreading</li> <li>• spray or flood irrigation</li> <li>• effluent ponds</li> <li>• collection for manufacture of commercial fertilisers and fuels.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSK329A Implement procedures for calving

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring cows at calving and providing the support required, and defines the standard required to: recognise signs of imminent calving; prepare facilities and equipment for calving; monitor calving and provide intervention if required, or refer on if birthing difficulties require specialist assistance; recognise abnormalities in freshly calved cows and their calves; monitor cow and calf post calving.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on cattle farms who are responsible for overseeing calving. The person is expected to refer any high risk issues or problems for veterinary advice.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for calving	<p>1.1. Condition and health status of cow is assessed and monitored prior to birthing.</p> <p>1.2. Birthing equipment, resources and materials are checked and prepared for use.</p> <p>1.3. Cows at risk of calving difficulty (especially first calf heifers) are grazed in an area where intervention can be carried out with as little disruption as possible.</p> <p>1.4. Hazards in assisting with calving are identified and safe work practices followed.</p> <p>1.5. Mating records are checked and anticipated calving date is confirmed.</p>
2. Observe the calving	<p>2.1. Cows are monitored for signs of approaching parturition and throughout calving.</p> <p>2.2. Signs of calf malpresentation or dystocia are noted from the rate of progress in giving birth and the initial orientation of the feet and head.</p>
3. Support calving	<p>3.1. Calving cows are handled calmly and put in a secure environment.</p> <p>3.2. Hygiene procedures are implemented to ensure that any calving equipment entering the birth canal is clean.</p> <p>3.3. The orientation and size of the foetus relative to the pelvis is estimated through manual palpation.</p> <p>3.4. The possibility of twins is checked and the position of the lead foetus adjusted where required.</p> <p>3.5. A malpresentation is physically manipulated into the correct position where required.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.6. Calving ropes/chains are placed on the calf above the front fetlocks and appropriate calf pulling equipment is applied in the case of dystocia, without causing undue harm to the female.</p> <p>3.7. Specialist support is brought in if normal assistance procedures are not adequate to assist the calving.</p>
4. Carry out monitoring after calf has been born	<p>4.1. Cow is allowed to rest and encouraged to lick the calf as an initial bonding.</p> <p>4.2. Calves that have been assisted are checked for clear airways.</p> <p>4.3. The placenta is left for the cow to ingest after calving.</p> <p>4.4. Cows with retained placentas or other abnormalities are treated and recorded.</p> <p>4.5. The calving environment, facilities and equipment are maintained in a safe, hygienic and operational state and faults are reported or fixed.</p> <p>4.6. Record of calving is kept.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- carry out cow husbandry procedures and recognise signs of imminent calving
- apply contingency measures for calving in the event of difficulties
- ability to correctly apply calving ropes/chains and use suitable calf pulling equipment
- monitor cow condition and recognise abnormal behaviour/presentations
- ability to manual palpate and recognise simple malpresentations
- recognise abnormalities in calving behaviour, expulsion of foetus and placenta, and progress of calf immediately after birth
- prepare calving environment, materials and resources to industry standards
- maintain a safe and secure post-calving environment
- demonstrate safe and environmentally responsible workplace practices
- identify hazards and use safe work practices in the calving environment
- use literacy skills to read, interpret and follow organisational policies and

**REQUIRED SKILLS AND KNOWLEDGE**

procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures.

**Required knowledge**

- calving behaviour and basic health and nutritional requirements as directed
- calving environment requirements
- calving equipment and materials, their components and functions
- calving intervention and non-intervention strategies
- normal calf presentation v abnormal that may need assistance
- problems associated with calving and intervention and follow up treatment
- cow gestation and birthing and husbandry procedures
- enterprise policies with regard to calving down, recording and reporting routines
- environmental impacts and minimisation measures associated with cattle breeding
- health and injury hazards associated with handling cattle
- personal protective clothing and equipment, and when and how it should be used
- procedures for cleaning and maintaining treatment equipment and materials
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace Occupational Health and Safety (OHS) and animal welfare.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- recognise signs of imminent calving in cattle
- monitor calving and provide assistance if required, or



<b>EVIDENCE GUIDE</b>	
	<p>refer on if birthing difficulties require supervisor or veterinary assistance</p> <ul style="list-style-type: none"> <li>• recognise abnormalities in calved cows and in newborn calves</li> <li>• monitor cow and calf post calving.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Compliance requirements may include:	<ul style="list-style-type: none"> <li>• OHS legislation, regulations and codes</li> <li>• animal welfare legislation and codes of practice</li> <li>• quality assurance procedures.</li> </ul>
Class of stock to be calved down may include:	<ul style="list-style-type: none"> <li>• all types and breeds of cattle.</li> </ul>
Calving equipment may include:	<ul style="list-style-type: none"> <li>• calf pullers, calf chains, halters and ropes.</li> </ul>
Hygiene procedures may include:	<ul style="list-style-type: none"> <li>• personal hygiene, use of disinfectants, sanitising of equipment, use of sterile gloves.</li> </ul>
Post calving procedures may include:	<ul style="list-style-type: none"> <li>• removal of retained placenta, antibiotic treatments, and mothering up and suckling of the calf.</li> </ul>
Situations requiring veterinary intervention may include:	<ul style="list-style-type: none"> <li>• dystocias, ruptures, physical injury to the calving female or calf.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCLSK330A Implement procedures for foaling down mares

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring mares and their newborn at foaling and providing the support required, and defines the work practices required to: recognise signs of imminent foaling in mares; monitor foaling and provide assistance if required or refer on if birthing difficulties require veterinary assistance; recognise abnormalities in freshly foaled down mares and in newborn foals; ensure both mare and foal have recovered from foaling and the foal stands and nurses.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to overseeing foaling while referring any high risk issues or problems for veterinary advice.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for foaling	<p>1.1. Condition and health status of pregnant mare is assessed and monitored prior to foaling.</p> <p>1.2. Birthing equipment, resources and materials are checked and prepared for use.</p> <p>1.3. Hazards in assisting with birthing are identified and safe work practices followed.</p> <p>1.4. Mares are moved to area where intervention can be carried out with as little disruption as possible.</p> <p>1.5. Mating or AI records are checked and anticipated foaling date is confirmed.</p>
2. Observe the foaling process	<p>2.1. Mares are monitored for signs of approaching parturition.</p> <p>2.2. Each of the three stages of foaling - the water breaking, the expulsion of the foetus, and the expulsion of the afterbirth - are monitored with veterinary advice sought where required.</p> <p>2.3. Signs of dystocia or malpresentation are noted from the rate of progress in giving birth and the initial presentation of the foal.</p>
3. Apply intervention strategies if birthing fails to progress normally	<p>3.1. Foaling mares are handled calmly and put in a safe and restricted environment.</p> <p>3.2. Mares experiencing birthing difficulties are identified by observing behaviour and foaling progress.</p> <p>3.3. Hygiene procedures are implemented to ensure the operator and any object entering the birth canal is clean.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4. The orientation and size of the foetus relative to the pelvis is estimated through manual palpation.</p> <p>3.5. The possibility of twins is checked and the position of the lead foetus adjusted where required.</p> <p>3.6. A malpresentation is physically manipulated into the correct position where required.</p> <p>3.7. Force is applied to the foetus in the case of hips being caught or a breech birth.</p>
4. Carry out monitoring after foal has been born	<p>4.1. Mare is allowed to lie and rest for as long as possible.</p> <p>4.2. The foal is allowed to stand to break the umbilical cord.</p> <p>4.3. The afterbirth is tied after the mare stands and is checked for expulsion within two to three hours after foaling.</p> <p>4.4. The placenta is examined to ensure no part of it has been retained.</p> <p>4.5. The mare and foal are monitored for nursing and general health.</p> <p>4.6. Foaling environment, facilities and equipment are maintained in a safe, hygienic and operational state and faults are reported or fixed.</p> <p>4.7. Record of foaling is kept.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- carry out mare husbandry procedures and recognise signs of imminent foaling
- assist at foaling in the event of difficulties
- monitor mare condition and recognise abnormal behaviour
- recognise abnormalities in foaling behaviour, expulsion of foetus and placenta, and progress of foal immediately after birth
- refer for specialist advice where required
- prepare foaling environment, materials and resources to industry standards
- maintain a safe and secure post-foaling environment

## REQUIRED SKILLS AND KNOWLEDGE

- demonstrate safe and environmentally responsible workplace practices
- identify hazards and use safe work practices in the foaling environment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- foaling behaviour and basic health and nutritional requirements
- foaling environment requirements
- foaling equipment and materials, their components and functions
- foaling intervention and non-intervention strategies
- problems associated with foaling and remedial treatment
- horse gestation and birthing and husbandry procedures
- enterprise policies with regard to foaling down mares, recording and reporting routines
- environmental impacts and minimisation measures associated with horse breeding
- hazards associated with handling horses
- personal protective clothing and equipment, and when and how it should be used
- procedures for cleaning and maintaining treatment equipment and materials
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace Occupational Health and Safety (OHS) and animal welfare.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise signs of imminent foaling in mares</li> <li>• monitor foaling and provide assistance if required, or refer on if birthing difficulties require veterinary assistance</li> <li>• recognise abnormalities in freshly foaled out mares and in newborn foals</li> <li>• ensure both mare and foal have recovered from foaling and the foal stands and nurses.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Foaling down may apply to:	<ul style="list-style-type: none"> <li>• all types and breeds of mares.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCLSK331A Comply with industry animal welfare requirements

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of complying with industry animal welfare requirements in the production of livestock and defines the standard required to: implement animal welfare practices; implement standard operating procedures; report problems that affect animal welfare.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to compliance with industry animal welfare requirements and is carried out independently under workplace policies and requirements.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Apply animal welfare practices	<p>1.1.Elements of the industry animal welfare requirements are determined.</p> <p>1.2.Hazards to animal welfare are identified for work area according to enterprise guidelines and standard operating procedures.</p> <p>1.3.Critical control points for work area are determined according to workplace procedures.</p> <p>1.4.Record keeping on animal welfare is completed according to industry Quality Assurance (QA) requirements.</p>
2. Comply with standard operating procedures	<p>2.1.Standard operating procedures in respect to animal welfare requirements are implemented in accordance with enterprise requirements.</p> <p>2.2.Non-conformance is reported to supervisor according to enterprise/industry requirements.</p> <p>2.3.Corrective action taken in accordance with enterprise policy and procedures.</p>
3. Report problems that affect animal welfare	<p>3.1.Recognise potential or existing animal welfare problems.</p> <p>3.2.Identify instances of problems of animal welfare from specifications or work instructions.</p> <p>3.3.Report variation and potential problems to supervisor/manager according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- implement animal welfare practices
- implement standard operating procedures
- report problems that affect animal welfare
- handle livestock in a humane and caring manner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- industry animal health requirements
- animal production processes
- enterprise policies, guidelines and standard operating procedures relating to animal welfare
- enterprise Occupational Health and Safety (OHS) requirements
- animal health and welfare
- animal handling techniques
- codes of practice for welfare.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• implement animal welfare practices</li> <li>• implement standard operating procedures</li> <li>• report problems that affect animal welfare.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of animals may include:	<ul style="list-style-type: none"> <li>• all types of animals that are farmed or held for commercial purposes.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK332A Monitor animals in intensive production systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of routine inspection of livestock in a feedlot and defines the standard required to: monitor animal health status and refer to the production plan for intervention strategies; identify animals requiring attention and accurately diagnose the type and severity of infection or injury; interpret the type and scope of treatment referring to the production plan for treatment protocols; take action as appropriate and administer treatments and observe withholding periods; implement appropriate follow-up procedures to monitor animals for treatment effectiveness as per enterprise protocols; record and document actions taken in the treatment of animal infection or injury.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in feedlots who operate under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor animal health status	<p>1.1. Information on animal health programs are sourced from the livestock production plans.</p> <p>1.2. Animal health status is assessed by routinely inspecting each animal from induction to despatch to ensure unimpeded access and opportunity to observe behavioural characteristics, signs of ill-health and freedom of movement.</p> <p>1.3. Information on past treatment is sourced from the individual animal's health tag/s and enterprise records to assist with decision making.</p> <p>1.4. Prevention and treatment strategies are identified to resolve health issues such as; recording for follow-up observation, removal/pulling for exclusion from other livestock and or treatment.</p>
2. Identify and diagnose animals requiring treatment	<p>2.1. Potential health issues are identified for individual animals in different pens and classes of livestock.</p> <p>2.2. The type and severity of infection or injury is determined and animals requiring treatment under the animal health plan are identified and removed/pulled.</p>
3. Determine the type and scope of treatment	<p>3.1. The need for treatment and the type and scope of treatment is determined and prepared according to manufacturer's specifications or veterinary advice.</p> <p>3.2. Equipment, materials and treatment site are prepared</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>to industry standards and according to enterprise requirements.</p> <p>3.3. Hazards in the workplace are identified; risk assessed and controlled according to Occupational Health and Safety (OHS) requirements and enterprise guidelines.</p> <p>3.4. Withholding periods and other details of treatment are recorded according to enterprise guidelines and product specifications.</p>
4. Administer treatment	<p>4.1. Suitable personal protective equipment is selected according to OHS requirements and enterprise guidelines.</p> <p>4.2. Animals are safely handled and restrained without causing harm or injury to animal or handler.</p> <p>4.3. Treatment is administered hygienically and consistently according to manufacturer's specifications or veterinary advice.</p> <p>4.4. Treated animals are identified from non-treated animals to ensure compliance against the required Withholding Period (WHP).</p> <p>4.5. Treated animals are counted out, prepared and moved along a planned route without damage to animal, person, property or environment.</p>
5. Implement follow-up procedures	<p>5.1. Animal health and condition is monitored post-treatment and abnormalities reported according to enterprise guidelines.</p> <p>5.2. Environmental implications associated with the treatment of animals are identified, assessed and controlled according to enterprise requirements.</p> <p>5.3. Equipment and worksite are cleaned and waste, including animal residues, is disposed of according to OHS and enterprise guidelines.</p> <p>5.4. Health treatments are stored to manufacturers recommendations, industry and enterprise requirements.</p> <p>5.5. Relevant information is documented according to industry and enterprise requirements.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices for animal health treatment
- collect faecal, tissue or blood samples for laboratory analysis samples
- identify the symptoms of infectious and other diseases and injuries
- select livestock prone to infection and behavioural problems for culling
- arrange and co-ordinate equipment and resources
- drench and vaccinate livestock
- select and apply appropriate chemicals to treat infections and infestations
- assemble, check and calibrate drenching and vaccinating equipment
- calculate animal numbers and measure treatment dosage and rates, demonstrating safe and environmentally responsible workplace practices
- provide due care and humanely handle animals to minimise stress
- return animals to prepared and clean environments
- read and interpret chemical and veterinary health labels, manufacturers specifications and Material Safety Data Sheets (MSDSs)
- recognise, monitor and report the signs of heat load to work team and management
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the relationship between livestock health and nutrition
- types of feedlot diseases and their symptoms
- application procedures and effects of veterinary chemicals
- types of health preparation treatments
- enterprise vaccination programs and procedures
- identification of and prescribed treatments for infections and infestations
- livestock health and nutritional requirements
- requirements for the preparation and transportation of samples for laboratory testing
- drenching equipment, drenches and their efficiency
- relevant codes of practice with regard to the safe use and handling of hazardous substances
- WHP for treated animals

**REQUIRED SKILLS AND KNOWLEDGE**

- principles of animal behaviour, handling and restraint techniques
- OHS and animal welfare legislative and enterprise requirements
- relevant codes of practice with regard to environmental protection
- understanding of the enterprise heat load management plan
- understanding of Livestock Arrivals Bio-security Risk Assessment.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor animal health status and refer to the production plan for intervention strategies
- accurately diagnose the type and severity of infection or injury
- determine the type and scope of treatment
- administer treatments and observe withholding periods
- monitor animals for treatment effectiveness
- document and record procedures for animal treatment.

**Context of and specific resources for assessment**

Competency requires the application of safe work practices under enterprise conditions. Selection and use of resources for worksites may differ due to the regional or enterprise circumstances.

**Method of assessment**

This unit may be assessed in a holistic way with other units. The assessment strategy for this unit must verify required knowledge, skill and application using more than one of the following assessment methods:

<b>EVIDENCE GUIDE</b>	
	demonstration, practical skills assessment, oral/written questions, professional conversations, direct observation, third-party evidence, case study analysis, role play, simulations, presentations, performance audit, written assignment, portfolio, and examinations.
<b>Guidance information for assessment</b>	Evidence should be gathered over a period of time in a range of actual or simulated environments.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• sheep</li> <li>• goats</li> </ul>
Feedlots may include:	<ul style="list-style-type: none"> <li>• sheds</li> <li>• pens etc</li> </ul>
Enterprises may include:	<ul style="list-style-type: none"> <li>• large scale</li> <li>• fully automated</li> <li>• small scale</li> <li>• manually operated</li> </ul>
Livestock health issues may include:	<ul style="list-style-type: none"> <li>• monitoring the heat load and heat stress of animals</li> <li>• bovine respiratory disease (BDR)</li> <li>• acidosis</li> <li>• feet problems</li> <li>• digestive disorders</li> </ul>
Treatments may include:	<ul style="list-style-type: none"> <li>• acclimation</li> <li>• ration variations</li> <li>• animal health treatments</li> <li>• medication</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK333A Monitor pen condition and ration suitability

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes required to monitor the ration available to livestock and pen conditions associated with feeding livestock and defines the standards required to: monitor ration and water available to animals and refer to the livestock production and/or ration plan for intervention strategies; inspect pen status and refer to the livestock production and or ration plan for intervention strategies; assess manure condition and refer to livestock production ration plan for intervention strategies; observe pen conditions considering weather and refer to feedlot management and or ration plan for intervention strategies; check pen hygiene conditions for ration spillages, insect activity, moisture and refer to livestock production and or maintenance plan for intervention strategies; monitor intervention effectiveness; record intervention and make improvements to livestock production plans where necessary.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in feedlot enterprises who operate under supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor ration and water levels	<p>1.1.Information on ration ingredients and composition is sourced from the livestock production and/or feed plans.</p> <p>1.2.Ration levels, composition and consistency are assessed and potential production and health issues identified for different pens and classes of livestock.</p> <p>1.3.Strategies are identified for emptying wet, mouldy and fouled ration from bunks; exclusion of animals from inappropriate rations.</p> <p>1.4.Water quantity and quality are assessed to meet animal requirements.</p>
2. Inspect pen status and condition	<p>2.1.Information on pen group status is sourced from the livestock production plan.</p> <p>2.2.Pen infrastructure including feed bunks, feed apron and water troughs are assessed together with animal feeding behaviour and performance and potential issues are identified.</p> <p>2.3.Strategies are identified to address control of leaking troughs; exclusion of animals from damaged bunk</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and apron area if necessary.</p> <p>2.4. Pen surface conditions and animal behaviour are assessed in consideration with prevailing weather conditions.</p> <p>2.5. Strategies are identified for increasing or decreasing stock density, provision of access to shade, pen drainage or cleaning and ration modification.</p>
3. Assess manure condition	<p>3.1. Manure consistency and colour is assessed and potential production and health issues identified for different pens and classes of livestock.</p> <p>3.2. Strategies are identified for including increased roughage in ration, courser processing of grain and observation and treatment of sick animals if necessary.</p>
4. Check Pen Hygiene	<p>4.1. Feed bunks, aprons and water troughs are assessed for fouling and unhygienic build up waste.</p> <p>4.2. Strategies are identified for resolving animal production and health issues and worker Occupational Health and Safety (OHS) concerns, including cleaning of area to prevent odour and insect problems.</p>
5. Report and record incidents as required	<p>5.1. Reporting of incidents and potential problems to supervisor as per feedlot guidelines.</p> <p>5.2. Recording and monitoring effectiveness of strategy adopted.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify ration ingredients
- identify ration composition ranging from starter, grower and finisher
- identify grain contaminants
- identify, resolve and/or report water supply issues
- recognise, monitor and report the signs of heat load to work team and management
- relate livestock performance data to ration consistency

## REQUIRED SKILLS AND KNOWLEDGE

- interpret and apply task instructions
- communicate with work team, supervisor and management
- record and report faults, workplace hazards and accidents
- recognise abnormal and normal feeding behaviour
- recognise ration related symptoms
- arrange and co-ordinate equipment and resources
- provide due care and humanely handle animals
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- the relationship between livestock health and nutrition
- understanding of the enterprise heat load management plan
- livestock health and nutritional requirements
- enterprise recording and reporting procedures
- contaminants of rations that could reduce performance, such as seeds, moulds, nutrition levels and disease factors which can influence product quality
- evidence of spoilage and correct handling of spoilt rations
- animal behaviour and indicators of stress, and/or ill-health
- animal handling and restraint techniques
- OHS and animal welfare legislative and enterprise requirements
- relevant codes of practice with regard to environmental protection.
- documentation and recording procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this



<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret and apply feeding instructions and consumption requirements</li> <li>• relate livestock performance data to ration consistency</li> <li>• interpret and apply task instructions and communicate with work team and supervisor</li> <li>• implement standard operating procedures</li> <li>• monitor animal health status and refer to the production plan for intervention strategies</li> <li>• determine the type and scope of treatment</li> <li>• monitor animals for treatment effectiveness</li> <li>• document and record procedures for animal feeding.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of safe work practices under enterprise conditions. Selection and use of resources for worksites may differ due to the regional or enterprise circumstances.
<b>Method of assessment</b>	This unit may be assessed in a holistic way with other units. The assessment strategy for this unit must verify required knowledge, skill and application using more than one of the following assessment methods: demonstration, practical skills assessment, oral/written questions, professional conversations, direct observation, third-party evidence, case study analysis, role play, simulations, presentations, performance audit, written assignment, portfolio, and examinations.
<b>Guidance information for assessment</b>	Evidence should be gathered over a period of time in a range of actual or simulated environments.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Animals may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• sheep</li> <li>• goats.</li> </ul>
Feedlots may include:	<ul style="list-style-type: none"> <li>• sheds</li> <li>• pens etc.</li> </ul>
Enterprises may include:	<ul style="list-style-type: none"> <li>• large scale</li> <li>• fully automated</li> <li>• small scale</li> <li>• manually operated.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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# AHCLSK335A Conduct dropped ovary technique procedures for spaying cattle

## Modification History

Release	TP Version	Comment
1	AHC10v6	Initial release

## Unit Descriptor

This unit of competency describes the skills and knowledge necessary to plan, prepare and conduct Dropped Ovary Technique (DOT) procedure for controlling fertility in females in extensive beef herds where alternative options for the management of cull heifers and cows, other than spaying, have been evaluated but deemed unsuitable or not available.

The unit defines the standard required to confirm pre-operative evaluation outcomes, prepare appropriate sites, facilities and equipment in line with infection control and animal welfare standards, carry out DOT procedure and monitor animals' behaviour post-spaying for health and well-being.

## Application of the Unit

This unit is intended for cattle producers and contractors in the livestock industry who normally operate under limited supervision. It is essential that candidates who undertake this unit have at least one year's prior experience working with cattle; skills in either bovine pregnancy diagnosis and/or artificial insemination procedures are desirable.

In addition to complying with legal and ethical responsibilities, handlers are to work with animals gently and calmly. The spay technician is required to exhibit appropriate care for animals so that stress, discomfort and pain are minimised. At all times the spay technician must consider the welfare of the animal and act appropriately.

## Licensing/Regulatory Information

Candidates should confirm the regulatory requirements that apply in their relevant State or Territory before undertaking this unit. Regulations in some States and Territories restrict the conduct of the DOT procedure to registered veterinarians. There is a direct link between this unit of competency and approval for lay operators to perform the DOT procedure in some State/Territory jurisdictions.

## Pre-Requisites

Nil

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Conduct pre-DOT evaluations	<p>1.1 Relevant State/Territory legislation, regulations, codes of practice and animal welfare standards and guidelines are identified and complied with</p> <p>1.2 <i>Alternatives to ovariectomy (spaying)</i> are discussed with cattle manager and carefully considered prior to undertaking DOT procedure</p> <p>1.3 <i>Pre-operative evaluation</i> of cattle submitted for ovary dropping is confirmed with cattle manager</p> <p>1.4 <i>Risks associated with DOT procedure</i> are identified and discussed with cattle manager</p>
2. Prepare for DOT operations	<p>2.1 <i>Weather conditions</i> are monitored to determine optimal conditions for operation</p> <p>2.2 Time of day for operation is selected to minimise animal stress</p> <p>2.3 Adequate numbers of skilled workers are engaged</p> <p>2.4 Appropriate holding yards, forcing yards, race and settling yards are selected</p> <p>2.5 Low-stress stock mustering, movement and handling procedures are followed</p> <p>2.6 Cattle are allowed to settle and cool after yarding</p>
3. Select, maintain and use appropriate equipment	<p>3.1 All <i>equipment</i> is well-maintained and in a clean and hygienic condition to reduce the risk of infection and cross-infection</p> <p>3.2 <i>Cattle crush</i> used for procedure is maintained in good working</p>

ELEMENT	PERFORMANCE CRITERIA
4. Conduct DOT procedures	<p>order and operated to ensure minimal risk to the operator and animal, especially when loading and unloading</p> <p>3.3 Wash-down, soaking and disinfecting containers are prepared and positioned ready for use</p> <p>3.4 Disinfectant solution is prepared in accordance with the label and Material Safety Data Sheet (MSDS) directions</p> <p>3.5 Ovariometer is sharpened regularly and disinfected before use and between each procedure</p> <p>3.6 All equipment is cleaned and disinfected at the end of operations and stored appropriately to minimise contamination</p> <p>4.1 All procedures are conducted in accordance with <i>animal welfare considerations</i> and <i>workplace health and safety</i> standards</p> <p>4.2 A <i>high standard of hygiene</i> is maintained throughout the procedures in relation to facilities, hands, handling and equipment</p> <p>4.3 Cattle are handled quietly in the holding yards, forcing yards and race so that they are relatively calm when they reach the crush</p> <p>4.4 <i>Common DOT procedural impediments</i> are identified and remedial actions planned</p> <p>4.5 Pain management is provided in accordance with legislative requirements</p> <p>4.6 <i>DOT procedures are performed in accordance</i> with industry best practice standards and processing rates</p> <p>4.7 Upon completion of procedures, <i>identification earmarks or ear tags</i> are applied to cattle in accordance with relevant State/Territory legislative requirements</p> <p>4.8 Ovariectomised animals are released and allowed to settle on to feed and water in the settling yards for several hours, before moving quietly to pasture</p>
5. Follow post-spay management procedures	<p>5.1 Spayed cattle are put onto good quality and quantity feed and water without having to travel long distances in between</p> <p>5.2 Cattle manager is advised on the <i>post-spay management requirements</i> to assist with rapid convalescence</p> <p>5.3 Required <i>documentation and records</i> are maintained and updated</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit

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**Required skills include:**

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**Ability to:**

- apply effective cattle identification techniques
- apply effective ovarian palpation techniques
- apply a high degree of skill in transrectal ovarian manipulation
- apply interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- clean, disinfect and maintain equipment to ensure efficient and safe working standards
- communicate effectively with others, including questioning, active listening, asking for clarification and consulting with or seeking advice as required
- comply with animal welfare legislation, animal welfare standards and guidelines, State and Territory veterinary surgeons' or practitioners' legislation and regulations and relevant codes of conduct
- employ safe, humane and environmentally responsible systems and procedures when working with and handling livestock
- follow sequenced written instructions
- record information collected accurately and legibly
- maintain the highest standards of hygiene and infection control at all times to reduce the risk of infection and cross-infection
- consider zoonotic and exotic disease possibilities (biosecurity)
- operate equipment effectively and with due consideration to the potential hazards associated with using equipment on cattle
- use numeracy skills to estimate, calculate and record routine workplace measures
- use safe manual handling techniques and equipment
- use safe, hygienic and environmentally friendly waste handling and disposal procedures
- work as a member of a team

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**Required knowledge includes:**

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**Knowledge of:**

- alternative options available to control fertility in cows
- Australian Animal Welfare Standards and Guidelines for Cattle (handling and management)
- basic reproductive anatomy of the cow and stages of pregnancy diagnosis
- body condition score (BCS) system for cattle
- basic cattle nutrition and husbandry
- cattle crush design and safety requirements
- disinfectant label and relevant Material Safety Data Sheet formats
- grazing industry biosecurity manual and related strategies
- guidelines for the proper selection and management of cattle for ovariectomy
- industry recognised best practice DOT procedure and processing rates
- relevant legislation, regulations and codes of practice, including those relating to WHS, animal welfare, veterinary practitioner/surgeons' Acts, stock diseases and waste disposal

- principles of animal welfare
- safe operating procedures for use of all equipment including veterinary crush, ovariome, earmarking and ear tagging pliers
- weather and other conditions and impacts on safe and effective DOT operations
- workplace hygiene standards including: disinfectants, cleaning agents and techniques, cleaning and appropriate disinfection of equipment and materials

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit. Assessors should ensure that candidates can:

- assess alternative strategies and confirm key indicators for the use of DOT procedures in consultation with cattle manager
- understand optimal conditions for carrying out DOT procedures
- conduct pre-operative evaluation of cattle submitted for ovary dropping and risk assessment in consultation with cattle manager
- prepare appropriate sites, facilities and equipment in line with infection control, workplace health and safety and animal welfare standards including pain management in accordance with legislative requirements
- follow low-stress stock mustering, movement and handling procedures
- carry out DOT procedures in accordance with industry recognised best practice DOT procedure and processing rates, impediment remedial actions and hygiene standards
- communicate post-spay management requirements to cattle manager
- accurately document and maintain appropriate records

The skills and knowledge required to conduct DOT procedure for spaying cattle must be transferable to a range of work environments and contexts and include the ability to deal with unplanned events.

Context of and specific resources for assessment

Assessment for this unit is to be practical in nature and will be most appropriately assessed in an on-farm workplace situation with access to appropriate female cattle, facilities and equipment to enable one to

	demonstrate competence.
Method of assessment	<p>To ensure consistency of performance, competency must be demonstrated to industry recognised standards, over a number of assessment activities, taking into account appropriate processing rates, procedural impediment remedial actions and hygiene standards.</p> <p>Assessment must take place over a period of time in order to cover a variety of circumstances, cases and responsibilities.</p> <p>The assessment strategies must include practical skills assessment. Suggested strategies for this unit are:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of candidate's required knowledge</li> <li>• observed, documented and firsthand testimonial evidence of candidate's application of practical tasks</li> <li>• simulation exercises that reproduce normal work conditions</li> <li>• portfolio records that provide evidence of practical skills</li> </ul> <p>This unit may be assessed in a holistic way with other units of competency relevant to the industry sector, workplace and job role.</p>
Guidance information for assessment	Assessment methods should reflect workplace demands (e.g. literacy and numeracy demands) and the needs of particular target groups (e.g. people with disabilities, Aboriginal and Torres Strait Islander people, women, people with a language background other than English, youth and people from low socioeconomic backgrounds).

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Alternatives to ovariectomy (spaying)*** for management of heifers and cows may include:

- lot feeding
- alternative selling options
- breeder segregation
- heifer-safe paddocks
- bull removal
- pregnancy diagnosis of heifers by veterinarians or accredited testers, with on-selling of empty heifers
- use of prostaglandins for heifers that are less than 4 months gestation prior to transport to a feedlot/live export depot



<p><b><i>Pre-operative evaluation</i></b> of cattle submitted for ovary dropping should include:</p>	<ul style="list-style-type: none"> <li>• therapeutic pregnancy control when available</li> <li>• selection of cattle that are:             <ul style="list-style-type: none"> <li>• surplus wet cows and heifers</li> <li>• at least 4 weeks postpartum</li> <li>• preferably well handled</li> <li>• accustomed to being worked in yards and races</li> <li>• empty or early pregnant (less than 4 months gestation)</li> <li>• strong and present with a good BCS (greater than 2.5 out of 5)</li> <li>• generally at or above a 180kg live weight (lower limit)</li> <li>• not affected by heavy tick burdens</li> <li>• not scheduled for dehorning within 4 weeks before or after spaying</li> <li>• feed only curfewed for a minimum of 12 hours prior to the procedure but have continuous access to water</li> </ul> </li> <li>• identifying animals showing signs of disease, weakness or emaciation which should not be spayed by any technique</li> </ul>
<p><b><i>Risks associated with DOT procedures</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• fractious animals and those with poor temperaments</li> <li>• animals with poor BCS</li> <li>• extreme environmental conditions, for example: heat, cold, rain</li> <li>• operator limitations for example: fatigue, hand size, lack of experience</li> <li>• anaemia due to heavy worm or tick burdens</li> <li>• pneumorectum (sucking air into the rectum)</li> <li>• lack of feed curfew</li> <li>• water curfew, dehydration</li> <li>• poor equipment, yards and other necessary infrastructure</li> <li>• inadequate spelling facilities</li> </ul> <p>Where such risks exist, it is recommended that the overall risks be assessed and risk mitigation put in place in the interests of animal welfare. In some cases the situation will be significant enough to be unmanageable and require deferral of the procedure.</p>
<p><b><i>Weather conditions</i></b></p>	<p>Weather conditions for operations should be a fine, mild day.</p> <p>Weather conditions to be avoided include:</p>

	<ul style="list-style-type: none"> <li>• excessively hot conditions which can increase bleeding and stress on cattle</li> <li>• cold weather conditions which place additional stress on cattle</li> <li>• wet or dusty conditions which increase the risk of contamination</li> </ul>
<p><b>Equipment</b> may include:</p>	<p>Essential equipment for performing DOT includes:</p> <ul style="list-style-type: none"> <li>• cattle crush and race</li> <li>• ovariotomes x 3 sizes (heifer, cow and large cow) plus spares</li> <li>• disinfectant and wash buckets preferably with a lid to reduce dust contamination</li> <li>• chlorhexidine or centrimide disinfectant</li> <li>• shoulder-length gloves</li> <li>• lubricant</li> <li>• overalls/aprons</li> <li>• safety boots and glasses</li> <li>• earmarking pliers</li> <li>• ear tagging pliers and tags</li> <li>• diamond sharpener</li> <li>• paper towelling</li> </ul> <p>Extra equipment may include:</p> <ul style="list-style-type: none"> <li>• table and chair</li> <li>• knives</li> <li>• waterbottle/pannikin</li> <li>• counter</li> <li>• electric prodder (use should be kept to a minimum)</li> <li>• hat/sunscreen</li> </ul>
<p><b>Cattle crush</b> must include:</p>	<ul style="list-style-type: none"> <li>• a rear kick gate featuring:             <ul style="list-style-type: none"> <li>• a recommended average height of 800mm</li> <li>• the gap between the bottom of the kick gate and the floor of the crush and the bottom of the side gate and the floor of the crush should be no more than 20 mms</li> <li>• side gates that are sheeted or closely railed up to 1 metre</li> </ul> </li> <li>• head bail</li> <li>• solid non-slip floor</li> <li>• squeeze</li> <li>• a wide area that is dust and mud free around the crush</li> <li>• effective protection for operators from cattle in same yard as crush</li> </ul>

<p><b><i>Animal welfare considerations</i></b> will include:</p>	<ul style="list-style-type: none"> <li>• complying with relevant legislation, regulations concerned with: <ul style="list-style-type: none"> <li>• animal welfare (eg. Australian Animal Welfare Standards for Cattle (handling and management))</li> <li>• the prevention of cruelty to animals</li> </ul> </li> <li>• adopting best practice recommendations as relevant in the Australian Animal Welfare Standards and Guidelines for Cattle (handling and management) and in industry documents such as: <ul style="list-style-type: none"> <li>• industry codes of practice</li> <li>• industry standards and protocols</li> </ul> </li> </ul>
<p><b><i>WHS standards</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• applying appropriate manual handling techniques when handling loads, including livestock and equipment</li> <li>• following safe operating procedures for: <ul style="list-style-type: none"> <li>• cleaning, disinfecting and sharpening instruments</li> <li>• following personal and workplace hygiene procedures</li> <li>• hazard identification and risk minimisation, including handling, use, storage, transport and disposal of chemicals and handling and disposal of biological wastes</li> <li>• livestock catching, handling, controlling and restraining methods</li> </ul> </li> <li>• using materials and equipment in accordance with manufacturers' instructions</li> <li>• using infection control procedures to minimise risks associated with: <ul style="list-style-type: none"> <li>• zoonotic diseases</li> <li>• release of infective agents (both animal and human)</li> <li>• chemical spillage</li> </ul> </li> <li>• using personal protective equipment (PPE) including: <ul style="list-style-type: none"> <li>• clothing of a protective nature</li> <li>• eye protection</li> <li>• gloves</li> <li>• items for sun and other protection</li> <li>• safety footwear and leg protection</li> <li>• surgical mask</li> </ul> </li> </ul>
<p><b><i>A high standard of hygiene</i></b> will require:</p>	<ul style="list-style-type: none"> <li>• equipment to be thoroughly cleaned and disinfected before initial use, between procedures and each time they are changed for cleaning and sharpening</li> </ul>

	<ul style="list-style-type: none"> <li>• disinfectant to be used in accordance with label instructions (MSDS)</li> <li>• appropriate reprocessing of reusable equipment</li> <li>• personal hygiene practices especially washing and drying hands (e.g. before and after animal contact)</li> <li>• safe handling and disposal of clinical, related and general waste</li> <li>• surface cleaning and management of blood and bodily fluid spills</li> <li>• techniques to limit contamination</li> <li>• use of personal protective equipment</li> </ul>
<b><i>Common DOT procedural impediments</i></b> may include, but are not limited to:	<ul style="list-style-type: none"> <li>• excessive animal movement</li> <li>• the head of the ovariator becoming caught in vaginal folds and deep vaginas</li> <li>• difficulty in penetrating the vaginal wall</li> <li>• the head of the ovariator becoming caught in broad ligament (membrane obstructions)</li> <li>• pneumorectum (wind sucking, ballooning of the rectum)</li> <li>• difficulty locating one ovary or both ovaries after the ovariator is in place</li> <li>• difficulty severing the ovary</li> <li>• small intestinal entanglement in the spay tool</li> </ul>
<b><i>DOT procedures</i></b> include:	<ul style="list-style-type: none"> <li>• administration of pain relief, where available</li> <li>• appropriate restraint of the cow, avoiding where possible the use of electro-immobilisation as a form of restraint for the procedure (only to be used when beneficial to the health and wellbeing of the animal and/or the operator)</li> <li>• a gloved hand being inserted in the rectum to manipulate the reproductive tract</li> <li>• the ovariator being introduced into the vagina and placed against the vaginal wall above the cervix</li> <li>• the vaginal wall being pierced with the spearhead end and the ovariator passed into the abdomen</li> <li>• each ovary then being manipulated per rectum and placed in the oval hole of the ovariator</li> <li>• each ovary then being cut off by a slow backward pull on the ovariator which draws the ovary into the cutting slot</li> </ul>
<b><i>Identification earmarks or ear tags</i></b> requirements include:	<ul style="list-style-type: none"> <li>• completed spay</li> <li>• incomplete spay</li> <li>• untoward event; should a mishap occur this needs to be identified that may require veterinary referral or</li> </ul>

<p><i>Post-spay management requirements</i> include:</p>	<p>humane euthanasia</p> <ul style="list-style-type: none"> <li>• monitoring spayed cattle for a minimum of three days after the procedure for indications of complications such as: pain, haemorrhage, rectal perforation, intestinal lacerations, sepsis</li> <li>• identifying situations requiring veterinary referral or humane euthanasia</li> <li>• providing appropriate treatment for complications which may include antibiotics, analgesia, supportive care or euthanasia</li> <li>• avoiding using paddocks with no shelter, little feed, or long distances to walk to water</li> <li>• moving spayed cattle gently and calmly and avoiding walking them long distances (more than 5km) to paddocks</li> <li>• familiarising cattle with a watering point</li> <li>• avoiding forced walks or trucking long distances for approximately 10 days after the procedure</li> <li>• organising/conducting post-mortems in deceased animals to determine the cause of death for continuous improvement of the technique</li> </ul>
<p><i>Documentation and records</i> may include:</p>	<ul style="list-style-type: none"> <li>• accurate animal counts</li> <li>• earmark and tagging system identifying spayed animal and operator</li> <li>• Material Safety Data Sheets (MSDSs)</li> </ul>

## Unit Sector(s)

Livestock

## AHCLSK401A Develop feeding plans for a production system

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing feeding plans for a production system and defines the standard required to: discuss feed and nutritional content with nutritionist and managers; develop rations for different classes of livestock based on production targets and cost and availability of feeds and additives; assess adequacy of feed storage and distribution systems; supervise feed milling and mixing and sample feeds for analysis; maintain a consistent feeding regime and check water is always available; monitor livestock for symptoms of digestive problems and review feeding plan if required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervisors and unit managers who are responsible for nutrition and feeding in an intensive livestock production facility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select ingredients for feed	<p>1.1.Nutritional needs of livestock are identified from information available and class of livestock.</p> <p>1.2.Nutritional advice is sourced from the appropriate industry or organisational sources.</p> <p>1.3.Ingredients are selected that provide for the identified nutritional need of livestock.</p> <p>1.4.Suppliers of ingredients are selected on the basis of quality and cost of feed.</p> <p>1.5.Quantities of individual ingredients are determined from the production program, in conjunction with advice from other available information and expert/supplier advice.</p>
2. Determine feed rations and schedules	<p>2.1.Quantities of feeds required for livestock are determined from the production program, in conjunction with advice from other available information and expert advice.</p> <p>2.2.The results of any available laboratory testing are taken into consideration when determining the quantities of each ingredient to be used.</p> <p>2.3.Feeding is scheduled and responsibility for feeding allocated in line with the production program and other operations occurring within the shed.</p> <p>2.4.Method(s) of providing feed to livestock is identified from production plan and confirmed with supplier of</p>

ELEMENT	PERFORMANCE CRITERIA
	ingredients and other expert advice.
3. Supervise mixing and storage of feed	<p>3.1. Secure and hygienic storage of feed and ingredients is organised to eliminate contamination and infestation.</p> <p>3.2. Storage location is selected to ensure safe access.</p> <p>3.3. Rotation of feedstocks and replacements are organised to arrive at the appropriate time to ensure optimum freshness.</p> <p>3.4. Mixing of feed is organised to suit the needs of the livestock, the identified nutritional requirements and the equipment available within the organisation.</p> <p>3.5. Medications are added to feeds according to enterprise procedures if required</p> <p>3.6. Samples of feed are taken, packaged and labelled, and forwarded to the laboratory for testing according to the schedules described in the production program.</p> <p>3.7. Calibration of measuring equipment and calculation of quantities is checked at regular intervals.</p> <p>3.8. Occupational Health and Safety (OHS) hazards are identified, risks assessed, and risk controls are implemented, monitored and reviewed for feed preparation and feeding operations.</p>
4. Supervise feeding	<p>4.1. Rations are supplied to the livestock according to the production program and schedules devised.</p> <p>4.2. Potable water is available continuously to the livestock.</p> <p>4.3. The health and wellbeing of the livestock is monitored and any reaction to a change in feed or schedules is noted and reported.</p> <p>4.4. Any change in production levels as a direct result of changes to feed types, ingredients or schedules is monitored and reported.</p> <p>4.5. Advice is given to operational staff during the feeding operation when requested, or when the need is observed.</p> <p>4.6. All waste materials and substances are removed from the site and stored, or disposed of according to legislation and enterprise procedures.</p> <p>4.7. Documentation is collated and stored according to the requirements of the organisation.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- discuss feed and nutritional content with nutritionist and managers
- identify a range of raw ingredients
- interpret laboratory result data
- operate a range of feeding equipment
- assess adequacy of feed storage and distribution systems
- perform basic trouble shooting of the feeding operation
- monitor animal intake and performance
- recognise and rectify minor operational faults
- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs)
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
- measure and calculate volumes, consumption and storage requirements
- complete the required records of feed use and livestock performance
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- control of common diseases and preventative measures including the placement of medications in feed
- growth and development in livestock
- milling systems
- dietary needs and analysis of feed samples
- the organisations sampling requirements and techniques
- appropriate legislative requirements, manufacturers instructions and enterprise

**REQUIRED SKILLS AND KNOWLEDGE**

procedures/instructions

- silo operations and configuration, machinery and operating practices
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, environment, animal welfare and the use and control of machinery and equipment
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures
- seasonal ingredient variations.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- discuss feed and nutritional content with nutritionist and managers
- develop rations for different classes of livestock based on production targets and cost and availability of feeds and additives
- assess adequacy of feed storage and distribution systems
- supervise feed milling and mixing and sample feeds for analysis
- maintain a consistent feeding regime and check water is always available
- monitor livestock for symptoms of digestive problems and review feeding plan if required.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources

<b>EVIDENCE GUIDE</b>	
	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>intensively raised pigs, poultry or lot fed ruminants.</li> </ul>
Feeds that may be used in an intensive system may include:	<ul style="list-style-type: none"> <li>prepared and formulated proprietary rations</li> <li>whole grains</li> <li>roughages</li> <li>protein additives</li> <li>and/or vitamins and minerals.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK402A Develop livestock feeding plans

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing livestock feeding plans and defines the standard required to: identify the production system and intended market for the livestock; match feed supply to livestock nutritional requirements; assess the feed available to stock from pasture and their likely performance; determine an effective and sustainable grazing management strategy; identify pasture shortfalls and supplementary feeding alternatives; determine suitable feed conservation methods or fodder sources; and document the feeding plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managers of grazing operations who design and develop feeding plans for livestock.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine nutritional requirements for livestock	<p>1.1.Nutritional value of pasture and feedstuffs is determined.</p> <p>1.2.Livestock production status is identified and assessed according to enterprise requirements.</p> <p>1.3.Essential requirements for livestock nutrition are determined according to assessed livestock condition.</p>
2. Assess pasture feed	<p>2.1.Grazing management strategy is determined to ensure the sustainable stocking capacity of pasture.</p> <p>2.2.Pasture is monitored for quantity and quality to ensure continual and consistent supply of nutrients to livestock.</p> <p>2.3.Pasture intake is monitored and assessed according to identified nutritional requirements of livestock.</p>
3. Determine supplementary feeding program	<p>3.1. Economic basis to supplementary feeding is determined according to enterprise requirements.</p> <p>3.2.Types of supplementary feed are identified and determined for all classes of livestock.</p> <p>3.3.Supplementary feeding program is determined to fill the pasture shortfall for predicted pasture growth.</p>
4. Develop livestock feeding plan	<p>4.1.Feeding plan is developed and reviewed to ensure it remains responsive to changing conditions.</p> <p>4.2.Suitable feed conservation methods or fodder sources are identified and carried out in preparation for abnormal conditions.</p> <p>4.3.A system of feeding is selected that supplies the appropriate amount of feed to the herd/flock to meet</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>condition and growth needs, and that meets production requirements of the business.</p> <p>4.4.A feed budget is prepared according to the selected system of feeding.</p> <p>4.5.Data is documented for continual assessment and effective management planning.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research predicted seasonal pasture production for the area
- estimate the feed value of a standing pasture
- calculate the feed demand for different types of livestock and production phases
- match feed supply and demand
- assess feeding plan alternatives
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- nutrient and daily energy requirements of livestock
- water quality and livestock tolerances
- nutritive levels of different feedstuffs
- assessment procedures to ascertain livestock condition
- methods of assessing pastures quality and quantity
- pasture livestock carrying capacity
- relationship between lactation and body reserves, udder development and secretion

**REQUIRED SKILLS AND KNOWLEDGE**

of milk.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify the production system and intended market for the livestock
- match feed supply to livestock nutritional requirements
- assess the feed available to stock from pasture and their likely performance
- determine an effective and sustainable grazing management strategy
- identify pasture shortfalls and supplementary feeding alternatives
- determine suitable feed conservation methods or fodder sources
- document the feeding plan.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• alpacas</li> <li>• deer</li> <li>• beef cattle.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLSK403A Escort livestock during export

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers escorting livestock during export and defines the standard required to: handle, treat and feed livestock; identify signs of ill health and injury, or signs of abnormal or depressed appetite; handle and restrain livestock for observation and treatment as required; oversee the care of livestock in transit; communicate effectively with exporting agents and related agencies, as well as the Master/Captain, officers and seamen on board; complete export documentation including daily records of animal observations and conditions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to animal attendants who escort livestock on sea voyages.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out administration requirements	<p>1.1.Details of the livestock to be exported are obtained from, and clarified with, the exporter or producer.</p> <p>1.2.Effective communication links are established between all parties to the consignment and any relevant organisations or agencies.</p> <p>1.3.Specific details of the vessel/plane are investigated and verified to attain efficiencies in loading and transit operations.</p> <p>1.4.Required certification, permit and invoicing arrangements are completed according to exporter requirements and relevant legislation.</p> <p>1.5.Nutritional and veterinary requirements are estimated and required quantities are ordered according to exporter directions, established industry standards and load specifications.</p>
2. Prepare for livestock to be loaded	<p>2.1.Details of the livestock to be exported are obtained from, and clarified with, the exporter or producer.</p> <p>2.2.Effective communication links are established between all parties to the consignment and any relevant organisations or agencies.</p> <p>2.3.Specific details of the vessel/plane are investigated and verified to attain efficiencies in loading and transit operations.</p> <p>2.4.Required certification, permit and invoicing arrangements are completed according to exporter requirements and relevant legislation.</p> <p>2.5.Nutritional and veterinary requirements are estimated and required quantities are ordered</p>

ELEMENT	PERFORMANCE CRITERIA
	according to exporter directions, established industry standards and load specifications.
3. Load and transport accompany livestock	<p>3.1. Workplace health and safety policies and procedures are observed and followed in line with regulatory and exporter requirements.</p> <p>3.2. Prepared livestock are loaded and secured safely and humanely according to animal welfare, Occupational Health and Safety (OHS), and exporter requirements.</p> <p>3.3. Loading densities and conditions are checked and verified in accordance with the loading plan, government regulations and exporter specifications.</p> <p>3.4. Water and feed provision to livestock is monitored and recorded, and any abnormalities or variance from feed budgets are reported to the appropriate party.</p> <p>3.5. Regular observation of all livestock is carried out to ensure timely and appropriate responses to changes in condition, feed and water intake, or incidence of disease.</p> <p>3.6. Injured or diseased livestock are humanely dealt with according to exporter policy, relevant health and environmental considerations, and in consideration of customer requirements.</p> <p>3.7. Reports are completed according to exporter and shipping company policy and in accurate observation of shipping conditions.</p>
4. Complete post-shipment procedure	<p>4.1. Unloading strategies including timing, health checks and documentation are established in consultation with the carriers Chief Officer or Master.</p> <p>4.2. Pen cleaning and other established pre-unloading procedures are completed prior to entering port.</p> <p>4.3. Animals are unloaded safely and humanely using appropriate equipment and facilities in line with manufacturer's specifications.</p> <p>4.4. Specific animal requirements at unloading are identified and supplies are obtained to meet consignment needs.</p> <p>4.5. End of voyage reports and required documentation are completed according to exporter requirements, shipping company policy, government legislation, and customer requirements.</p> <p>4.6. Post-transport checks are undertaken according to exporter and customer requirements, and shipping</p>

ELEMENT	PERFORMANCE CRITERIA
	company policy.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- quickly and accurately identify signs of ill health and injury, or signs of abnormal or depressed appetite
- competently handle and restrain livestock for observation and treatment as required
- effectively oversee the care of livestock in transit
- humanely handle, treat and feed livestock
- communicate effectively with exporting agents and related agencies, as well as the Master/Captain, officers and seamen on board
- complete livestock health and medication records clearly, accurately, and in line with established practice for such records
- accurately complete export documentation including daily records of animal observations and conditions
- maintain and store records, reports and log books
- select, fit and use personal and protective equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- applicable geography and culture of the importing nation
- health and welfare of all classes of livestock - including pregnant livestock - in transit
- zoonoses applicable to the specific classes and species of livestock
- commonly occurring animal disease and parasitic infestation
- on-board procedures and responsibilities

**REQUIRED SKILLS AND KNOWLEDGE**

- quarantine and its implementation both for export and import purposes
- the application of a range of treatments under veterinary supervision
- methods of safe animal handling within the code of practice guidelines
- methods of euthanasing and disposing of livestock
- relevant legislation and regulations relating to waste management, animal health and welfare, and employment of staff and contractors
- invoice, receipt and document requirements at both ends of the transport operation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- handle, treat and feed livestock
- identify signs of ill health and injury, or signs of abnormal or depressed appetite
- handle and restrain livestock for observation and treatment as required
- oversee the care of livestock in transit
- communicate effectively with exporting agents and related agencies, as well as the Master/Captain, officers and seamen on board
- complete export documentation including daily records of animal observations and conditions.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Export livestock may include:	<ul style="list-style-type: none"> <li>• cattle</li> <li>• horses</li> <li>• goats</li> <li>• sheep.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCLSK404A Implement and monitor animal welfare programs

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers implementing and monitoring animal welfare programs and defines the standard required to: provide information to the work group about animal welfare; facilitate the participation of workers in complying with animal welfare guidelines; implement and monitor enterprise programs for animal welfare; deal with animal welfare emergencies; maintain animal welfare records including staff training.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to livestock production enterprise supervisors and managers with responsibility for animal production.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Provide information about animal welfare	<p>1.1.Relevant provisions of animal welfare legislation and codes of practice are accurately and clearly explained to the work group.</p> <p>1.2.Information on enterprise animal welfare policies, procedures and programs is provided in a readily accessible manner and is accurately and clearly explained to the work group.</p> <p>1.3.Information about identified animal welfare requirements is regularly provided and is accurately and clearly explained to the work group.</p>
2. Facilitate the participation of workers in animal welfare compliance	<p>2.1.Enterprise procedures for compliance on animal welfare issues are implemented and monitored.</p> <p>2.2.Procedures whereby workers report animal welfare hazards, risks and action taken to control risks, are clearly described to the work group.</p> <p>2.3.Issues raised on animal welfare are dealt with and resolved promptly or referred to the appropriate personnel for resolution in accordance with workplace procedures.</p>
3. Implement and monitor enterprise animal welfare procedures	<p>3.1.Existing and potential hazards to animal welfare which are identified are reported so that effective remedial measures are implemented.</p> <p>3.2.Work procedures to control animal welfare risks are implemented by the work group and regular monitoring occurs to ensure ongoing adherence and effectiveness of animal practices.</p> <p>3.3.Inadequacies in allocation of resources to ensure animal welfare are identified and reported to</p>

ELEMENT	PERFORMANCE CRITERIA
	management.
4. Implement workplace procedures for dealing with animal welfare emergencies	<p>4.1. Workplace procedures for dealing with animal welfare emergencies are implemented where necessary to ensure that prompt and effective control action is taken.</p> <p>4.2. Animal welfare emergencies are reported in accordance with established enterprise procedures.</p> <p>4.3. Measures to prevent recurrence and minimise risk of animal welfare emergencies are implemented.</p>
5. Implement and monitor enterprise procedures for providing animal welfare training	<p>5.1. Animal welfare induction and training needs are identified accurately.</p> <p>5.2. Arrangements are made for meeting identified animal welfare training needs in both on and off-the-job training programs in consultation with relevant parties.</p>
6. Implement and monitor enterprise procedures for maintaining animal welfare record	<p>6.1. Animal welfare records for work area are accurately and legibly completed in accordance with workplace and legislative requirements for record keeping.</p> <p>6.2. Aggregate information from animal welfare records is used to identify potential hazards to animal welfare and monitor compliance procedures within work area according to enterprise procedures and within scope of responsibilities.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- facilitate the participation of workers in animal welfare compliance
- implement and monitor enterprise animal welfare procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

**REQUIRED SKILLS AND KNOWLEDGE**

- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- animal health and welfare requirements, practices and procedures.
- animal physiology.
- relevant animal welfare legislation and codes of practice.
- industry animal health requirements
- animal production processes
- enterprise policies, guidelines and standard operating procedures relating to animal welfare.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- provide information to the work group about animal welfare
- facilitate the participation of workers in complying with animal welfare guidelines
- implement and monitor enterprise programs for animal welfare
- deal with animal welfare emergencies
- maintain animal welfare records including staff training.

**Context of and specific resources for**

Competency requires the application of work practices

**EVIDENCE GUIDE**

<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Animal welfare programs may include:

- those within the full range of livestock production enterprises.

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCLSK405A Implement intensive production systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers implementing intensive production systems and defines the standard required to: determine measurable indicators, specifications and targets for the intensive enterprise; assess the resources required for unit operations; establish processes/strategies, procedure and controls to meet quality assurance requirements and production targets; implement quarantine procedures and monitor disease status of stock; operate effluent storage and disposal systems; monitor the production system for output, Quality Assurance (QA) compliance, costs and profitability.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the implementation and monitoring of intensive production systems.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for production operations	<p>1.1. Documents within the organisation that detail the requirements of the production program are identified and obtained.</p> <p>1.2. The resources required for the production operations are assessed and calculated from the product to be produced, the available timelines, the available resources, and the types of shed used.</p> <p>1.3. Measurable indicators, specifications and targets are determined, based on the production program and type of shed used.</p> <p>1.4. Discussions are held with operational personnel and immediate management to discuss the production program.</p> <p>1.5. Any approvals that are required for the operations are identified, sought and obtained.</p>
2. Intensively produce livestock products	<p>2.1. People, materials and equipment required for the operations are co-ordinated, scheduled and regularly communicated with, according to the prepared plan and to ensure smooth operation and progress.</p> <p>2.2. Occupational Health and Safety (OHS) hazards are identified, assessed, and responsible action taken throughout the production operations.</p> <p>2.3. The procedures and tools to be used, the personal protective equipment to used/worn, the kind of records that are to be taken, and any potential hazards that might be faced are clearly communicated to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>operational personnel, and confirmation of the clear communication is sought.</p> <p>2.4.Any documentation that is required to be kept by either the organisation or OHS guidelines is completed clearly and accurately.</p> <p>2.5.Advice is given to operational staff and any contractors during the production operations when requested, or when the need is observed.</p>
3. Manage environment for livestock	<p>3.1.Herd/flock and shed conditions are regularly observed for signs of ill health and changes recorded and reported.</p> <p>3.2.Dead livestock is examined for evidence of disease through correct post-mortem techniques in line with individual unit standard and veterinary advice.</p> <p>3.3.Disease status of unit stock is assessed and evaluated, and serviceman or veterinary assistance notified when required.</p> <p>3.4.Components of quarantine procedures are regularly checked for compliance.</p> <p>3.5.Aspects of the internal environment are monitored and adjusted in line with the production program.</p>
4. Manage waste and environmental matters	<p>4.1.Effluent storage and disposal systems are operated according to production program and manufacturers instructions.</p> <p>4.2.Volume and type of effluent is calculated, monitored and documented according to the requirements of the production program.</p> <p>4.3.All rubbish and used consumables are removed from production site according to the requirements of the production program.</p> <p>4.4.Environment maintenance program is ongoing through all seasons where this is required by the organisations management plan.</p> <p>4.5.The regulatory and legislative requirements outlined in the production program are monitored and reported on as necessary.</p>
5. Monitor and adjust production operation	<p>5.1.Monitoring points outlined in the production plan are adhered.</p> <p>5.2.Checks are made to ensure that the OHS requirements are being observed and followed.</p> <p>5.3.Checks are made to ensure that the site environmental requirements are being observed and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>followed.</p> <p>5.4.Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress.</p> <p>5.5.Checks are made to ensure that the documentation required by the organisation or other regulating bodies, is completed clearly and accurately during the progress of the control operations.</p> <p>5.6.Where any corrective action or amendment is required, the action is initiated and taken.</p> <p>5.7.Documentation is collated and stored according to the requirements of the organisation.</p> <p>5.8.Recommendations for subsequent production programs are prepared, based on the conduct of the operation, the data collected, and the discussions had during the operation.</p> <p>5.9.Where it is required, a report on the production operations and throughput is made including the key aspects of the operation.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and monitor the safety of the operating environment
- perform routine hygiene maintenance activities
- observe, identify and react appropriately to environmental implications and OHS hazards
- establish processes/strategies, procedure and controls for livestock production
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data



<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• common livestock diseases and clinical signs</li> <li>• quarantine policies and herd/flock health status</li> <li>• relevant industry, environmental and quality standards (inc ISO9002:1094)</li> <li>• animal welfare codes of practice and procedures</li> <li>• differences between a range of production systems</li> <li>• types of sheds and production systems</li> <li>• livestock husbandry and management practices</li> <li>• environmental controls and codes of practice applicable to the enterprise</li> <li>• relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors</li> <li>• relevant OHS legislation, regulations and codes of practice.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine measurable indicators, specifications and targets for the intensive enterprise</li> <li>• assess the resources required for unit operations</li> <li>• establish processes/strategies, procedure and controls to meet quality assurance requirements and production targets</li> <li>• implement quarantine procedures and monitor disease status of stock</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>operate effluent storage and disposal systems</li> <li>monitor the production system for output, QA compliance, costs and profitability.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Facilities and production systems may include:	<ul style="list-style-type: none"> <li>those of intensive pigs, poultry and lot fed ruminants.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK406A Oversee animal marking operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers overseeing animal marking operations and defines the standard required to: co-ordinate staff, equipment and resources; determine efficient animal grouping and sequencing of marking operations; prepare and implement a work plan for marking; monitor the health and well-being of animals after marking; maintain accurate data records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to livestock producers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare marking plan	<p>1.1. Information and instructions with regard to marking operations are obtained and clarified in line with enterprise objectives.</p> <p>1.2. The timing of marking reflects the calendar of operations and minimises growth checks.</p> <p>1.3. Animal groupings, marking operations and sequencing are determined.</p> <p>1.4. Resource requirements are assessed and determined within enterprise budgetary constraints.</p> <p>1.5. Marking plan is prepared and is sufficiently flexible to adapt to changes during marking operations.</p>
2. Co-ordinate and arrange resources	<p>2.1. Suitable locations for undertaking marking operations and facilities are located and arranged to meet requirements of marking schedules.</p> <p>2.2. Equipment, materials and health treatments are arranged and provided on site.</p> <p>2.3. Staff are confirmed and provided with safety, task and operational briefings.</p> <p>2.4. Safe and risk assessed workplace environment is maintained in line with Occupational Health and Safety (OHS) and enterprise requirements.</p> <p>2.5. Marking operations are timed and supervised to ensure mistreatment is minimised and animal welfare requirements are met.</p>
3. Monitor marking operation	<p>3.1. Implementation of marking plan is monitored for efficiency and effectiveness in terms of achieving enterprise objectives.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Condition and health status of animals is monitored and abnormalities are reported in line with enterprise and animal welfare requirements.</p> <p>3.3. Effective worksite communication is maintained to ensure efficient workflow and address immediate problems.</p> <p>3.4. Data with regard to operational processes and outcomes are documented for continual assessment and management planning.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and oversee the implementing of safe operating procedures
- plan, cost and schedule resource requirements
- develop and implement an operational strategy
- prioritise and schedule marking operations
- determine and allocate staff roles and responsibilities
- manage staff and operations
- establish and monitor performance targets
- implement safe and positive environmental workplace policies
- document and prepare written plans and reports for the understanding of staff and management
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- management processes and procedures
- cost analysis techniques

**REQUIRED SKILLS AND KNOWLEDGE**

- systems and procedures for planning and developing
- marketing and production plans
- codes of practice with regard to animal marking and animal health and welfare
- veterinary medicines and administration
- animal marking methods and procedures
- OHS and animal welfare legislation, codes of practice and enterprise requirements
- animal behaviour and nutritional requirements
- environmental codes of practice associated with animal production.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- co-ordinate staff, equipment and resources
- determine efficient animal grouping and sequencing of marking operations
- prepare and implement a work plan for marking
- monitor the health and well-being of animals after marking
- maintain accurate data records.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• pigs</li> <li>• alpacas</li> <li>• deer</li> <li>• beef cattle</li> <li>• dairy cattle.</li> </ul>
Marking may include:	<ul style="list-style-type: none"> <li>• castrating</li> <li>• tagging</li> <li>• tailing</li> <li>• pizzle dropping</li> <li>• notching</li> <li>• vaccinating</li> <li>• tattooing</li> <li>• micro-chipping</li> <li>• branding</li> <li>• dehorning</li> <li>• trimming eye teeth</li> <li>• identifying abnormalities or faults and marking animals for culling.</li> </ul>

## Unit Sector(s)

Unit sector	Livestock
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## Co-requisite units

Co-requisite units	



## Competency field

Competency field	
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## AHCLSK407A Plan and monitor intensive production systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning and monitoring intensive production systems and defines the standard required to: analyse key production data, herd/flock information and market requirements; set production targets and identify resources needed to achieve them; provide accommodation that meets animal welfare and production requirements; develop feeding plans and evaluate alternatives for feed purchasing, milling and distribution; determine work responsibilities and staffing requirements; remove waste and handle effluent in line with environmental requirements and legislation; and monitor and review intensive production operations.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes sourcing relevant information and planning for intensive production of livestock.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Source information for input to production system planning	<p>1.1.Livestock production plan is consulted for details of current period planning, organisation requirements and market expectations.</p> <p>1.2.Key production data is analysed to establish unit performance.</p> <p>1.3.Information regarding the characteristics of the herd/flock under production is accessed and analysed.</p> <p>1.4.Organisation and regulatory requirements that impact on the production system are accessed.</p> <p>1.5.Market information regarding quality, standards and trends is accessed for input to the planning process.</p>
2. Plan for production	<p>2.1.Target unit performance is determined through a comparison with organisation and industry standards.</p> <p>2.2.Production targets are established and confirmed using data and information from its livestock production.</p> <p>2.3.Resources required to achieve production targets are determined in terms of personnel, equipment and materials.</p> <p>2.4.Staff and contractors are organised and/or engaged to suit the production plan and its targets.</p> <p>2.5.Other resources are selected and ordered according to organisational guidelines.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Plan for animal welfare needs	<p>3.1. Accommodation requirements are calculated from livestock numbers, market requirements and regulations.</p> <p>3.2. Alternative construction and equipment system options are evaluated and optimal choice selected.</p> <p>3.3. Materials chosen for construction are selected according to animal welfare needs, cost and efficiency.</p> <p>3.4. Aspects of the internal environment are determined according to all welfare needs, efficiency of systems and market expectations.</p> <p>3.5. Feed requirements are selected based on its end use of the animals, the size of the herd/flock, and the suitability of the range of available products.</p>
4. Plan for environmental and waste management requirements	<p>4.1. Accommodation requirements are calculated from livestock numbers, market requirements and regulations.</p> <p>4.2. Alternative construction and equipment systems options are evaluated and optimal choice selected.</p> <p>4.3. Materials chosen for construction are selected according to animal welfare needs, cost and efficiency.</p> <p>4.4. Aspects of the internal environment are determined according to all welfare needs, efficiency of systems and market expectations.</p> <p>4.5. Feed requirements are selected based on its end use of the animals, the size of the herd/flock, and the suitability of the range of available products.</p>
5. Determine scheduling and key responsibilities	<p>5.1. Scheduling for the production plan is determined taking the range of seasonal, geographic and resourcing factors into consideration.</p> <p>5.2. Key responsibilities for specific implementation processes are determined.</p> <p>5.3. Record keeping requirements are determined and procedures are put in place to ensure compliance with the range of applicable regulations.</p> <p>5.4. The plan, including scheduling and key responsibilities, is clearly documented.</p> <p>5.5. The plan includes the type, format, frequency and detail of any reporting required by both managers and operators.</p>
6. Monitor and adjust	6.1. The effectiveness of the production plan is evaluated

ELEMENT	PERFORMANCE CRITERIA
production plan strategies	<p>at key points and adjustments made as necessary.</p> <p>6.2.Environmental impacts and Occupational Health and Safety (OHS) hazards relating to the production plan are identified, monitored and assessed throughout the implementation process.</p> <p>6.3.Modifications are made to the plan as and when necessary for environmental, OHS, resourcing or effectiveness reasons.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- observe, identify and react appropriately to environmental implications and OHS hazards
- work planning
- assess, then adopt profitable innovations
- implement procedures to meet OHS and animal welfare requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- sustainable effluent management practices
- environmental, welfare and OHS legislation, codes of practice and enterprise requirements
- livestock husbandry and management practices
- sound management practices and processes to minimise noise, odours and debris from the livestock operations

**REQUIRED SKILLS AND KNOWLEDGE**

- disposal of waste and manure in compliance with legislation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- analyse key production data, herd/flock information and market requirements
- set production targets and identify resources needed to achieve them
- provide accommodation that meets animal welfare and production requirements
- develop feeding plans and evaluate alternatives for feed purchasing, milling and distribution
- determine work responsibilities and staffing requirements
- remove waste and handle effluent in line with environmental requirements and legislation
- monitor and review intensive production operations.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of production may include:	<ul style="list-style-type: none"> <li>intensive pig and poultry production systems.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLSK408A Pregnancy test animals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers pregnancy testing animals and defines the standard required to: draft animals and source information on joining to assist in pregnancy testing; restrain each animal for pregnancy testing using humane methods and facilities; detect pregnancy through several manually determined key indicators; maintain records of pregnancy testing; monitor animals after pregnancy testing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes testing animals for pregnancy. Veterinary advice may need to be sought in some cases where pregnancy symptoms are difficult to detect, or animals are to be identified as pregnant for sale.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for pregnancy diagnosis procedures	<p>1.1.Pregnancy testing preparations including the preparation of relevant documentation are completed according to organisation requirements and procedures.</p> <p>1.2.Animals are mustered, yarded and safely restrained in line with organisation policy.</p> <p>1.3.Animals to be tested are drafted according to breeding or management program requirements.</p> <p>1.4.Physical and human resources for pregnancy testing are assembled according to organisation policy.</p>
2. Arrange support for pregnancy testing procedures	<p>2.1.Pregnancy testing supplies and equipment are assembled for the pregnancy testers use.</p> <p>2.2.Individual animals are separated and restrained for veterinary treatment or examination.</p> <p>2.3.All handling and testing of animals is undertaken with strict adherence to the Code of Animal Welfare.</p> <p>2.4.Records of pregnancy testing operations are completed in line with established procedures and outcomes reported to management as required.</p>
3. Carry out manual pregnancy diagnosis procedures	<p>3.1.Individual animals are humanely restrained for testing and individual breeding records checked.</p> <p>3.2.Personal protective equipment, including appropriate hand protection, is fitted and used according to organisation policy.</p> <p>3.3.While working with animals, Occupational Health and Safety (OHS) hazards are continually identified, risks assessed and suitable controls implemented.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4.Rectal area of animal is cleaned as required prior to examination.</p> <p>3.5.Rectal examination/palpation is humanely carried out to establish pregnancy or non-pregnancy from a range of key indicators.</p> <p>3.6.Strict hygiene procedures are implemented between individual animals in line with organisation and industry requirements.</p> <p>3.7.Records are kept and non pregnant animals identified according to organisation requirements.</p> <p>3.8.Other indicators of animal health are observed and noted for input to herd health management.</p>
4. Carry out post pregnancy testing clean up procedure	<p>4.1.Animals diagnosed as pregnant or not pregnant are accurately identified according to the requirements of the organisation.</p> <p>4.2.All animals are consigned to their destination or returned to paddocks/pens in line with organisation needs.</p> <p>4.3.Debris and veterinary medicine containers from pregnancy testing operations are disposed of in full consideration of environmental considerations and controls.</p> <p>4.4.Regular monitoring of animals post testing is carried out to ensure that no evidence of physical damage or injury is evident.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- provide empathic care for animals during husbandry operations
- report clearly, accurately and in a timely fashion on the health and welfare of the animals
- accept advice and instruction
- work effectively and safely to accurately carry out manual pregnancy diagnosis

## REQUIRED SKILLS AND KNOWLEDGE

with safety and nil damage to animals or personnel

- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- the physiology of reproduction of the animal
- the stages of parturition in animals
- basic animal reproductive physiology
- animal reproductive systems
- animal embryological development
- relevant zoonoses
- OHS and animal welfare legislation, codes of practice and enterprise procedures
- recording and reporting systems used in conjunction with pregnancy diagnosis and animal breeding programs.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- draft animals and source information on joining to

<b>EVIDENCE GUIDE</b>	
	assist in pregnancy testing <ul style="list-style-type: none"> <li>• restrain each animal for pregnancy testing using humane methods and facilities</li> <li>• detect pregnancy through several manually determined key indicators</li> <li>• maintain records of pregnancy testing</li> <li>• monitor animals after pregnancy testing.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pregnancy testing may include:	<ul style="list-style-type: none"> <li>• the manual pregnancy testing of cattle and horses. This standard does not cover pregnancy scanning.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK409A Supervise animal health programs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising animal health programs and defines the standard required to: determine animal health issues; prepare and implement a work plan for animal health; coordinate staff, equipment and resources to supervise animal health programs; monitor the health and wellbeing of animals; and maintain accurate data records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managers of animal production enterprises and covers the process of implementing and monitoring animal health programs.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor and assess animal health	<p>1.1.Regular observations are taken to assess animals' health according to the requirements of the organisation.</p> <p>1.2.Symptoms of ill health and common diseases or parasite infestations are recognised and reported.</p> <p>1.3.Sampling is carried out and testing arranged for internal parasites or diseases.</p> <p>1.4.Unusual or suspected exotic disease outbreaks are referred for veterinary advice immediately.</p> <p>1.5.Notifiable diseases are reported and all restrictions and treatment requirements are complied with.</p> <p>1.6.Animal health status is recorded according to enterprise requirements.</p> <p>1.7.Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.8.Suitable personal protective equipment (PPE) is selected, used and maintained.</p> <p>1.9.Animal welfare status is recorded according to enterprise and legislative requirements.</p> <p>1.10. Deceased animals are disposed of according to organisational and environmental policies.</p>
2. Implement preventative health strategies	<p>2.1.Risks to animal health are identified, and strategies sourced, from the production plan.</p> <p>2.2.A vaccination program is developed and implemented to control clostridial and other diseases.</p> <p>2.3.Livestock prone to internal parasite build up are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>identified and the timing of treatments is planned out.</p> <p>2.4.Strategies based around pasture spelling and rotations of different classes of livestock are implemented.</p> <p>2.5.The health treatments for animals are planned using an integrated approach.</p> <p>2.6.Drenches, vaccines and other stock medications are used according to manufacturer instructions and withholding periods are complied with.</p> <p>2.7.Drench groups are rotated to minimise the risk of parasite resistance.</p>
3. Record and review the animal health program	<p>3.1.All treatments are recorded and an inventory is maintained of stock medicines.</p> <p>3.2.Health issues are recorded and the results of tissue, organ and/or blood samples are recorded if applicable.</p> <p>3.3.Records of health tests and animal health treatments, including animal production records, are used to review the animal health plan.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and oversee safe work practices
- detect possibility of disease through parameters such as behaviour or length of time required to eat food
- recognise clinical symptoms (normal vs. abnormal)
- recognise abnormal physiological and behavioural signs in livestock
- undertake post-mortems and collect tissue, organ and blood samples
- administer vaccines and medications to animals
- recognise abnormal behavioural signs
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks



## REQUIRED SKILLS AND KNOWLEDGE

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- storage conditions for a range of chemicals, including veterinary chemicals
- types of vaccines and how they work
- zoonotic diseases and mode of transmission
- animal anatomy and physiology for post-mortems, and the collection of tissue, organ and blood samples
- environmental controls and codes of practice applicable to the organisation, including biosecurity
- sound management practices and processes to minimise noise, odours, and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management, animal diseases and animal welfare
- relevant OHS legislation, regulations and codes of practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine animals health issues
- prepare and implement a work plan for animal health

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• coordinate staff, equipment and resources to supervise animal health programs</li> <li>• monitor the health and wellbeing of animals</li> <li>• maintain accurate data records.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animal health programs may include:	<ul style="list-style-type: none"> <li>• those for sheep</li> <li>• goats</li> <li>• pigs</li> <li>• horses</li> <li>• alpacas</li> <li>• deer</li> <li>• poultry</li> <li>• beef and dairy cattle.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK410A Supervise feedlot operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising feedlot operations and defines the standard required to: discuss feed and feeding regime with nutritionist and managers; select, purchase and induct livestock for feedlotting; administer preventative health treatments and monitor health and welfare; assess livestock performance on weight gains and meeting carcass criteria; diagnose feeding problems and remove animals for treatment; review procedures in response to feedback from slaughter point and customers; complete the required records of feed use and livestock performance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to feedlot supervisors whose job role includes recommending the suitability of livestock for feedlotting and subsequently preparing rations and monitoring the performance of feedlot livestock.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select feedlot livestock	<p>1.1. Organisational plans and management are consulted regarding the breeds, classes and numbers of livestock to be obtained for feedlotting.</p> <p>1.2. Livestock for feedlotting are selected and purchased according to management requirements and organisational practice.</p> <p>1.3. Purchased livestock are inspected on delivery to the organisation for health, form, and quality.</p> <p>1.4. All records required by the organisation and regulations to be kept are prepared and maintained accurately, and stored appropriately.</p>
2. Oversee the preparation of rations for feedlot livestock	<p>2.1. Nutritional need of livestock is identified from information available and class of livestock.</p> <p>2.2. Expert nutritional advice is sourced from the appropriate government, industry or organisational sources.</p> <p>2.3. Ingredients are selected that provide for the identified nutritional need of livestock.</p> <p>2.4. Suppliers of ingredients are selected on the basis of quality and cost of feed.</p> <p>2.5. Quantities of individual ingredients are determined from the production program in conjunction with advice from other available information and expert/supplier advice.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.6. Feeding is scheduled and responsibility for feeding allocated in line with the production program and other operations occurring within the shed.</p> <p>2.7. Method(s) of providing feed to livestock is identified from production plan and confirmed with supplier of ingredients and other expert advice.</p>
3. Supervise feeding of feedlot livestock	<p>3.1. Mixing of feed is organised to suit the needs of the livestock, the identified nutritional requirements, and the equipment available within the organisation.</p> <p>3.2. Calibration of measuring equipment and calculation of quantities is supervised at regular intervals.</p> <p>3.3. Checks are made to ensure that suitable personal protective equipment is selected, used and maintained.</p> <p>3.4. Occupational Health and Safety (OHS) hazards are identified, assessed, and responsible action is taken throughout the preparation and feeding operations.</p> <p>3.5. Rations are supplied to the livestock according to the production program and schedules devised.</p>
4. Monitor performance of feedlot livestock	<p>4.1. The health and wellbeing of the livestock is monitored and any reaction to a change in feed or schedules is noted and reported upon.</p> <p>4.2. Any change in production levels as a direct result of changes to feed types, ingredients or schedules is monitored and reported upon.</p> <p>4.3. Advice is given to operational staff during the feeding operation when requested, or when the need is observed.</p> <p>4.4. All waste materials and substances are removed from the site and stored, or disposed of according to legislative and enterprise requirements.</p> <p>4.5. Animals are dispatched for slaughter with required identification and documentation.</p> <p>4.6. Feedback is gathered and analysed from slaughter point and downstream customers.</p> <p>4.7. Documentation is collated and stored according to the requirements of the organisation.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and oversee safe work practices
- discuss feed and nutritional content with nutritionist and managers
- identify a range of raw ingredients for feed mixes
- assess the suitability of livestock for feeding to meet a market specification
- assess ration performance used on weight gains, feed times, and make adjustments to ensure required performance parameters are maintained
- diagnose feed toxicities
- assess live animals for carcass characteristics and suitability for markets
- apply feed rates to nutritional profiles
- perform basic troubleshooting for animal health and welfare
- supervise staff
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- control of common diseases and preventative measures including the placement of medication in feed
- rationale for a range of feeding techniques and methods
- dietary and nutritional requirements of different livestock classes
- growth and development in livestock
- physiology of digestion and relationship to feed inputs
- appropriate legislative requirements, manufacturers instructions and enterprise procedures/instructions
- organisational and industry guidelines for the preparation of feed and mixes
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, the environment and the use and control of machinery and equipment
- cleaning and storage of machinery, equipment and materials

**REQUIRED SKILLS AND KNOWLEDGE**

- seasonal ingredient variations
- factors adversely affecting meat quality.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- discuss feed and feeding regime with nutritionist and managers
- select, purchase and induct livestock for feedlotting
- administer preventative health treatments and monitor health and welfare
- assess livestock performance on weight gains and meeting carcass criteria
- diagnose feeding problems and remove animals for treatment
- review procedures in response to feedback from slaughter point and customers
- complete the required records of feed use and livestock performance.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Supervisory activities may include:	<ul style="list-style-type: none"> <li>those associated with all types and sizes of cattle, sheep and goat feedlots.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCLSK411A Supervise natural mating of livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising natural mating of livestock and defines the standard required to: select appropriate joining areas; carry out physical examination of sires and females for health and breeding soundness; draft livestock into appropriate ratios to encourage optimum mating; monitor mating activity and returns to oestrus; identify and implement remedial action as required; record details of mating.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to livestock producers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare animals for breeding	<p>1.1. Joining areas are identified and prepared using a range of selection factors.</p> <p>1.2. Animals are handled safely and humanely to minimise stress and discomfort.</p> <p>1.3. Animals are drafted according to mating plan and in appropriate ratios to encourage optimum mating.</p> <p>1.4. Siring requirements are determined and met in advance of mating.</p> <p>1.5. Animals are prepared and examined for mating.</p>
2. Implement breeding program and monitor mating	<p>2.1. Veterinary advice is accessed according to animals' needs, enterprise requirements and industry practice.</p> <p>2.2. Dates and timing of breeding are identified and scheduled</p> <p>2.3. Physical examination of animals is carried out to evaluate health and welfare status of animal.</p> <p>2.4. Behaviour of animals during joining is observed to identify necessity of intervention and assistance.</p> <p>2.5. Assistance is provided as required.</p>
3. Complete breeding program	<p>3.1. Where required, sires are removed from herd, mob or flock.</p> <p>3.2. Mating activity is monitored to ensure successful joinings have occurred, to identify problems and to effect remedial action as required.</p> <p>3.3. Pregnancy testing is carried out to determine the effectiveness of joining</p> <p>3.4. Data is recorded and documented to develop history of mating performance and outcomes.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.5. Industry information of emerging and prevailing practices are researched and compared with enterprise practice to recommend future improvements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and oversee safe systems of work
- prepare animals for joining
- monitor joining activity
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- mating behaviour
- anatomy and physiology of the reproductive organs and reproductive process in animals
- live weights and conditions for mating
- environmental influences and their effects on joining
- ovulation stimulation and synchronisation
- enterprise's breeding programs and selection criteria (EBV)
- breeding principles
- pregnancy testing
- animal health and abnormalities
- enterprise and industry identification system for animals
- relevant State/Territory legislation, regulations and Codes of Practice with regard

**REQUIRED SKILLS AND KNOWLEDGE**

- to workplace Occupational Health and Safety (OHS) and animal welfare
- legislative and regulatory controls with regard to breeding programs
  - enterprise and industry policies with regard to recording and reporting requirements
  - identification of veterinary and non-veterinary procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select appropriate joining areas
- carry out physical examination of sires and females for health and breeding soundness
- draft livestock into appropriate ratios to encourage optimum mating
- monitor mating activity and returns to oestrus
- identify and implement remedial action as required
- record details of mating.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• pigs</li> <li>• horses</li> <li>• alpacas</li> <li>• deer</li> <li>• beef and dairy cattle.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCLSK412A Arrange livestock purchases

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers arranging livestock purchases and defines the standard required to: monitor livestock price trends and budgeted returns; identify selection criteria to meet enterprise requirements and set bid offer; check the health status and records of the intended purchase; arrange and prepare for correct and timely transport; and quarantine purchased livestock and isolate sick and distressed animals.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to livestock producers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify purchasing opportunities	<p>1.1.Number, type and breed of livestock to be purchased are identified and confirmed.</p> <p>1.2.Agents and sellers of livestock are researched and reviewed to determine appropriate sources.</p> <p>1.3.Sales schedules for livestock types are monitored and identified.</p> <p>1.4.Purchasing prices are researched and evaluated to identify comparative values between sellers and agents.</p>
2. Inspect livestock condition	<p>2.1.Health status of livestock is checked using accepted methods.</p> <p>2.2.Records and documents relating to livestock histories are obtained and verified.</p> <p>2.3.Suitability of livestock for purchasing purposes is assessed.</p> <p>2.4.Prices are assessed against livestock condition and enterprise requirements to identify appropriate purchasing values.</p>
3. Complete documentation	<p>3.1.Insurance requirements for livestock are sourced and completed.</p> <p>3.2.Purchases are confirmed at realistic price levels according to estimated livestock values.</p> <p>3.3.Documentation details are accurate and exchanged promptly with seller.</p>
4. Organise transportation	<p>4.1.Carriers appropriate to livestock type and quantity are identified and engaged on suitable terms.</p> <p>4.2.Timing and dates of transportation and delivery are</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>arranged with transporter, vendors and agents.</p> <p>4.3. Special needs of livestock are assessed and facilities prepared to ensure timely pick up.</p> <p>4.4. Animal health checks on arrival are undertaken according to enterprise and legislative requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- arrange livestock purchases
- research and determine best prices
- organise transport
- negotiate on price and terms
- assess livestock and condition
- arrange transport and insurance
- check on health status and condition of livestock
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- livestock assessment
- livestock selling procedures
- matching livestock to feed available
- livestock transportation
- animal health procedures
- livestock insurance

**REQUIRED SKILLS AND KNOWLEDGE**

- relevant legislative health and Occupational Health and Safety (OHS) requirements especially as they relate to livestock sales, livestock products, animal transportation for local and export markets, and safe livestock handling techniques
- enterprise and industry policies and codes of practice with regard to livestock sales, livestock transportation, and recording and reporting requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor livestock price trends and budgeted returns
- identify selection criteria to meet enterprise requirements and set bid offer
- check the health status and records of the intended purchase
- arrange and prepare for correct and timely transport
- quarantine purchased livestock and isolate sick and distressed animals.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• beef cattle</li> <li>• alpacas</li> <li>• deer</li> <li>• dairy cattle</li> <li>• pigs.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCLSK413A Design livestock handling facilities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers designing livestock handling facilities and defines the standard required to: assess the need for livestock handling facilities; determine the site and design the handling facility for the site; incorporate animal welfare requirements and movement principles into design; identify appropriate safe workplace procedures for livestock and personnel; and estimate cost of building the designed facilities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes planning and designing handling and/or accommodation facilities for livestock.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine requirements	<p>1.1. Requirements for livestock handling facilities are assessed and clarified according to enterprise objectives.</p> <p>1.2. Cost structures and timelines are negotiated and confirmed within enterprise budgetary constraints.</p> <p>1.3. Plans are obtained for livestock handling facilities from a variety of sources and are assessed in relation to enterprise requirements.</p>
2. Undertake a site analysis	<p>2.1. Location of new or existing site is inspected and physical elements and features of the site are recorded for assessment of suitability.</p> <p>2.2. Surveys to be undertaken are specified and tolerances determined according to enterprise requirements.</p> <p>2.3. Site preparation requirements are assessed and determined according to enterprise policies and site parameters.</p>
3. Prepare a design brief	<p>3.1. Plans are modified appropriate to the individual site and reflect enterprise objectives.</p> <p>3.2. Options to modify existing facilities or establish alternative handling operations are assessed and quotes obtained.</p> <p>3.3. Occupational Health and Safety (OHS) codes of practice and enterprise quality assurance requirements are identified and incorporated into the plan.</p> <p>3.4. Legal requirements and constraints on development</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>processes are identified.</p> <p>3.5.Design brief is prepared and consultation is undertaken to establish agreement on options and approaches for development.</p>
4. Develop a final plan	<p>4.1.Recommendations are prepared based on the analysis of data and enterprise instructions.</p> <p>4.2.Authorisations and approvals required for implementation of the plan are obtained.</p> <p>4.3.Detailed plan is produced with consideration for safety, environmental implications and meeting enterprise objectives.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- evaluate and recommend alternative options
- identify appropriate safe workplace procedures for livestock and personnel
- regularly access industry information databases to maintain currency with industry developments
- incorporate safety considerations in all aspects of design
- develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- livestock behaviour and design interactions
- enterprise operations
- costing alternatives

**REQUIRED SKILLS AND KNOWLEDGE**

- livestock handling and/or accommodation facilities and their uses
- site analysis and issues
- industry and legislative requirements for the planning and establishment of livestock handling facilities
- OHS issues and legislative requirements
- codes of practice with regard to environmental protection.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess the need for livestock handling facilities
- determine the site and design the handling facility for the site
- incorporate animal welfare requirements and movement principles into design
- identify appropriate safe workplace procedures for livestock and personnel
- estimate cost of building the designed facilities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock handling facilities may include:	<ul style="list-style-type: none"> <li>• fixed and portable yards</li> <li>• drafting gates</li> <li>• livestock dips</li> <li>• laneways</li> <li>• gates</li> <li>• loading ramps</li> <li>• races</li> <li>• pens</li> <li>• showers</li> <li>• adjacent fencing.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCLSK414A Arrange transport for farm produce or livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers arranging transport for farm produce or livestock and defines the standard required to: source and negotiate an appropriate transportation agreement; obtain permits and clearances; ensure the accurate and timely completion of relevant documentation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes arranging and coordinating the transport of farm produce, fodder or livestock.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Confirm transport requirements	<p>1.1.Transport requirements are confirmed according to enterprise marketing and production plans.</p> <p>1.2.The amount and type of farm produce and/or number of livestock to be transported, the pick up or delivery requirements, and the route to be taken is confirmed according to enterprise instructions.</p> <p>1.3.Legislative requirements associated with the transport farm produce or livestock are identified and complied with.</p>
2. Prepare transport plan	<p>2.1.Equipment, vehicles and resources required to transport farm produce or livestock are determined and arranged according to enterprise requirements.</p> <p>2.2.Relevant authorisations, permits or animal identification requirements are identified, sought and obtained according to legislative requirements.</p> <p>2.3.Transport arrangements include pick up and delivery details, and any requirement to unload livestock to allow for spelling, are documented.</p> <p>2.4.Conditions to be maintained for produce, including separation for product integrity, are documented.</p> <p>2.5.Compensation or penalties for damage to produce or livestock is negotiated, or transport insurance is obtained.</p>
3. Source and select carrier	<p>3.1.Carriers are sourced to ascertain availability, terms and conditions in relation to transport and enterprise requirements.</p> <p>3.2.Carriers who satisfy the transport requirements are contacted to negotiate suitable costs, terms and</p>

ELEMENT	PERFORMANCE CRITERIA
	cartage conditions. 3.3. Carrier is selected and negotiations are confirmed with an agreement and insurance arrangements prepared accordingly.
4. Co-ordinate transport arrangement	4.1. Relevant documentation is complete, accurate and according to industry, legislative and enterprise requirements. 4.2. Operational staff and contractors are communicated with regularly to confirm arrangements are clear and understood. 4.3. Scheduling arrangements and preparation of farm produce or livestock in readiness for transportation are checked and confirmed with enterprise personnel.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- organise quotes and negotiate effective transport contracts
- co-ordinate transport operations
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- industry and legislative requirements for the transport of grain and livestock
- safety requirements for livestock and personnel
- animal welfare and Occupational Health and Safety (OHS) legislative requirements
- transportation availability and costing alternatives

**REQUIRED SKILLS AND KNOWLEDGE**

- environmental codes of practice and management practices, and processes to minimise noise, odours, and debris from transport operations.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- source and negotiate an appropriate transportation agreement
- obtain permits and clearances
- ensure the accurate and timely completion of relevant documentation.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Transport activities may include:

- the transport of a range of farm produce, fodder and livestock.

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCLSK415A Oversee alpaca farm activities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers overseeing alpaca farm activities and defines the standard required to: complete appropriate forms and records; manage nomination of alpacas for sale, exhibition and competition; maintain operational and breeding records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes overseeing activities on an alpaca farm, particularly maintaining the farms administrative affairs.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Maintain farm records	<p>1.1.Information required to successfully manage farm activities is identified and obtained.</p> <p>1.2.Record keeping and information management systems in place within farm are maintained and managed to ensure that sound records may be accessed at any time.</p> <p>1.3.Required pedigrees and histories are obtained from, or supplied to, relevant controlling body.</p> <p>1.4.Alpaca transfer and registration forms are completed and forwarded to relevant controlling body.</p>
2. Identify and nominate alpacas for sale, exhibition or competition	<p>2.1.Individual alpacas are considered for sale, exhibition or competition according to enterprise objectives and procedures.</p> <p>2.2.Appropriate entry forms are obtained, completed and submitted for specified activity and any required entry fees are paid.</p>
3. Oversee alpaca farm activities	<p>3.1.Risks associated with alpaca farm activities are identified. Site quarantine and other biosecurity protocols, including hygiene and cleanliness of work areas, are applied to all animals and activities as appropriate.</p> <p>3.2.Services to be provided for clients' animals are agreed with each client and documented.</p> <p>3.3.Plan is developed and agreed with each client for management of identified risks in relation to services provided.</p> <p>3.4.Alpacas arriving at the property are identified in line</p>

ELEMENT	PERFORMANCE CRITERIA
	with established farm protocols.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe work procedures
- keeping alpaca farm records that comply with requirements of controlling body
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant legislation and regulations relating to Occupational Health and Safety (OHS), waste and environment management, animal health and welfare, and employment of staff and contractors
- relevant state and territory legislation, regulations and codes of practice with regard to workplace occupational health and safety, and the use and control of machinery and equipment
- requirements and procedures laid down by the breed society for recording and communicating farm records
- risk management procedures required when providing services to clients' animals.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• complete appropriate forms and records</li> <li>• manage nomination of alpacas for sale, exhibition and competition</li> <li>• maintain operational and breeding records.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Activities may include:	<ul style="list-style-type: none"> <li>• all operational and breeding activities, and the associated records, for alpaca production.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSK416A Identify and select animals for breeding

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers identifying and selecting animals for breeding and defines the standard required to: determine selection criteria according to enterprise goals; implement strategies to cull animals for conformation and/or productivity; apply selection criteria to identify animals to be retained for breeding; select animals that conform to the requirements of a breeding strategy.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervisors and managers on livestock farms.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify breeding selection criteria	<p>1.1. Enterprise production records are referenced and enterprise production goals are reaffirmed in the breeding program.</p> <p>1.2. The heritabilities of the desired performance characteristics are sourced and the potential for genetic improvement is identified.</p> <p>1.3. Criteria for selection are determined and recorded in the production plan.</p>
2. Select animals for breeding	<p>2.1. Animals are accurately assessed against selection criteria.</p> <p>2.2. Culling and replacement practices are determined and organised to improve the performance of the enterprise breeding program.</p> <p>2.3. Selected livestock are checked and monitored to ensure condition and welfare status is maintained according to breeding program requirements.</p> <p>2.4. Tests are conducted using recognised industry methods and evaluated within appropriate breeding program parameters.</p>

## Required Skills and Knowledge

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>This section describes the skills and knowledge required for this unit.</p>
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## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- develop selection criteria for a breeding program
- select animals that have defects in conformation
- select animals that display characteristics associated with desirable genetic traits
- select animals according to a breeding program's selection criteria
- record performance information
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- principles of genetic selection for multi traits
- structural abnormalities and their potential impact on production
- correlated traits
- market requirements and related physical traits
- selection criteria to be applied
- strategies for animal selection - individual traits, measured performance, Estimated Breeding Value (EBVs), indexes
- environmental codes of practice with regard to livestock production.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine selection criteria according to enterprise goals</li> <li>• implement strategies to cull animals for conformation and/or productivity</li> <li>• apply selection criteria to identify animals to be retained for breeding</li> <li>• select animals that conform to the requirements of a breeding strategy.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• beef cattle</li> <li>• alpacas</li> <li>• deer</li> <li>• dairy cattle</li> <li>• pigs.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCLSK417A Manage horses for stock work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing horses for stock work and defines the standard required to: organise the safe handling and riding of horses; develop operational procedures to manage health and nutritional requirements of horses; identify ill or injured horses and consult with veterinarians; match horse type and experience to rider and task; supervise the horse work of other property personnel such as the breaking in by contractors.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to livestock managers who use horses for stock work. Coordinating specialist services from veterinarians and farriers may be required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Manage horse condition and health	<p>1.1.Organisation procedures for maintaining health are developed in consultation with other organisation staff, and using sound animal welfare guidelines.</p> <p>1.2.Soundness and working condition of organisation horses is assessed, reported and documented.</p> <p>1.3.Suitable personal protective equipment is selected, used and maintained.</p> <p>1.4.Unsound or unhealthy horses are identified, and reasons for their condition are established, if necessary, in consultation with available veterinary advice.</p>
2. Manage nutritional requirements of horses	<p>2.1.Daily and seasonal factors affecting the nutritional requirements of horses are determined for the organisation.</p> <p>2.2.Supplementary feeding programs are provided to organisation horses to ensure that their physical condition and health is optimised for stock work.</p> <p>2.3.Work programs for horses are related to, and balanced with, feeding program.</p> <p>2.4.Potential nutritional problems are anticipated and preventative or corrective action taken for supplementary feeding.</p>
3. Supervise horse work of other property personnel	<p>3.1.Horse selection matches rider ability and suitability for task.</p> <p>3.2.Planned horse activities are scheduled and details are communicated to appropriate staff.</p> <p>3.3.Horse work and breaking by contractors or staff is</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>co-ordinated, and supervision provided to ensure that horses and personnel work within their limitations.</p> <p>3.4. Inexperienced horses are provided with stock training by experienced riders.</p> <p>3.5. Occupational Health and Safety (OHS) hazards are identified, assessed, and planned activities provide for responsible actions by all people working with and around the horses.</p> <p>3.6. Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress.</p> <p>3.7. Work outcomes and horse costs and treatments are monitored and recorded in the organisation record.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- handle and ride horses safely
- assess the suitability and soundness of horses and match to riders
- train inexperienced horses
- provide feed for horses suitable for their stage and workload
- monitor the health and welfare of stock horses
- co-ordinate operations with horse breakers, vets, farriers and farm staff
- observe, identify and react appropriately to environmental implications and OHS hazards
- meet animal welfare legislative and enterprise requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

**REQUIRED SKILLS AND KNOWLEDGE**

abilities.

**Required knowledge**

- care and maintenance of hooves and the lower limb
- relevant legislation and regulations relating to OHS, contractor engagement and animal welfare
- environmental controls and codes of practice applicable to the business and to the seeding operations
- sound management practices and processes to minimise noise, odours, and debris.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- organise the safe handling and riding of horses
- develop operational procedures to manage health and nutritional requirements of horses
- identify ill or injured horses and consult with veterinarians
- match horse type and experience to rider and task
- supervise the horse work of other property personnel such as the breaking in by contractors.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of horses may include:	<ul style="list-style-type: none"> <li>all types and breeds of horses that are used for stock work.</li> </ul>
Type of conditions that impact on the welfare of horses may include:	<ul style="list-style-type: none"> <li>Lameness, sore eyes, sore mouth, girth galls, back conditions, mud, caked sweat or vegetable matter, damaged feet or lower limbs, and localised or systemic infections.</li> </ul>
Factors that effect nutrition and feeding programs may include:	<ul style="list-style-type: none"> <li>paddock conditions</li> <li>the presence of native and introduced species of grasses and legumes</li> <li>feeding, mastication, teeth problems</li> <li>hierarchical structures in the mob</li> <li>the differing demands of age, sex, work, growth and pregnancy</li> <li>mineral requirements and availability of roughage</li> <li>grains, supplements and greenfeed.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK501A Manage livestock production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of planning for livestock production, and then managing the implementation of such a plan, and defines the standard required to: establish livestock production targets and plans; monitor and manage animal health and nutrition; implement grazing strategies that match livestock needs and optimise pasture growth; maintain the farm natural resource base through sustainable practice; plan and monitor the finances of the production unit; maintain records of production.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farm managers with extensive or intensive livestock production enterprises.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan for production	<p>1.1.The capability of land resources for grazing is assessed and stock, fire, pasture or range management strategies are determined for each land capability class.</p> <p>1.2.The suitability and sustainability of water resources is assessed.</p> <p>1.3.Livestock production targets for each enterprise are established for the short and long term according to the farms marketing and business plans.</p> <p>1.4.Short and long term livestock production targets take breeding for herd/flock improvement into consideration, and are established in the light of the risk control factors that are applicable.</p> <p>1.5.Breeds and breeding programs are selected based on the production targets and the marketing requirements for the enterprise.</p> <p>1.6.Production facilities are selected and designed in a way that deals sensitively with identified waste products.</p> <p>1.7.Environmental controls are established and specifically included in the production plan.</p> <p>1.8.Occupational Health and Safety (OHS) hazards are identified, risks assessed, and suitable controls are incorporated into the production plan.</p> <p>1.9.A plan is prepared that documents the decisions taken, the assessments made, the targets established, and any specific issues that relate to environmental and OHS risks.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>1.10. The plan includes the type, format, frequency and detail of any reporting required by both manager(s) and operators.</p>
<p>2. Plan for livestock needs</p>	<p>2.1. Feed requirements are determined for each age/sex category of herds and/or flocks.</p> <p>2.2. A feeding plan is determined for each livestock category based on a cost benefit analysis.</p> <p>2.3. Health strategies are devised to prevent and control disease in each herd and/or flock on the basis of a cost benefit analysis.</p> <p>2.4. Schedules are prepared for purchasing and using the products and services that are used in livestock production.</p> <p>2.5. Livestock production, harvesting, handling and transportation methods are determined from a cost benefit analysis.</p> <p>2.6. A livestock production plan is prepared that incorporates the calendar of operations for each enterprise production cycle, and any specific animal welfare issues.</p> <p>2.7. The plan includes the type, format, frequency and detail of any reporting required by both manager(s) and operators.</p>
<p>3. Seek information on innovations for existing or potential enterprises and farm activities</p>	<p>3.1. Sources of information on innovations are identified and accessed.</p> <p>3.2. Information on innovations is assessed to determine whether or not such innovations could be used in the present enterprise, or in a potential enterprise.</p> <p>3.3. Prepared production plans are amended to include innovations that are deemed suitable for use in the enterprise.</p>
<p>4. Test and adopt relevant innovations</p>	<p>4.1. Any people who may be involved in implementing the innovation or in planning for it are consulted, and the change is discussed with them.</p> <p>4.2. Innovations are tested on the farm to determine whether or not they are suitable, and whether they may be readily adapted to suit the circumstances of the business.</p> <p>4.3. Any OHS hazards or environmental risks that present during the trial phase are identified, assessed, and responsible action is taken.</p> <p>4.4. A decision is made about whether or not to adopt the</p>



ELEMENT	PERFORMANCE CRITERIA
	innovation, based on its costs and benefits and any implementation issues, including environmental and OHS considerations.
5. Implement, monitor and evaluate livestock production plans	<p>5.1. Production plans are implemented and monitored according to the calendar of operations.</p> <p>5.2. Production facilities are sited, erected and/or installed in a way that deals sensitively with identified waste products.</p> <p>5.3. Livestock growth/maturity or production is evaluated according to the planned targets and the marketing requirements.</p> <p>5.4. Flock/herd health is monitored and parasite and disease outbreaks are controlled quickly and effectively.</p> <p>5.5. Feed supplies are assessed, pasture or range condition and species composition are monitored, and stocking rates are varied to maintain optimum pasture and livestock health.</p> <p>5.6. Environmental impacts and OHS hazards relating to livestock production in the business are identified, monitored and managed to promote optimum pasture, livestock, and employee health.</p> <p>5.7. Physical and financial records are analysed and extractions taken from them to assess production performance, and to provide information for taxation purposes.</p> <p>5.8. The production performance of each enterprise is evaluated to determine whether or not they are sustainable and profitable, and to use in reviewing and revising production plans.</p>
6. Comply with legal requirements and regulation	<p>6.1. Information about the legal requirements and regulations that affect farm land ownership/possession and livestock production is obtained.</p> <p>6.2. Record keeping requirements are determined, and procedures are put in place to ensure compliance with the range of applicable regulations including taxation legislation.</p> <p>6.3. Permits are obtained from the relevant authorities for the transport and movement of livestock and equipment.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop livestock production plans
- supervise or perform livestock husbandry operations
- monitor health and welfare of animals
- manage all resources for a grazing enterprise
- observe, identify and react appropriately to environmental implications and OHS hazards
- analyse and assess the whole cost and benefit of specific situations
- establish processes/strategies, procedures and controls for livestock production
- assess land capability
- comply with legal and taxation requirements
- assess, and then adopt profitable innovations
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- livestock nutrition
- health and welfare of animals.
- livestock breeding, where appropriate
- livestock husbandry and management practices
- land capability
- sustainable land use principles and practices applicable in the region
- environmental controls and codes of practice applicable to the enterprise
- whole farm planning
- budgeting and financing for an enterprise
- cost benefit analysis,
- sound management practices and processes to minimise noise, odours and debris from the livestock operations

**REQUIRED SKILLS AND KNOWLEDGE**

- relevant legislation and regulations relating to soil and water degradation issues, animal health and welfare, and chemical use
- OHS legislation codes of practice and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- establish livestock production targets and plans
- monitor and manage animal health and nutrition
- implement grazing strategies that match livestock needs and optimise pasture growth
- maintain the farm natural resource base through sustainable practice
- plan and monitor the finances of the production unit
- maintain records of production.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• pigs</li> <li>• horses</li> <li>• alpacas</li> <li>• deer</li> <li>• goats</li> <li>• sheep.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCLSK502A Arrange marketing of livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of arranging for the marketing of livestock and associated products and defines the standard required to: identify appropriate markets and sales opportunities; calculate cost of production and target sale price; ensure that the product meets legislative and industry requirements for fitness for sale; select selling method and negotiate with brokers, sellers and agents; arrange transport/delivery.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to livestock production managers whose job role includes livestock marketing.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine sales characteristics and demand	<p>1.1.Potential purchasers and their purchasing requirements are identified from available market information.</p> <p>1.2.Current and recent sales are observed to monitor market trends and patterns.</p> <p>1.3.Regulatory requirements for market entry are monitored and reviewed to ensure quality assurance and fitness for sale.</p> <p>1.4.Ability to deliver product to meet market demand and requirements is determined.</p>
2. Sell product and arrange transport	<p>2.1.Sale logistics are researched and incorporated into marketing strategy.</p> <p>2.2.Sale outlets are consulted about market prospects and informed of preferred sale method.</p> <p>2.3.Transport arrangements are completed in time for sale, and facilities and product are prepared and organised.</p> <p>2.4.Negotiations with agents, brokers and buyers are completed.</p> <p>2.5.Payments are arranged and processed.</p>
3. Assess sales performance	<p>3.1.Sales data is obtained and analysed to facilitate monitoring of performance against marketing plan and enterprise requirements.</p> <p>3.2.Strengths and weaknesses of performance are analysed.</p> <p>3.3.Sales strategies are reviewed to maximise future returns.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4.Data is recorded for future reference according to enterprise, industry and legislative requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify appropriate markets and sales opportunities
- ensure that the product meets legislative and industry requirements for fitness for sale
- select sales outlets
- arrange transport
- monitor sales trends and analyse and record sales data to help improve future profit margins
- prepare marketing plans
- implement marketing plan
- implement sales and transport logistics for livestock product
- monitor the effectiveness of the sales strategy
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- market specifications
- quality assurance procedures and techniques
- sales outlets and dates
- transport systems
- price risk and sales strategies
- sales analysis

**REQUIRED SKILLS AND KNOWLEDGE**

- livestock preparation requirements
- sale methods
- communication techniques
- relevant legislative health and Occupational Health and Safety (OHS) requirements especially as they relate to livestock products, live animals, animal transportation for local and export markets, and safe livestock handling techniques
- enterprise and industry policies and codes of practice with regard to livestock sales transportation and recording and reporting requirements
- awareness and knowledge of Minimum Residue Levels (MRLs) and the variance between countries
- withholding periods after treatment.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify appropriate markets and sales opportunities
- calculate cost of production and target sale price
- ensure that the product meets legislative and industry requirements for fitness for sale
- select selling method and negotiate with brokers, sellers and agents
- arrange transport/delivery.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• beef cattle</li> <li>• alpacas</li> <li>• deer</li> <li>• dairy cattle</li> <li>• pigs.</li> </ul>
Sale outlets could include:	<ul style="list-style-type: none"> <li>• auction markets</li> <li>• contract sales</li> <li>• processors</li> <li>• deliverable future contracts</li> <li>• paddock/private and computer aided selling.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCLSK503A Develop and implement a breeding strategy

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the work required to: develop and implement a livestock breeding program and defines the standard required to develop a breeding objective; implement selection strategies for livestock; use industry programs to benchmark and identify sources of genetic material; monitor progress in a breeding program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managers of livestock enterprises responsible for selection and breeding programs and the use of resources appropriate to meet the breeding aims of the enterprise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess breeding requirements	<p>1.1. Breeding requirements are assessed and clarified according to enterprise objectives.</p> <p>1.2. Resources to support breeding requirements are identified and arranged.</p> <p>1.3. Breeding options are selected to optimise results and consistency according to enterprise objectives.</p> <p>1.4. Economic assessments are undertaken to establish the feasibility of the breeding objectives.</p> <p>1.5. Breeding program is formulated to meet enterprise objectives, and is sufficiently flexible to accommodate contingencies.</p>
2. Select livestock for breeding	<p>2.1. Selection criteria are determined for the visual and objective methods of selecting livestock based on heritabilities and economic returns of selection for traits.</p> <p>2.2. Culling and replacement practices are established to maintain the appropriate size and ratios of livestock.</p> <p>2.3. Rate of genetic gain is considered in determining herd or flock structure.</p> <p>2.4. Genetic material is sourced to optimise genetic gain within the herd or flock.</p> <p>2.5. Selected livestock are checked and monitored to ensure condition and welfare status meets breeding program requirements.</p> <p>2.6. Tests are conducted using recognised industry methods, and evaluated within appropriate breeding program parameters.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Monitor breeding program	3.1. Implementation of the breeding program is monitored for efficiency and effectiveness. 3.2. Changes necessary to achieve breeding aims are prioritised and implemented according to breeding program requirements. 3.3. Allocated resources are monitored and controlled within enterprise budgetary constraints. 3.4. Safe workplace and environmentally responsible practices are maintained according to OHS and enterprise requirements. 3.5. Relevant legislative requirements associated with livestock production are observed and complied with.
4. Evaluate breeding program	4.1. Breeding program processes and outcomes are reviewed and evaluated against enterprise objectives. 4.2. Performance of facilities, resources and equipment are evaluated for effectiveness and efficiency. 4.3. Effectiveness of selection criteria is evaluated for contribution to achievement of breeding aims and enterprise profitability. 4.4. Relevant information is documented for continual assessment to inform future practice.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- handle livestock safely and humanely
- supervise personnel
- plan and schedule resources
- interpret genetic reports and information
- develop selection criteria
- monitor genetic progress
- assess and review documentation and resource requirements
- maintain a safe and hazard-free workplace environment
- monitor and minimise impacts to the environment
- use literacy skills to fulfil job roles as required by the organisation. The level of

**REQUIRED SKILLS AND KNOWLEDGE**

skill may range from reading and understanding documentation to completion of written reports

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- basic genetic theories, including knowledge of genotype and phenotype, heritability of traits, dominant and recessive genes, generation interval and genetic correlation
- use of estimated breeding values and indexes in multi trait selection
- the application of basic genetic theory to the development of an enterprise's breeding strategy and its long term planning
- economic assessment of production characteristics
- testing procedures
- costs and benefits of alternative strategies.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- develop a breeding objective
- implement selection strategies for livestock
- use industry programs to benchmark and identify sources of genetic material

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• monitor progress in a breeding program.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• beef cattle</li> <li>• dairy cattle</li> <li>• goats</li> <li>• alpacas</li> <li>• pigs.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Livestock
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCLSK504A Develop livestock health and welfare strategies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to: design and implement preventative health treatment and programs for livestock and defines the standard required to identify common livestock diseases; develop prevention and treatment strategies for diseases; handle and use veterinary medicines; maintain records of animal health treatment; implement a risk management approach to managing animal health.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to livestock enterprise managers whose job role includes developing animal health and welfare strategies.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine health strategy for livestock	<p>1.1.Livestock condition is monitored and risks to health and welfare are identified based on property history, type of livestock and external disease threats.</p> <p>1.2.A program of monitoring parasite and disease status is implemented.</p> <p>1.3.Preventative health strategies based on integrated controls and production requirements are documented in a livestock health plan.</p> <p>1.4.Treatments based on veterinary medicines are integrated with other parasite and disease control strategies, if applicable.</p> <p>1.5.Treatment program, procedures and operations are planned to meet livestock health requirements, legislative and enterprise requirements.</p> <p>1.6.Facilities and equipment required to implement health strategy are identified and arranged according to industry standards and enterprise requirements.</p> <p>1.7.Staff is briefed with details of treatment programs, schedules and Occupational Health and Safety (OHS) issues.</p>
2. Implement treatment program	<p>2.1.Diagnosis of livestock condition is made systematically with reference to all symptoms and signs according to veterinary guidelines.</p> <p>2.2.Complex problems or signs of disease are referred for specialist advice and treatment.</p> <p>2.3.Treatment is planned and administered according to veterinary guidelines, legislative requirements, and animal welfare codes of practice.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4. Control measures are carried out as required to prevent the spread of communicable diseases.</p> <p>2.5. Procedures for reporting notifiable diseases are implemented according to legislative requirements.</p>
3. Manage livestock welfare	<p>3.1. Requirements of the animal welfare code of practice are integrated into the production plan and enterprise procedures.</p> <p>3.2. Livestock are continually monitored for access to feed and water and health status.</p> <p>3.3. Injured or sick animals are treated and monitored, or euthanased if required.</p> <p>3.4. Susceptible animals are provided with adequate shade and shelter.</p> <p>3.5. Welfare issues are documented and accurate records are maintained according to industry standards, legislative and enterprise requirements.</p>
4. Monitor health strategy	<p>4.1. Withholding periods for veterinary medicines are noted and complied with according to manufacturer's instructions and legislative requirements.</p> <p>4.2. Livestock are monitored post-treatment for evidence of treatment effectiveness and any further health problems.</p> <p>4.3. Treatment outcomes and processes are reviewed for effective management planning and best practice.</p> <p>4.4. Animal health procedures are evaluated in a review of the animal health plan.</p> <p>4.5. Travel and quarantine restrictions are identified and complied with.</p> <p>4.6. Surplus health supplies are stored according to manufacturer's recommendations and enterprise requirements.</p> <p>4.7. Data is documented and accurate records are maintained according to industry standards, legislative and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- plan and co-ordinate livestock health and welfare strategies
- develop a plan for health control and disease prevention
- diagnose health problems in livestock
- measure preventative health treatment dosage and calculate rates and schedule for treatment effectiveness
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- livestock health and abnormalities
- preventative health strategies
- principles of genetic resistance and immunity
- contingency and operational planning
- animal welfare codes of practice
- environmental protection codes of practice
- veterinary medicines and their use
- quarantine procedures
- vaccine types and their administration
- OHS legislative requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify common livestock diseases</li> <li>• develop prevention and treatment strategies for diseases</li> <li>• handle and use veterinary medicines</li> <li>• maintain records of animal health treatment</li> <li>• implement a risk management approach to managing animal health.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• beef cattle</li> <li>• alpacas</li> <li>• deer</li> <li>• dairy cattle</li> <li>• pigs.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCLSK505A Develop production plans for livestock

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing production plans for livestock and defines the standard required to: assess potential livestock enterprises for their market potential and gross margin returns; define production objectives for the chosen livestock enterprise; incorporate livestock selection, health and grazing strategies into production planning; develop cash flow budgets and marketing strategies for the enterprise; prepare the production plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managers of intensive or extensive livestock production systems.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine feasibility of livestock enterprise	<p>1.1. Farm environment parameters are assessed for their suitability for a range of livestock species.</p> <p>1.2. Potential livestock enterprises are assessed for their market potential and gross margin returns.</p> <p>1.3. Resource requirements are identified.</p> <p>1.4. Production risks and strategies to address them are identified.</p> <p>1.5. Livestock species and breeds are selected to suit the production system and the market.</p>
2. Identify and define determinants of livestock profitability	<p>2.1. Production objectives are defined.</p> <p>2.2. Strategies for herd/flock sourcing and improvement are established, and breeding program determined as appropriate.</p> <p>2.3. Feed requirements are determined for each age/sex/category of herds/flocks.</p> <p>2.4. Feeding strategy including grazing management, where appropriate, is determined and feeding programs are developed for each livestock category.</p> <p>2.5. Health management program is developed to manage/prevent disease in each herd/flock.</p> <p>2.6. Environmental controls are established as required.</p>
3. Establish livestock production targets and prepare production plan	<p>3.1. Performance indicators for the livestock enterprise are defined.</p> <p>3.2. Product quality specifications are developed and production targets set.</p> <p>3.3. Livestock cash flow budget is established.</p> <p>3.4. Production plan is prepared incorporating a calendar</p>



ELEMENT	PERFORMANCE CRITERIA
	of operations for the enterprise production cycle.
4. Review production plans to determine input and service requirement	4.1. Logistical arrangements related to harvesting/transportation/marketing and other key operations are planned for the production cycle. 4.2. Schedules are established for the purchase of inputs and services used in production. 4.3. Appropriate physical and financial record keeping system is established to provide data for the analysis of livestock production performance. 4.4. Production plan is reviewed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- determine feasibility of livestock enterprise
- identify and define determinants of livestock profitability
- establish livestock production targets
- prepare production plans
- review production plans to determine input and service requirements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- livestock husbandry, production and management practices
- livestock selection, health and grazing strategies
- financial analysis techniques
- livestock marketing

**REQUIRED SKILLS AND KNOWLEDGE**

- sustainable land use principles and practices applicable in the region
- environmental controls and codes of practice applicable to the enterprise
- whole farm planning processes
- relevant Occupational Health and Safety (OHS) legislation, regulations and codes of practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess potential livestock enterprises for their market potential and gross margin returns
- define production objectives for the chosen livestock enterprise
- incorporate livestock selection, health and grazing strategies into production planning
- develop cash flow budgets and marketing strategies for the enterprise
- prepare the production plan.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>• sheep</li> <li>• goats</li> <li>• beef cattle</li> <li>• alpacas</li> <li>• deer</li> <li>• dairy cattle</li> <li>• pigs.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Livestock
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCLSK506A Design livestock effluent systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of the design and planning of livestock effluent systems and defines the standard required to: meet the requirements of statutory, local government and environment authorities for effluent disposal; identify factors affecting the design of effluent systems; conduct a cost benefit analysis of a livestock effluent management system; design an effluent system that meets environmental standards and enterprise requirements and; evaluate the effectiveness of a range of livestock effluent management systems.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to intensive production unit managers or related specialists who design effluent disposal systems.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine the feasibility of an effluent management system	<p>1.1.Planning parameters that affect the design of effluent management system are identified.</p> <p>1.2.Statutory, local government and environment authority requirements for effluent disposal are identified.</p> <p>1.3.The environmental implications of livestock effluent disposal are identified.</p> <p>1.4.Effluent recycling options are evaluated in accordance with the whole farm plan.</p> <p>1.5.Processing options are analysed on the basis of their merits and suitability for the environment.</p> <p>1.6.Information is obtained from effluent management specialists on all relevant aspects of effluent management.</p> <p>1.7.An effluent management system is selected on the basis of a cost benefit analysis.</p>
2. Design an effluent management system	<p>2.1.The volume of livestock effluent is calculated according to established guidelines.</p> <p>2.2.The volume of water flowing into the effluent management system is calculated.</p> <p>2.3.Storage requirements are calculated.</p> <p>2.4.Professional assistance is obtained, appropriate to the complexity of the task and the financial risk involved.</p> <p>2.5.Plan and layout include provision of access, availability and the incorporation of technological innovations.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.6. Occupational Health and Safety (OHS) hazards are identified, risks assessed, safe systems established, and OHS risk assessment records maintained.</p> <p>2.7. The effluent management system design reflects the requirements of the business plan, production plan and the whole farm plan.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify all factors affecting the design of a livestock effluent system
- evaluate the effectiveness of a range of livestock effluent management systems
- research the latest innovations in livestock effluent management
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the role of differing components of a livestock effluent management system
- the options available and the relative advantages and disadvantages of differing effluent management systems
- different methods of managing large quantities and reducing the quantity of effluent water in effluent management
- financial considerations including the availability of low interest loans and incentives for expenditure on facilities to treat and retain livestock effluent
- relevant legislation and regulations relating to effluent management
- relevant OHS legislation, codes of practice and enterprise procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• meet the requirements of statutory, local government and environment authorities for effluent disposal</li> <li>• identify factors affecting the design of effluent systems</li> <li>• conduct a cost benefit analysis of a livestock effluent management system</li> <li>• design an effluent system that meets environmental standards and enterprise requirements</li> <li>• evaluate the effectiveness of a range of livestock effluent management systems.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Effluent disposal systems may include:	<ul style="list-style-type: none"> <li>• ponding and spreading on paddocks to improve pasture growth</li> <li>• recycling water for yard wash-down</li> <li>• generation of methane gas for water heating</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• applying to crops and trees as a soil conditioner</li> <li>• composting</li> <li>• worm farming.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Livestock
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCMER301A Process customer complaints

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of handling negative feedback/complaints from customers, whether formal or informal and defines the standard required to: apply organisational and/or industry procedures for customer complaints; investigate the details of and background to the complaint and refer to other parties if required; negotiate an outcome with the customer if appropriate; process the complaint according to enterprise policy; recommend appropriate action arising from the complaint.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires the ability to identify the customer's need(s) and to process the complaint to standard and in an appropriate time frame, or to recommend appropriate action(s) arising from the complaint.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Respond to customer complaints	<p>1.1.Complaints are processed in accordance with organisational policies and procedures established under legislation, regulations or codes of practice.</p> <p>1.2.Necessary reports relating to the complaints are obtained, documented and reviewed.</p> <p>1.3.Decisions are made, taking into account applicable law, company policies and codes.</p> <p>1.4.Resolution of the complaint is negotiated and agreed where possible.</p> <p>1.5.A register of complaints/disputes is maintained.</p> <p>1.6.Customer is informed of outcome of investigation.</p>
2. Refer complaints	<p>2.1.Complaints that require referral to other personnel or external bodies are identified.</p> <p>2.2.Referrals are made to appropriate personnel for follow up in accordance with individual level of responsibility.</p> <p>2.3.All documents and investigation reports are forwarded.</p> <p>2.4.Appropriate personnel are followed up to gain prompt decisions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- the ability to apply organisational and/or industry procedures to a range of situations, and to exercise judgement in this application, along with an ability to facilitate other people to undertake appropriate customer service
- active listening
- using open and/or closed questions
- speaking clearly and concisely
- using appropriate language and tone of voice
- giving customers full attention
- maintaining eye-contact (for face-to-face interactions)
- non-verbal communication, e.g. body language, personal presentation (for face-to-face interactions)
- negotiation techniques
- clear, legible writing/language skills which allow for adequate communication with required people
- literacy skills to the level required to process complaints
- numeracy skills to the level required to interpret the customer complaints and take required actions.

#### Required knowledge

- State/Territory/Commonwealth legislation, regulations, industry codes of practice, standards and guidelines
- organisational policy and procedures for dealing with complaints
- the importance of customer complaints
- the importance of good communication
- the individual's role in processing customer complaints.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• apply organisational and/or industry procedures for customer complaints</li> <li>• investigate the details of and background to the complaint and refer to other parties if required</li> <li>• negotiate an outcome with the customer if appropriate</li> <li>• process the complaint according to enterprise policy</li> <li>• recommend appropriate action arising from the complaint.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of complaints may include:	<ul style="list-style-type: none"> <li>• simple customer dissatisfaction that can be resolved on the spot, to scenarios where external bodies such as police are required.</li> </ul>
Examples of complaints may include:	<ul style="list-style-type: none"> <li>• product quality or misunderstanding of its purpose, service dissatisfaction, price or quantity errors, delivery issues, manufacturers warranty or service.</li> </ul>

## Unit Sector(s)

Unit sector	Merchandising and sales
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCMER302A Provide advice on hardware products

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of providing advice on hardware products and defines the standard required to: advise customers as to the range of products available for their specific application/environment; engage with and give advice to customers; ensure that the advice, product type, application and suitability are understood by the customer; encourage add on sales; organise the demonstration of products; represent the enterprise in a professional manner when dealing with customers.
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### Application of the Unit

<b>Application of the unit</b>	This unit will be carried out with limited supervision within enterprise guidelines and legislation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify customer needs	1.1. Appropriate interpersonal skills are used to accurately identify customer needs. 1.2. Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements. 1.3. Available products are matched to customer needs. 1.4. Knowledge and understanding of hardware products is actively and regularly researched and updated from authoritative sources.
2. Provide product advice	2.1. Advice that addresses customer needs is provided to customers in a timely and professional manner. 2.2. Products that may meet customer needs are appropriately exhibited to customer. 2.3. Alternative and additional products and services are suggested as necessary. 2.4. Customers concerns and questions are addressed sensitively in line with enterprise requirements.

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>

## REQUIRED SKILLS AND KNOWLEDGE

- communicate using a range of interpersonal skills, including questioning and attentive listening skills
- relate to people from a range of social, cultural and ethnic backgrounds, and of varying physical and mental abilities
- assess and demonstrate cost benefits
- research supplier information
- safely lift, carry and handle products
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- customer service and selling techniques
- systems and procedures for the safe handling of products
- enterprises business values, structure, products and services
- industry terminology for products
- requirements of local or specific customers
- relevant requirements of Occupational Health and Safety (OHS), industry, fair trading, trade practices, sales of goods, public liability and environmental legislation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- advise customers as to the range of products available



<b>EVIDENCE GUIDE</b>	
	<p>for their specific application/environment</p> <ul style="list-style-type: none"> <li>• engage with and give advice to customers</li> <li>• ensure that the advice, product type, application and suitability are understood by the customer</li> <li>• encourage add on sales</li> <li>• organise the demonstration of products</li> <li>• represent the enterprise in a professional manner when dealing with customers.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Advice may include:	<ul style="list-style-type: none"> <li>• advice on building products such as: <ul style="list-style-type: none"> <li>• timber</li> <li>• cement</li> <li>• colorbond</li> <li>• galvanised</li> <li>• zincalume</li> <li>• fibrous cement cladding</li> <li>• roofing materials</li> <li>• insulation and damp-proofing materials</li> <li>• pre-fabricated buildings</li> <li>• small hardware items.</li> </ul> </li> <li>• advice on irrigation and stock water supply systems.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Merchandising and sales
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCMER303A Sell products and services

### Modification History

June 2012. Corrected typographical error in Unit Descriptor.

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of selling products and services and defines the standards required to: identify the potential for a sale; present purchase options to the customer; provide quotations; complete a sale.
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### Application of the Unit

<b>Application of the unit</b>	This unit will be carried out under supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Engage customer	1.1. Customer is approached in a timely and professional manner and in line with enterprise procedures. 1.2. Appropriate interpersonal skills are used to engage customer. 1.3. Customers are presented with purchase options that address their needs, and assisted to identify their preferred option. 1.4. Personal and professional limitations in addressing customer needs are identified, and assistance is sought from appropriate personnel when required.
2. Sell products and services	2.1. Prices and quotations are determined on the advice of appropriate personnel and provided to customer. 2.2. Sales are completed in accordance with enterprise requirements and to maximise potential for customer satisfaction. 2.3. Opportunities for "add-on" and repeat sales are identified and responded to in line with enterprise procedures.
3. Maintain products	3.1. Products are handled and stored safely and efficiently in line with manufacturer, enterprise and Occupational Health and Safety (OHS) guidelines. 3.2. Documentation and re-ordering are completed in line with enterprise requirements. 3.3. Own sales techniques are reviewed to enhance future sales results.

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
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## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- assess initial customer needs
- calculate quantities and prices
- access and research product information
- seek assistance as required
- recommend products
- encourage repeat business
- complete sales
- communicate effectively with customers from a range of culturally diverse backgrounds
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- customer buying signals
- customer requirements in various rural and horticultural settings
- how to effectively engage and communicate with a range of customers from culturally diverse backgrounds, and of varying physical and mental abilities
- legal requirements in sales environments, particularly Fair Trading, Trade Practices and Sale of Goods legislation, and public liability
- sales techniques.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• engage customers</li> <li>• identify the potential for a sale</li> <li>• present purchase options to the customer</li> <li>• provide quotations</li> <li>• complete a sale.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Products and services may include:	<ul style="list-style-type: none"> <li>• selling products and services in an agricultural, horticultural or land management context including details and documented data of the enterprise's products and services, and relevant government legislation and regulations.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Merchandising and sales
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCMER401A Coordinate customer service and networking activities

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers coordinating customer service and networking activities and defines the standard required to: access and apply customer service policies and procedures; respond to customer feedback and complaints; develop and use networks to source goods and services; provide value for the customer in sourcing and supplying goods and services; maintain records of customer feedback and interactions.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to agricultural or horticultural merchandise or department managers who have responsibility for customer service delivery by others.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Contribute to quality customer standards	<p>1.1. Customer service standards are accessed, interpreted, applied and monitored in the workplace in accordance with enterprise policies and procedures.</p> <p>1.2. Contributions are made to the development, refinement and improvement of service policies, standards and processes.</p>
2. Implement customer service systems	<p>2.1. All personnel are encouraged to consistently implement customer service systems.</p> <p>2.2. Customer feedback is reviewed in consultation with appropriate personnel and is analysed when improving work practices.</p> <p>2.3. Customer service complaints are identified and adjustments made to ensure continued service quality.</p> <p>2.4. Adjustments are communicated to all those involved in service delivery within appropriate time frames.</p> <p>2.5. Delivery of services/products is coordinated and managed to ensure they effectively and efficiently meet agreed quality standards.</p>
3. Manage networks to ensure customer needs are addressed	<p>3.1. Effective regular communication is established with customers.</p> <p>3.2. Relevant networks are established, maintained and expanded to ensure appropriate referral of customers to products/services from within and outside the</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>organization.</p> <p>3.3. Procedures are put in place to ensure that decisions about targeting of customer services are based on up-to-date information about the customer and the products/services available.</p> <p>3.4. Procedures are put in place to ensure that referrals are based on the matching of the assessment of customer needs and availability of products/services.</p> <p>3.5. Records of customer interaction are maintained in accordance with organisational procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds
- clear, legible writing
- language skills which allow for adequate communication with customer and all relevant personnel
- literacy skills to the level required to read and write procedures and reports
- numeracy skills to the level required to develop and implement customer service procedures.

#### Required knowledge

- legislative and regulatory requirements may include but are not limited to: Consumer Law, Environmental Law, Occupational Health and Safety (OHS), Privacy Legislation, Codes of Conducts, Discrimination/Equal Employment Opportunity, Harassment and other laws specific to local government, State and Federal legislation
- the organisation's business structure, products and services
- customer service systems/procedures including the continuous quality improvement framework, together with some knowledge of the customer population and how the system applies to delivering customer service to that customer population
- the principles of customer service
- the principles of effective communication in relation to listening, questioning and

**REQUIRED SKILLS AND KNOWLEDGE**

non-verbal communication

- the individual's role in delivering customer service
- techniques for dealing with customers with special needs
- techniques for building relationships of trust and mutually acceptable outcomes
- related organisations, agencies and networks
- the principles and operations of networks.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- access and apply customer service policies and procedures
- respond to customer feedback and complaints
- develop and use networks to source goods and services
- provide value for the customer in sourcing and supplying goods and services
- maintain records of customer feedback and interactions.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Internal and external customers may include:	<ul style="list-style-type: none"> <li>• customers with routine or special requests</li> <li>• regular and new customers</li> <li>• people from a range of social, cultural or ethnic backgrounds</li> <li>• people with varying physical and mental abilities.</li> </ul>
Relevant networks may include:	<ul style="list-style-type: none"> <li>• agricultural or horticultural manufacturers and suppliers</li> <li>• industry associations</li> <li>• internal and external customers</li> <li>• government agencies and departments</li> <li>• specific interest or support groups</li> <li>• advisory committees</li> <li>• lobby groups</li> <li>• research bodies.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Merchandising and sales
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCMER402A Provide advice and sell machinery

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers providing advice and sell machinery and defines the standard required to: advise customers as to the most appropriate products for their specific application/environment; engage with and give advice to customers; ensure that the advice, product type, application and suitability are understood by the customer; encourage add on sales; organise the demonstration of products; represent the enterprise in a professional manner when dealing with customers.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to rural products merchandisers whose job role includes providing advice and selling agricultural farm and small machinery, spare parts and building products.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify customer needs	<p>1.1. Appropriate interpersonal skills are used to accurately identify customer needs.</p> <p>1.2. Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements.</p> <p>1.3. Available products are matched to customer needs.</p> <p>1.4. Knowledge and understanding of machinery and related products is actively and regularly researched and updated from authoritative sources.</p>
2. Provide product advice	<p>2.1. Advice that addresses customer needs is provided in a timely and professional manner.</p> <p>2.2. Products that may meet customer needs are appropriately exhibited to customer.</p> <p>2.3. Customers concerns and questions are addressed sensitively in line with enterprise requirements.</p> <p>2.4. Quotations are prepared and supplied in accordance with enterprise requirements.</p>
3. Sell products	<p>3.1. Sales are completed in accordance with enterprise requirements and to customer's satisfaction.</p> <p>3.2. Opportunities for "add-on" and repeat sales are identified and responded to in line with enterprise procedures.</p> <p>3.3. Sales results are monitored against specified criteria.</p> <p>3.4. Sales techniques are reviewed to enhance future sales results.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Handle and maintain products	4.1. Products are handled and stored safely and efficiently in line with manufacturer, enterprise and Occupational Health and Safety (OHS) guidelines. 4.2. Documentation is completed in line with enterprise requirements. 4.3. Stock levels are monitored and re-ordering procedures followed in line with enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess and demonstrate cost benefits
- valuing trade-ins
- research supplier information
- demonstrate equipment
- safe lifting, carrying and handling techniques
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- customer service and selling techniques
- systems and procedures for the safe handling of machinery
- enterprises business values, structure, products and services
- industry terminology for products
- requirements of local or specific customers



## REQUIRED SKILLS AND KNOWLEDGE

- nature of agricultural activities in district
- industry trends and improved practices in relation to machinery usage and equipment
- systems and procedures for the safe handling of machinery and parts
- manufacturers product recommendations and warranty requirements
- relevant OHS, industry, fair trading, trade practices, and sales of goods legislation
- relevant components of State/Territory Acts relating to machinery and its use.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- advise customers as to the most appropriate products for their specific application/environment
- engage with and give advice to customers
- ensure that the advice, product type, application and suitability are understood by the customer
- encourage add on sales
- organise the demonstration of products
- represent the enterprise in a professional manner when dealing with customers.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Machinery may include:	<ul style="list-style-type: none"> <li>• all types of agricultural and small machinery</li> <li>• spare parts</li> <li>• building products.</li> </ul>
Advice may include:	<ul style="list-style-type: none"> <li>• that relating to products, usage, application rates.</li> </ul>

## Unit Sector(s)

Unit sector	Merchandising and sales
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## Co-requisite units

Co-requisite units	

## Competency field

Competency field	
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## AHCMER403A Provide advice and sell farm chemicals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers providing advice and sell farm chemicals and defines the standard required to: engage customers, especially in relation to giving advice, receiving information and creating additional sales opportunities; assess and demonstrate cost benefits; ensure that information and directions on the product label covering Occupational Health and Safety (OHS), mixing and loading, handling, application, disposal and withholding period is understood by the customer; research supplier information; supply Material Safety Data Sheets (MSDSs) with all registered chemicals; encourage add on sales and represent the enterprise in a professional manner.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to rural products merchandisers whose job role includes providing advice and selling farm chemicals. It requires the ability to provide appropriate advice to customers regarding the safe use of chemicals and how to apply them.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify customer needs	<p>1.1. Appropriate interpersonal skills are used to accurately identify customer needs.</p> <p>1.2. Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements.</p> <p>1.3. Available products are matched to customer needs and against environmental considerations.</p> <p>1.4. Knowledge and understanding of farm chemicals is actively and regularly researched and updated from authoritative sources.</p>
2. Provide product advice	<p>2.1. Advice that addresses customer needs is provided in a timely and professional manner.</p> <p>2.2. Environmental considerations, non-chemical alternatives and additional products are considered and discussed with customers.</p> <p>2.3. Customers concerns and questions are addressed sensitively in line with enterprise requirements.</p> <p>2.4. Quotations are prepared and supplied in accordance with enterprise requirements.</p>
3. Sell products	<p>3.1. Sales are completed in accordance with enterprise</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>requirements and to customer's satisfaction.</p> <p>3.2. Opportunities for "add-on" and repeat sales are identified and responded to in line with enterprise procedures.</p> <p>3.3. Sales results are monitored against specified criteria.</p> <p>3.4. Sales techniques are reviewed to enhance future sales results.</p>
4. Handle and maintain products	<p>4.1. Products are handled and stored safely and efficiently in line with manufacturer, enterprise and OHS guidelines.</p> <p>4.2. Documentation is completed in line with enterprise requirements.</p> <p>4.3. Stock levels are monitored and re-ordering procedures followed in line with enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and provide safety information to customers
- assess and demonstrate cost benefits
- research supplier information
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

## REQUIRED SKILLS AND KNOWLEDGE

- potential environmental impact of chemicals
- enterprises business values, structure, products and services
- chemical formulations, available proprietary products and their applications
- industry terminology for products
- labelling specifications
- requirements of local or specific customers
- relevant HAZCHEM, AGSAFE, Australian Dangerous Goods, OHS, industry, fair trading, trade practices, and sales of goods legislation
- enterprise policies and procedures relating to customer service
- relevant licences/accreditation regarding the sale and handling of farm chemicals
- OHS, pesticides and environmental legislation, codes of practice and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- engage customers, especially in relation to giving advice, receiving information and creating additional sales opportunities
- assess and demonstrate cost benefits
- ensure that information and directions on the product label covering OHS, mixing and loading, handling, application, disposal and withholding period is understood by the customer
- research supplier information
- supply MSDSs with all registered chemicals
- encourage add on sales and represent the enterprise in a professional manner.

**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Advice may include:

- all types of chemical mixes used in the control of pests, weeds and diseases including animal health products.

**Unit Sector(s)**

**Unit sector**

Merchandising and sales

**Co-requisite units**

Co-requisite units		

**Competency field**

**Competency field**





## AHCMER404A Provide advice on agronomic products

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers providing advice on agronomic products and defines the standard required to: retain technical currency in all aspects of agronomy relevant to the client group; engage with and give advice to customers; ensure that the advice and product type are applicable and suitable for the purpose and growing environment of the client; encourage add on sales; organise trials of agronomic products and distribute results to clients; represent the enterprise in a professional manner when dealing with customers.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to rural products merchandisers whose job role includes providing advice on agronomic products including fertilisers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify customer needs	1.1. Appropriate interpersonal skills are used to accurately identify customer needs. 1.2. Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements. 1.3. Available products are matched to customer needs and against ecological considerations. 1.4. Knowledge and understanding of agronomic products is actively and regularly researched and updated from authoritative sources.
2. Provide product advice	2.1. Advice that addresses customer needs is provided to customers in a timely and professional manner. 2.2. Products that may meet customer needs are appropriately exhibited to customer. 2.3. Alternative and additional products and services are suggested as necessary. 2.4. Customers concerns and questions are addressed sensitively in line with enterprise requirements.

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
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## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- assess and demonstrate cost benefits of fertilisers
- research supplier information
- safely lift, carry and handle products
- identify basic nutritional deficiencies and plants and animals
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- customer service techniques
- systems and procedures for the safe handling of products
- enterprises business values, structure, products and services
- industry terminology for products
- requirements of local or specific customers
- relevant requirements of Occupational Health and Safety (OHS), industry, fair trading, trade practices, sales of goods, environment and public liability legislation
- crop seeds requirements of local customers
- basic crop cultivation techniques
- fertilisers types and analyses
- climate and growing conditions generally
- relevant components of State/Territory Acts relating to fertilisers and certified seeds.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• retain technical currency in all aspects of agronomy relevant to the client group</li> <li>• engage with and give advice to customers</li> <li>• ensure that the advice and product type are applicable and suitable for the purpose and growing environment of the client</li> <li>• encourage add on sales</li> <li>• organise trials of agronomic products and distribute results to clients</li> <li>• represent the enterprise in a professional manner when dealing with customers.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The range of agronomic products may include:	<ul style="list-style-type: none"> <li>• Fertilisers: <ul style="list-style-type: none"> <li>• Urea</li> <li>• superphosphate</li> <li>• lime</li> <li>• blood and bone</li> <li>• potash</li> <li>• mixed fertilisers</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• trace elements</li> <li>• specialty fertilisers.</li> <li>• Crop and seeds:                             <ul style="list-style-type: none"> <li>• Cereal crop including wheat</li> <li>• oats</li> <li>• barley</li> <li>• triticale</li> <li>• grey peas</li> <li>• maize lupins</li> <li>• others appropriate to local district.</li> </ul> </li> <li>• Fodder and forage crops:                             <ul style="list-style-type: none"> <li>• choumoullier</li> <li>• turnips</li> <li>• swede</li> <li>• rape</li> <li>• others appropriate to local district.</li> </ul> </li> <li>• Pasture species:                             <ul style="list-style-type: none"> <li>• legumes</li> <li>• annual, perennial and short rotation grasses</li> <li>• native pasture species</li> <li>• others appropriate to local district.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Merchandising and sales
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**Co-requisite units**

Co-requisite units		

## Competency field

Competency field	
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## AHCMER405A Provide advice on livestock products

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers providing advice on livestock products and defines the standard required to: advise customers as to the range of products available for their specific application/environment; engage with and give advice to customers; ensure that the advice, product type, application and suitability are understood by the customer; advise customers on risks to worker safety or animal welfare from use of the product; encourage add on sales; represent the enterprise in a professional manner when dealing with customers.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to rural products merchandisers whose job role includes providing advice on livestock industry equipment, animal handling systems and stockfeeds.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify customer needs	<p>1.1. Appropriate interpersonal skills are used to accurately identify customer needs.</p> <p>1.2. Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements.</p> <p>1.3. Available products are matched to customer needs.</p> <p>1.4. Knowledge and understanding of livestock products is actively and regularly researched and updated from authoritative sources.</p>
2. Provide product advice	<p>2.1. Advice that addresses customer needs is provided to customers in a timely and professional manner.</p> <p>2.2. Products that may meet customer needs are appropriately exhibited to customer.</p> <p>2.3. Alternative and additional products and services are suggested as necessary.</p> <p>2.4. Customers concerns and questions are addressed sensitively in line with enterprise requirements.</p> <p>2.5. Relevant safety information is provided to the customer for recommended products.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess and demonstrate cost benefits
- research supplier information
- safely lift, carry and handle products
- provide Material Safety Data Sheets (MSDSs) or other safety information for recommended products
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- customer service and selling techniques
- systems and procedures for the safe handling of products
- enterprises business values, structure, products and services
- industry terminology for products
- requirements of local or specific customers
- relevant Occupational Health and Safety (OHS), industry (e.g. racing/harness racing), fair trading, trade practices, and sales of goods legislation
- relevant components of State/Territory Acts relating to fertilisers and certified seeds.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• advise customers as to the range of products available for their specific application/environment</li> <li>• engage with and give advice to customers</li> <li>• ensure that the advice, product type, application and suitability are understood by the customer</li> <li>• advise customers on risks to worker safety or animal welfare from use of the product</li> <li>• encourage add on sales</li> <li>• represent the enterprise in a professional manner when dealing with customers.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The range of products may include:	<ul style="list-style-type: none"> <li>• animal restraint systems</li> <li>• dairy industry products</li> <li>• horse industry products</li> <li>• stockfeed requirements.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Merchandising and sales
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCMER406A Provide information on fertilisers and soil ameliorants

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes required to: provide information on fertilisers and soil ameliorants and defines the standard required to: take soil, plant tissue and water samples; use and explain use of nutrient management tools; provide information on the relationship between soil types, water, crops, fertiliser and soil ameliorant use; describe legislative requirements relating to use of fertiliser and soil ameliorants.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to employees in a sales role in an agricultural or horticultural support enterprise who provide information on fertilisers, soil ameliorants and related environmental information to primary producers and the provision of services and products that improve the nutrition and benefit the physical, biological and chemical nature of a soil.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Gather information on the requirements of the client	<p>1.1. Basis of customer's fertiliser or soil ameliorant requirement is identified.</p> <p>1.2. Planned use of fertiliser or soil ameliorant is evaluated against legislative requirements, local productivity and environmental guidelines and food safety regulations.</p> <p>1.3. Individual soil, plant tissue and water samples are taken for each customer.</p> <p>1.4. Where appropriate, customer is provided with relevant sampling kits and advice on required sampling processes to be followed.</p>
2. Provide information on nutrient management program	<p>2.1. Information and referrals about the fertiliser and soil ameliorant product are provided to customer, with particular reference to Occupational Health and Safety (OHS), food safety and environmental issues and according to industry codes of practice.</p> <p>2.2. Use of nutrient management tools is recommended where necessary.</p> <p>2.3. Changes to application method and/or timing are suggested if necessary.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Provide appropriate service or product	3.1. Customer is referred to an appropriately qualified specialist adviser if required. 3.2. Customer is supplied with information and recommendations regarding transporting, storing and handling fertiliser and soil ameliorants in a safe and environmentally responsible manner. 3.3. Where required by customer, the transport, handling and storage of fertiliser and soil ameliorants in a safe and environmentally responsible manner are arranged. 3.4. Fertiliser and soil ameliorants are supplied that meet legislative requirements and productivity, food safety and environmental guidelines. 3.5. Details of transaction are recorded according to enterprise and industry guidelines.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- taking soil, water and plant tissue samples
- analysing soil and plant tissue tests to determine nutrient requirements
- using safe and environmentally responsible work practices
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- crop nutrient requirements - both macro and micro nutrients

## REQUIRED SKILLS AND KNOWLEDGE

- effect of soil ameliorants in dispersion and adjustment for acidity or alkalinity (pH)
- fertiliser and soil ameliorant application methods, including timing and frequency of fertiliser and soil ameliorant application to minimise losses
- fertiliser and soil ameliorants availability and relative costs
- industry production regimes and fertiliser practices
- sources of technical information
- major nutrient management risks of leach, run-off, load, blow, mine and how these impact on the environment
- nutrient management advisory tools and processes used by advisers in making a crop nutrition recommendation
- organisational OHS and environmental procedures, practices and policies in operating sampling equipment
- packaging and dispatch procedures for samples
- physical, chemical and biological properties related to a healthy soil and environment, including texture, structure, slaking, dispersion, organic matter and pH
- rainfall patterns in local area
- sampling tools and methods, including soil, plant tissue and water tests; yield monitoring; and electrical conductivity survey
- environmental impacts such as soil structural decline, fertility decline, acidification and salinity, erosion, loss of organic matter, water quality, fertiliser and soil ameliorant impurities, and greenhouse gas emissions
- transport, handling and storage requirements of fertiliser and soil ameliorants in terms of legislation, codes of practice, environmental stewardship and human safety.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include

<b>EVIDENCE GUIDE</b>	
	<p>achievement of the following:</p> <ul style="list-style-type: none"> <li>• take soil, plant tissue and water samples</li> <li>• use and explain use of nutrient management tools</li> <li>• provide information on the relationship between soil types, water, crops, fertiliser and soil ameliorant use</li> <li>• describe legislative requirements relating to use of fertiliser and soil ameliorants.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Fertiliser or soil ameliorants may include:	<ul style="list-style-type: none"> <li>• the range of fertiliser or soil ameliorants that form part of a nutrient management plan covering inorganic or organic solids and fluids applied directly to soil or plant via foliar sprays.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Merchandising and sales
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## Co-requisite units

<b>Co-requisite units</b>	



<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCMER501A Develop a sales strategy for rural products

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a sales strategy for rural products and defines the standard required to: review current product sales against the marketing plan; identify product specifications and quality assurance strategy, target market outlets, timing and volume of sales, and price risk management strategy; assess a range of options for selling rural products; devise a sales strategy; implement the sales strategy and review against targets in the marketing plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to retail and wholesale managers who developing a sales strategy for rural products.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Review existing sales plans	1.1. Current market returns are reviewed against sales objectives for the property. 1.2. Current performance data is analysed and compared to relevant benchmark information. 1.3. Trends and opportunities in respect to customer requirements are identified. 1.4. Current specifications for products and services are reviewed.
2. Devise a sales strategy	2.1. Range of market options for farm products and services are identified. 2.2. Alternative market options are analysed for their profitability and feasibility consistent with sales objectives for property. 2.3. Sales plan is developed identifying product specifications and quality assurance strategy, target market outlets, timing and volume of sales, and price risk management strategy. 2.4. Available resource commitments and capacity are determined to implement the sales strategy. 2.5. Contingency arrangements are defined to manage variations in production and market prices.
3. Implement and review a sales strategy	3.1. Sales are conducted according to the sales strategy and adjusted according to the contingency plan. 3.2. Sales plan is reviewed and amended.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research skills
- determine current market position
- review existing strategies and propose improvements
- check relevant business, industrial and legislative requirements
- define and obtain information for use in making effective decisions
- develop plans to implement sales strategies
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- potential market outlets
- customer specifications for products and services
- relevant information sources related to markets and market returns
- marketing and promotional planning targets
- OHS legislation, codes of practice and enterprise requirements
- relevant commercial law and legislation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• review current product sales against the marketing plan</li> <li>• identify product specifications and quality assurance strategy, target market outlets, timing and volume of sales, and price risk management strategy.</li> <li>• assess a range of options for selling rural products</li> <li>• devise a sales strategy</li> <li>• implement the sales strategy and review against targets in the marketing plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Rural products may include:	<ul style="list-style-type: none"> <li>• any agricultural product</li> <li>• any horticultural product.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Merchandising
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCMKH301A Carry out minor service of milking equipment

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the processes of identification of faults in milking equipment by mechanical testing and safety audits and the replacement of consumable parts and components in line with programmed maintenance procedures and defines the standard required to: observe and critically evaluate the performance of milking equipment; operate the full range of milking equipment components; identify common sources of air leakage; operate hand tools and use a range of test equipment proficiently; read and interpret operators manuals and maintenance data supplied; disassemble and assemble a range of milking equipment components such as pulsators, regulators.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit requires some judgement and discretion and is carried out routinely.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify faults in milking machines	1.1. Occupational Health and Safety (OHS) hazards are identified, risk assessed and recorded. 1.2. Poor performance of milking equipment is identified from observations at milking. 1.3. Minor machine adjustments are carried out to rectify identified poor performance characteristics. 1.4. Fault finding and fault diagnosis is completed with minimum disruption to milking routines.
2. Identify external faults	2.1. Independent electrical appliances that impact on the farm dairy operation are identified and isolated. 2.2. Animal behaviour during milking is observed and recorded to identify abnormalities. 2.3. Earthing systems and grids are installed to minimise potential differences in the milking shed.
3. Carry out operational service & maintenance of milking machines	3.1. Machine components are cleaned, adjusted and defective parts or components repaired or replaced to bring machine up to industry performance standards. 3.2. Defective electric motors are disconnected, removed and replaced to conform to manufacturer's recommendations and OHS guidelines. 3.3. Programmed maintenance routines are completed to replace consumables and maintain lubrication in accordance with manufacturer's recommendations. 3.4. OHS hazards identified in safety audits are



ELEMENT	PERFORMANCE CRITERIA
	<p>eliminated or risk controlled according to manufacturer's guidelines and industry standards.</p> <p>3.5. Adjustments are completed to restore optimum performance of milking equipment.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- observe and critically evaluate the performance of milking equipment
- operate the full range of milking equipment components
- identify common sources of air leakage
- operate hand tools and use a range of test equipment proficiently
- communicate effectively with the dairy farmer, milkers and other personnel to identify all contributing factors to milking equipment performance
- disassemble and assemble a range of milking equipment components such as pulsators, regulators
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- familiarity with the components that make up milking equipment installations and their individual contributions to milking function
- common symptoms of poor milking machine performance
- symptoms demonstrated by animals in the milking environment when external problems are apparent
- routine maintenance requirements for milking equipment
- consumable replacement strategies recommended for milking equipment
- lubrication requirements for milking equipment
- OHS legislation and industry and enterprise safety standards for milking equipment installations

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>environmental legislation and impacts of milking machinery servicing.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>observe and critically evaluate the performance of milking equipment</li> <li>operate the full range of milking equipment components</li> <li>identify common sources of air leakage</li> <li>operate hand tools and use a range of test equipment proficiently</li> <li>read and interpret operators manuals and maintenance data supplied</li> <li>disassemble and assemble a range of milking equipment components such as pulsators, regulators.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>
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<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Operational service may include:	<ul style="list-style-type: none"> <li>• setting, adjusting and servicing pulsators</li> <li>• inspecting and servicing vacuum pumps</li> <li>• topping up of oil or water in vacuum pumps</li> <li>• servicing of milk pumps</li> <li>• cleaning and servicing of automatic cup removers.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Milk harvesting
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCMKH303A Service and repair milking equipment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of non-company specific service and repair of milking equipment on farm so as to meet prescribed maintenance schedules or to rectify poor performance and defines the standard required to monitor and evaluate the performance of milking equipment; operate the full range of milking equipment components; carry out mechanical testing of milking equipment; apply information from operator's manuals and supplied maintenance and diagnostic data; disassemble and re-assemble a range of milking equipment components such as pulsators, regulators and vacuum pumps.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to technicians and dairy farm workers who service and repair specific machine components. It requires some judgement and discretion and is likely to be carried out independently, with advice sought from milk company representatives or equipment resellers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Service and repair vacuum pumps and the vacuum regulator	<p>1.1. Vacuum pump capacity is established as a part of mechanical testing and performance assessed against design parameters and shed requirements.</p> <p>1.2. Vacuum pump is disassembled, serviced and reassembled.</p> <p>1.3. Vacuum pump exhaust and housing is checked and repaired as required to minimise noise and ensure that levels remain within prescribed workplace standards.</p> <p>1.4. Regulators are checked for performance cleaned and defective parts replaced.</p>
2. Service pulsators and electronic systems	<p>2.1. Pulsator performance is assessed during milking and as a part of mechanical testing.</p> <p>2.2. Electronic or pneumatic pulsators are removed and repaired or replaced as identified in mechanical testing.</p> <p>2.3. Extra low voltage segments of the pulsation and wash systems controllers are tested and replaced as required.</p>
3. Service and repair	3.1. Milk pumps are checked for pumping performance.

ELEMENT	PERFORMANCE CRITERIA
milk pumps and the milk releasing system	<p>3.2.Milk pumps are disassembled and repairs as required including drives and couplings.</p> <p>3.3.Milk releaser is inspected and checked with rubber seals and flaps replaced as required.</p>
4. Repair and maintain the milk transport system	<p>4.1.Rubberware is inspected for correct specification including liner/teat cup matching and replaced or adjusted as required.</p> <p>4.2.Claws and claw bowls are inspected for cleanliness and correct connection to suit the specific pulsation system.</p> <p>4.3.The operation of automatic vacuum cut-off in the claw is assessed and air admission holes cleaned as required.</p> <p>4.4.Milk lines and air lines are inspected and joints checked for compliance with industry minimum standard recommendations.</p> <p>4.5.Cans and vessels are checked for dents and damage and shut off valves checked for correct operation.</p> <p>4.6.Plate cooler is disassembled, cleaned and re-assembled and filters cleaned and replaced as required.</p>
5. Service and repair non-milking systems	<p>5.1.Jettors and cleaning system are inspected to ensure adequate air admission during cleaning and correct water volumes are circulating.</p> <p>5.2.Repairs or replacement of cleaning system components are effected as required</p> <p>5.3.Automatic cup removers are checked to ensure that detectors are clean and effective and that the pistons operate effectively.</p> <p>5.4.Automatic cup removers are repaired or replaced as required.</p> <p>5.5.Herd recording equipment is inspected and valves and rubberware replaced as required.</p> <p>5.6.Feed systems are inspected and repaired or maintained as required.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- identify hazards and implement safe work procedures
- observe and critically evaluate the performance of milking equipment
- competently operate the full range of milking equipment components
- efficiently and effectively carry out mechanical testing of milking equipment
- operate hand tools and use a range of test equipment proficiently
- communicate effectively with the dairy farmer, milkers and other personnel to identify all contributing factors to milking equipment performance
- disassemble and re-assemble a range of milking equipment components such as pulsators, regulators and vacuum pumps
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- familiarity with the components that make up milking equipment installations and their individual contributions to milking function
- common symptoms of poor milking machine performance
- symptoms demonstrated by animals in the milking environment that indicates poor performance such as cup slip, agitation or frequent urination or defecation.
- routine maintenance requirements for milking equipment
- consumable replacement strategies recommended for milking equipment
- lubrication requirements for milking equipment
- industry safety standards for milking equipment installations.
- Occupational Health and Safety (OHS) guidelines for working with machinery in the rural sector.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• monitor and evaluate the performance of milking equipment</li> <li>• operate the full range of milking equipment components</li> <li>• carry out mechanical testing of milking equipment</li> <li>• apply information from operator's manuals and supplied maintenance and diagnostic data</li> <li>• disassemble and re-assemble a range of milking equipment components such as pulsators, regulators and vacuum pumps.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
International Standards may include:	<ul style="list-style-type: none"> <li>• International Standards for Milking Machines ISO5707 Construction and Performance and ISO6690 Mechanical Tests.</li> </ul>
Service and repair may include:	<ul style="list-style-type: none"> <li>• low voltage pulsation or other electronic systems (up to 36v DC).</li> </ul>
Adjustments may include:	<ul style="list-style-type: none"> <li>• vacuum pumps and vacuum regulator may also include the adjustment of vacuum pressure or available effective reserve.</li> </ul>
Pumps may include:	<ul style="list-style-type: none"> <li>• centrifugal or diaphragm and slow speed two vane, high speed four vane or liquid ring</li> </ul>



<b>RANGE STATEMENT</b>	
	vacuum pumps.

**Unit Sector(s)**

<b>Unit sector</b>	Milk harvesting
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCMKH304A Monitor and provide advice on cleaning milking machines

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the process of carrying out the cleaning of milking machines and associated equipment including detergent selection, selecting wash cycle programs and problem investigation of cleaning systems and defines the standard required to: assemble/disassemble milking equipment; carry out milking equipment and vat cleaning routines; prepare cleaning solutions in accordance with manufacturer's specifications; evaluate cleaning routines for equipment and vats and identify cleaning problems; identify mechanical and chemical safety hazards associated with the cleaning process.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit requires some judgement and discretion and is carried out independently. The role of providing advice to achieve the highest possible standards of dairy hygiene requires an understanding of the milking process, the nature of milk and the basic components of the cleaning process.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify cleaning problems	<p>1.1. Current hygiene practices are established through interview and shed records.</p> <p>1.2. Factory test results are accessed and collated to establish bacterial levels for the plant and identify potential cleaning problems.</p> <p>1.3. Milking equipment is inspected and disassembled as required to identify residues and other evidence of poor cleaning regimes.</p> <p>1.4. Cleaning chemicals are identified to establish current cleaning and hygiene regimes.</p> <p>1.5. Water quality and quantity is assessed to establish the effect on cleaning procedures.</p> <p>1.6. Occupational Health and Safety (OHS) hazards are identified, risks assessed and hazards reported, or risk controlled and the risk assessment recorded as a part of investigative procedures.</p>
2. Carry out cleaning routines	2.1. Machine and ancillary equipment cleaning routines are carried out as specified by the equipment

ELEMENT	PERFORMANCE CRITERIA
	<p>manufacturer.</p> <p>2.2. Vat cleaning routines are carried out as specified by the equipment manufacturer.</p> <p>2.3. Water temperature and the chemical concentrations circulated are monitored through the cleaning cycle.</p> <p>2.4. Plant is manually cleaned to remove milk stone and other accumulated residues.</p>
3. Advise on chemicals and cleaning routines	<p>3.1. Cleaning routines to suit the installation are determined and documented in consultation with the equipment manufacturer and chemical company representatives as required.</p> <p>3.2. Hygiene regime for the total installation is recorded and specified to the shed manager.</p> <p>3.3. Prescribed cleaning routines are evaluated to ensure that equipment and cleaning performance meets performance specification.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assemble/disassemble milking equipment
- efficiently carry out milking equipment and vat cleaning routines
- prepare cleaning solutions in accordance with manufacturers specifications
- effectively evaluate cleaning routines for equipment and vats
- identify cleaning problems
- identify mechanical and chemical safety hazards associated with the cleaning process
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural,

**REQUIRED SKILLS AND KNOWLEDGE**

social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- best practice hygiene routines employed in farm dairies
- the range of bacteria affecting milk quality
- microbial testing of milk and the effect of cleaning practices on those levels
- the role of chemical concentration, physical turbulence, water temperature and contact time in the cleaning routine
- the conduct of milking machine cleaning routines
- the conduct of vat cleaning routines
- cleaning chemicals and methods
- common milking machine cleaning systems and their operation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assemble/disassemble milking equipment
- carry out milking equipment and vat cleaning routines
- prepare cleaning solutions in accordance with manufacturer's specifications
- evaluate cleaning routines for equipment and vats and identify cleaning problems
- identify mechanical and chemical safety hazards associated with the cleaning process.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Cleaning may include:	<ul style="list-style-type: none"> <li>Standard Operating Procedures for dairy cleaning</li> <li>machines and equipment such as the milking plant with all lines and cans</li> <li>non-milking equipment including jettors and cup removers.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Milk harvesting
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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# AHCMKH305A Mechanically test milking machines

## Modification History

Not Applicable

## Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of the static testing of milking equipment and the compilation of results according to industry standard reporting procedures and defines the work practices required to: disassemble and reassemble milking machines and equipment; operate milking machine testing equipment; calculate effective reserve and vacuum pump capacity for the plant; measure air consumption and component leakage, and adjust vacuum to optimise performance; record measurements of milking machine performance; identify and make appropriate recommendations to the dairy manager.</p>
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## Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to working independently as part of preparing for milking. The information from testing is supplied to the supervisor or employer</p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<p><b>Prerequisite units</b></p>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Record milking machine specifications	1.1.Herd details and health status are established in consultation with dairy farmer. 1.2.Overall machine specifications are recorded to establish expected performance. 1.3.Component condition is assessed and recorded. 1.4.Occupational Health and Safety (OHS) hazards are identified and risks assessed in line with workplace OHS and industry standards, and reported to supervisor.
2. Calculate required milking machine performance	2.1.Effective reserve is calculated based on individual shed specification. 2.2.Vacuum pump capacity is calculated from effective reserve. 2.3.Manufacturer's recommended component specification and matching is recorded.
3. Measure milking machine performance	3.1.Working vacuum levels are measured in line with required performance. 3.2.Vacuum is adjusted as required to optimise plant performance. 3.3.Air consumption and component leakage is established and reported. 3.4.Pulsators are tested in line with manufacturer's recommendations.

ELEMENT	PERFORMANCE CRITERIA
	3.5. Working air consumption is established and matched to manufacturer's recommendations in line with industry standards.
4. Make recommendations to optimise machine performance	4.1. Test results are interpreted in line with desired performance and herd details. 4.2. Verbal recommendations backed with a written report are provided to the farmer or shed manager on safety considerations for the specific installation tested. 4.3. Written recommendations on plant performance are provided to the farmer. 4.4. Report on component condition is completed in line with manufacturer's requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- complete the necessary calculations and identify leakage and defects isolated from a machine test
- competently disassemble and reassemble milking machines and equipment
- competently operate milking machine testing equipment
- effectively communicate with the farmer or shed manager and relevant industry professionals
- access and interpret relevant industry standards
- identify and make appropriate recommendations on aspects of milking equipment and shed safety identified during equipment testing procedures
- demonstrate the use of tools and testing equipment, and in the disassembly and reassembly milking equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• the International Standards ISO 6690 - 1983 ( Mechanical Tests) and ISO5707 ( Construction and Performance) together with the Industry Standard Minimum recommendations established by the Australian Milking Machine Trade Association are the basis of testing procedures - knowledge needs to include an awareness of these documents and an ability to use and interpret their contents in a working environment</li> <li>• OHS hazards associated with milking machines and principles of risk control including machine guarding, protection from hot water or steam scalds, noise control, electrical safety in the dairy, and the responsibilities of people in the workplace</li> <li>• vacuum requirements, pulsation and the interaction between these characteristics in a milking machine</li> <li>• the components that make up milking equipment</li> <li>• how milking machines work</li> <li>• pulsation systems, e.g. difference between 2x2 or 4x1 systems</li> <li>• the effects of high or low milking machine vacuum on animal health</li> <li>• the establishment and recording of machine specifications includes a working knowledge of how to obtain and interpret manufacturer's specifications</li> <li>• environmental legislative and enterprise requirements.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• disassemble and reassemble milking machines and equipment</li> <li>• operate milking machine testing equipment</li> <li>• calculate effective reserve and vacuum pump capacity for the plant</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• measure air consumption and component leakage, and adjust vacuum to optimise performance</li> <li>• record measurements of milking machine performance</li> <li>• identify and make appropriate recommendations to the dairy manager.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Sheds may include:	<ul style="list-style-type: none"> <li>• herringbone sheds</li> <li>• rotary sheds</li> <li>• conventional sheds.</li> </ul>
Data collected for overall machine specifications may include:	<ul style="list-style-type: none"> <li>• details of vacuum pumps</li> <li>• milkline size</li> <li>• milkline fall</li> <li>• airline sizes</li> <li>• regulator detail</li> <li>• pulley and belt sizes</li> <li>• electric motor size</li> <li>• claw specifications</li> <li>• liner and cup specifications</li> <li>• shaft speeds.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Milk harvesting
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCMKH401A Carry out cleaning-time tests of milking machines

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers carrying out cleaning time tests of milking machines and defines the standard required to: implement routine cleaning procedures for milking machines; carry out mechanical tests of milking machines in accordance with industry standards; use milking equipment testing tools, gauges and equipment; and carry out cleaning-time testing procedures of milking machines in line with standard procedures and ISO standards.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to dairy technicians.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for cleaning-time testing	<p>1.1. Protocols for the conduct of cleaning-time tests are established with the farmer and other relevant advisers based on a consideration of the previous testing outcomes.</p> <p>1.2. Water quality utilised for the cleaning process is assessed through on-site, factory or laboratory testing and recorded.</p> <p>1.3. Cleaning chemicals are identified and their suitability and recommended concentrations are established in line with prevailing water quality, factory requirements and equipment manufacturer recommendations.</p> <p>1.4. Relevant factory records are accessed to establish bacteriology of the specific plant.</p>
2. Carry out cleaning-time tests of milking equipment	<p>2.1. Normal cleaning routines and procedures are identified for use whilst testing is carried out and details recorded.</p> <p>2.2. Testing equipment is installed to measure water and/or airflow velocities in line with testing requirements for the installation.</p> <p>2.3. Cleaning-time tests are carried out before or during the cleaning of the milking machines or bulk milk tank in accordance with established industry procedures.</p>
3. Report on cleaning-time test result	<p>3.1. Test results are recorded accurately using industry standard test report forms and collated.</p> <p>3.2. Test report results are interpreted in line with industry standards and manufacturer</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>recommendations.</p> <p>3.3. Test results are reported to the farmer or shed manager.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- accurately carry out mechanical tests of milking machines in accordance with industry standards
- competently use milking equipment testing tools, gauges and equipment
- interpret water quality test results
- effectively carry out cleaning-time testing procedures of milking machines in line with standard procedures and ISO standards
- efficiently implement routine cleaning procedures for milking machines
- act in a team situation to address milk quality problems
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- principles of milking machine function
- the mechanical testing of milking equipment
- milking operation and shed management
- relevant milk quality assurance programs
- dairy factory milk quality assessment procedures
- relevant bacteriology of milking equipment and factory milk quality assurance



<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>programs</p> <ul style="list-style-type: none"> <li>• cleaning and sanitation processes for milking equipment</li> <li>• aspects of water quality that affect cleaning chemicals and the cleaning process</li> <li>• the range of cleaning chemicals and compounds used for cleaning milking equipment and their action</li> <li>• Occupational Health and Safety (OHS) and environmental legislation, codes of practice and enterprise procedures.</li> </ul>
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## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• implement routine cleaning procedures for milking machines</li> <li>• carry out mechanical tests of milking machines in accordance with industry standards</li> <li>• use milking equipment testing tools, gauges and equipment</li> <li>• carry out cleaning-time testing procedures of milking machines in line with standard procedures and ISO standards.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Milking machinery may include:	<ul style="list-style-type: none"> <li>the types and models of cleaning equipment in all types and layouts of commercial dairies.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Milk harvesting
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCMKH402A Design and fabricate milking equipment installations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers design and fabrication of milking equipment installations and defines the standard required to: assess the need for livestock throughput and milk handling facilities; determine the site and design the installation for the site; incorporate animal welfare requirements and movement principles into design; incorporate appropriate safe workplace procedures for personnel into design; estimate cost of the proposed installations; and project manage the fabrication and assembly of the milking equipment installation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to milking machinery technicians.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare design and installation estimates	<p>1.1. Shed design and installation estimates to suit the application are determined and meet current industry guidelines.</p> <p>1.2. Financial and physical resources that impact on the proposed works are identified and documented.</p> <p>1.3. Occupational Health and Safety (OHS) issues affecting the design and construction of the shed and equipment are identified and addressed in design and construction planning.</p> <p>1.4. Labour and other inputs are calculated and the tender submitted.</p>
2. Plan installation	<p>2.1. Contract for work is completed with the customer including verification of material estimates and costings.</p> <p>2.2. Relevant building and planning permits are obtained in co-operation with the appropriate authorities.</p> <p>2.3. Site planning includes consideration of environmental issues, service connections and alternative power supplies.</p> <p>2.4. Required components are planned to match the proposed installation and sourced from the appropriate original equipment manufacturer.</p> <p>2.5. The installation is planned to create a safe working environment designed to eliminate hazards to people and animals during milking, cleaning or service operations.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Facilitate the completion of the installation	3.1. Job scheduling is carried out in consultation with all relevant parties. 3.2. Physical and material resources are ordered and delivery facilitated. 3.3. Co-ordination of the implementation of the milking machine installation is carried out according to the project plan. 3.4. Project management is carried out in line with the scope of the project and contract needs. 3.5. Site OHS procedures and policies are established including areas of responsibility for all the project participants and full notification provided.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- blend design standards and requirements with practical application and customer needs
- understand construction plans and specifications on machinery and equipment components of dairy installations
- safely utilise hand and power tools in a workshop and field situation
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- applicable building regulations and codes of practice
- OHS acts in the relevant state, and specifically regulations relating to plant and

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>machinery and noise</p> <ul style="list-style-type: none"> <li>• relevant industry minimum standards for the design and installation of milking equipment</li> <li>• original equipment manufacturers requirements for milking equipment installation</li> <li>• the working requirements of milking sheds including the siting of components to ensure efficient shed operation.</li> </ul>
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## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess the need for livestock throughput and milk handling facilities</li> <li>• determine the site and design the installation for the site</li> <li>• incorporate animal welfare requirements and movement principles into design</li> <li>• incorporate appropriate safe workplace procedures for personnel into design</li> <li>• estimate cost of the proposed installations</li> <li>• project manage the fabrication and assembly of the milking equipment installation.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Shed configurations may include:	<ul style="list-style-type: none"> <li>• conventional walk through</li> <li>• herringbone</li> <li>• rotary.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Milk harvesting
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCMKH403A Design and install on-farm milk cooling and storage

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers design and installation of on-farm milk cooling and storage systems and defines the standard required to: identify milk cooling and storage requirements; recognise and rectify operational faults in milk cooling and storage equipment; perform tests on cooling towers; install and maintain milk cooling and storage equipment.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to milking machinery technicians.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine cooling and storage system requirements	<p>1.1. Available water supply is identified and analysed in line with cooling requirements for quality and quantity.</p> <p>1.2. Components of the on-farm dairy milk cooling and storage requirements are identified to meet standard industry guidelines and herd and dairy factory needs.</p> <p>1.3. Design considerations, including the siting of components, are identified and recorded.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified and risks assessed in line with workplace OHS and industry standards and reported to the supervisor.</p>
2. Identify milk pre-cooling requirements	<p>2.1. Maximum peak flow of milk delivery is measured and recorded.</p> <p>2.2. Cooling water temperatures and quality are checked against design specifications.</p> <p>2.3. Available milk cooling equipment is compared to design requirements and suitable equipment selected.</p> <p>2.4. Relevant legislation including OHS and human health requirements is identified and compliance targets established.</p> <p>2.5. Water cooling system requirements are identified in line with installed equipment and available resources.</p>
3. Identify milk storage requirements	<p>3.1. Farm milk production together with projected production increases is estimated in line with the available farm management plan.</p> <p>3.2. Milk entry temperature and other critical design</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>considerations are established in consultation with the shed manager and available data.</p> <p>3.3. Vat selection is made meet shed production requirements and bulk milk collection routines.</p>
4. Install milk cooling and storage equipment	<p>4.1. Plate cooler and other components of the pre-cooling system are installed in line with established system design and industry standards.</p> <p>4.2. Vat and refrigeration equipment are installed to meet design specifications.</p> <p>4.3. Commissioning tests are completed as required to ensure that the operation of all elements of the cooling and storage equipment complies with performance targets and milk supply quality standards.</p>
5. Operate and maintain milk cooling & storage equipment	<p>5.1. Routine maintenance program requirements are completed in line with manufacturers' recommendations.</p> <p>5.2. Repair and service requirements including operational faults are identified as a structured part of maintenance routines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and assess risks
- recognise and rectify operational faults in milk cooling and storage equipment
- perform tests on cooling towers
- install and commission equipment
- complete routine maintenance
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• the components of on-farm milk pre-cooling, cooling and storage systems</li> <li>• how milk is cooled on farm</li> <li>• the effect of cooling on milk quality</li> <li>• available milk cooling and storage equipment</li> <li>• the requirements of factory based milk quality assurance programs</li> <li>• industry recognised milking equipment minimum standards</li> <li>• relevant OHS and environmental legislation, codes of practice and enterprise procedures relating to milk cooling and storage</li> <li>• applicable human health standards requirements.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify milk cooling and storage requirements</li> <li>• recognise and rectify operational faults in milk cooling and storage equipment</li> <li>• perform tests on cooling towers</li> <li>• install and maintain milk cooling and storage equipment.</li> </ul>
<p><b>Context of and specific resources for</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources</p>

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Milking machinery equipment may include:	<ul style="list-style-type: none"> <li>• farm milk cooling and storage system components covering:                             <ul style="list-style-type: none"> <li>• cooling water storage and circulation systems</li> <li>• tanks</li> <li>• pumps</li> <li>• plate coolers</li> <li>• refrigerated vats.</li> </ul> </li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Milk harvesting
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCMKH404A Install milking equipment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers installing milking equipment and defines the standard required to: interpret plans and equipment specifications; ensure that proper equipment and component matching is practised; interpret construction plans and specifications on machinery and equipment components for dairy installations; manufacture/assemble milking equipment in the workshop; fit and test milking equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to milking machinery technicians.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Order installation components	<p>1.1. Contract for work is completed with customer.</p> <p>1.2. Specified tinware is ordered in line with planned installation.</p> <p>1.3. Bending and rolling of pipe work by external contract are overseen to ensure specifications are met.</p> <p>1.4. Components are assembled in transportable sections in preparation for transfer to site.</p> <p>1.5. Specialist advice is sought for non-standard installations.</p>
2. Inspect and prepare installation site	<p>2.1. Site is checked for correct location, dimensions and levels, etc., utilising appropriate measuring equipment.</p> <p>2.2. Occupational Health and Safety (OHS) hazards are identified, risk assessed, hazards eliminated or risk controlled and risk assessment recorded.</p> <p>2.3. Non-compliance with the contract specification is reported and alterations and correction are undertaken in co-operation with the appropriate authorities.</p> <p>2.4. Installation is measured and layout marked in line with contract plans.</p>
3. Manufacture components in the workshop	<p>3.1. Vacuum pump guards and stands are manufactured according to specifications.</p> <p>3.2. Pipelines and vessels are manufactured and assembled according to installation design.</p> <p>3.3. Electrical components are pre-wired in the</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>workshop.</p> <p>3.4.Non-milking systems are completed as required in dairy plan.</p> <p>3.5.OHS hazards are identified, risks assessed and safe systems of work implemented during manufacture.</p>
4. Install equipment	<p>4.1.Machine/equipment components are prepared for correct sequential installation.</p> <p>4.2.Machine/equipment is installed in accordance with manufacturers and site specifications and in co-operation with the dairy farmer and other trade and building personnel.</p> <p>4.3.All work is carried out in accordance with appropriate legislative requirements and in compliance with Australian Standards for Milking Equipment Installation and Performance.</p> <p>4.4.OHS hazards are identified, risk assessed and safe systems of work implemented during installation.</p> <p>4.5.Routine modifications/alterations are undertaken to standard operating procedures where required.</p> <p>4.6.Machine/equipment is levelled, aligned, coupled and connected (excluding electrical components) in accordance with the specification.</p>
5. Commission test installed equipment	<p>5.1.Completed equipment is mechanically tested to ensure that it conforms to design specification and performance standards, including OHS standards.</p> <p>5.2.Equipment performing below standard is brought up to manufacturer's specifications.</p> <p>5.3.Final work quality and finish complies with established industry standards.</p> <p>5.4.Site is cleaned and cleared of all materials and debris and left in a safe state and in consideration of environmental and OHS considerations.</p> <p>5.5.All alterations/modifications are recorded and/or reported to the appropriate authority.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE



## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- identify hazards and implement safe work practices
- interpret technical data
- interpret plans and equipment specifications
- ensure that proper equipment and component matching is practised
- understand construction plans and specifications on machinery and equipment components of dairy installations
- safely utilise hand and power tools in a workshop and field situation
- use minimum standard recommendations in the assembly and installation of milking equipment
- safely use a range of hand and power tools
- be resourceful in all aspects of fitting milking equipment
- employ safe working practices and exercise duty of care whilst employed on work-sites
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- an appreciation of the function of the full range of the components of milking machines and equipment
- vacuum and the operation of pulsation systems
- international standards for milking equipment and their application in Australia in working sheds
- OHS legislation and codes of practice, in the relevant state, and specifically regulations relating to equipment, machinery and noise
- the application of dairy shed design in the field
- the mechanical testing of milking equipment installations
- original equipment manufacturer's requirements for milking equipment installation
- the working requirements of milking sheds including the siting of components to ensure efficient shed operation
- milking equipment installation standards including pipe sizing, friction loss,

**REQUIRED SKILLS AND KNOWLEDGE**

- component size selection, drainage within the equipment, bracketing, waterproofing and safety including practical design criteria for safe operation
- safe working practices in a workshop and building situation. This will include an awareness of safe lifting and manual handling practices, the safe use of hand and power tools, and duty of care to all other personnel on-site.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- interpret plans and equipment specifications
- ensure that proper equipment and component matching is practised
- interpret construction plans and specifications on machinery and equipment components for dairy installations
- manufacture/assemble milking equipment in the workshop
- fit and test milking equipment.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Milking machinery may include:	<ul style="list-style-type: none"> <li>• milking equipment</li> <li>• milk storage and cooling equipment</li> <li>• Cleaning in Place (CIP) systems.</li> </ul>
Milking equipment installed or serviced may include:	<ul style="list-style-type: none"> <li>• full shed installations</li> <li>• pipework and vessels</li> <li>• vacuum pumps</li> <li>• regulators</li> <li>• plate coolers</li> <li>• cup removers</li> <li>• cleaning systems</li> <li>• cluster and pulsation systems</li> <li>• releasers and milk transfer systems</li> <li>• non-milking systems may include:                             <ul style="list-style-type: none"> <li>• feeding systems</li> <li>• jettors</li> <li>• automatic cup removers.</li> </ul> </li> </ul>
Installations may include:	<ul style="list-style-type: none"> <li>• new milking sheds</li> <li>• be installed in existing sheds to replace old equipment.</li> </ul>

## Unit Sector(s)

Unit sector	Milk harvesting
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCMKH405A Performance test milking machines

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of completing industry recognised wet tests which are conducted with a test liquid, such as water, and milking-time tests, which are conducted with live animals in situ, and defines the standard required to: dry test milking machines in accordance with industry standards; use milking equipment testing tools, gauges and equipment; measure vacuum fluctuation in line with industry standard measuring procedures; initiate milking machine performance testing procedures; and carry out performance testing in line with standard procedures and ISO standards.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit will be carried out with minimal supervision with only general guidance sought from other industry specialists. The diagnosis and solving of milk harvesting problems and the completion of milking performance investigations may include partnerships between any or all of the following groups: milking machine technicians, veterinarians, dairy factory field officers, herd test personnel, detergent and chemical company representatives, original equipment manufacturer representatives, regulatory authority personnel, and dairy farmer or share farmer.</p>
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Wet test milking equipment	<p>1.1.Relevant mechanical testing reports and outcomes are collated as the basis for additional tests in consultation with the farmer or adviser.</p> <p>1.2.Protocols for wet testing are established to suit the individual installation requirements.</p> <p>1.3.Test equipment is installed at specific locations, as required, to complete tests according to industry standard methods and procedures.</p> <p>1.4.Vacuum levels and vacuum drop are measured and recorded and abnormalities identified.</p>
2. Carry out milking-time tests of milking equipment	<p>2.1.Protocols for the conduct of milking-time tests are established with the farmer and other relevant industry professionals based on a consideration of the previous dry or wet testing outcomes.</p> <p>2.2.Testing equipment is installed, as required, to complete agreed tests during milking.</p> <p>2.3.Milking-time tests are completed according to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>industry standard procedures in cooperation with the milking personnel and results recorded.</p> <p>2.4. Written assessment and recommendations are reported to the dairy farmer or manager.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- accurately dry test milking machines in accordance with industry standards
- competently use milking equipment testing tools, gauges and equipment
- accurately measure vacuum fluctuation in line with industry standard measuring procedures
- understand and initiate the conduct of milking machine performance testing procedures
- effectively carry out performance testing in line with standard procedures and ISO standards
- act in a team situation to address milk harvesting problems
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- effects of vacuum changes on milking machine function
- the mechanical testing of milking equipment
- the effects of machine function as they relate to teat health and condition, slow or incomplete milking, or a higher incidence of liner slipping or cluster falling
- milking operation and shed management.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• dry test milking machines in accordance with industry standards</li> <li>• use milking equipment testing tools, gauges and equipment</li> <li>• measure vacuum fluctuation in line with industry standard measuring procedures</li> <li>• initiate milking machine performance testing procedures</li> <li>• carry out performance testing in line with standard procedures and ISO standards.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Testing may include:	<ul style="list-style-type: none"> <li>• recognised wet tests</li> <li>• milking-time tests.</li> </ul>



## Unit Sector(s)

<b>Unit sector</b>	Milk harvesting
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCMOM101A Assist with routine maintenance of machinery and equipment

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers assisting with routine maintenance of machinery and equipment, and defines the standard required to: test machinery and equipment to identify faults; carry out basic repairs; complete work records and clean up work area.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking maintenance on small engine machinery including hand tools and equipment.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for basic routine maintenance	1.1. Tools and supplies required to carry out basic routine maintenance tasks are identified, selected and provided on site according to supervisor's instructions. 1.2. Routine pre-operational checks of machinery and equipment are carried out and adjustments made according to manufacturers specifications and/or enterprise procedures. 1.3. Faulty or unsafe machinery and equipment are identified and segregated for repair or replacement according to enterprise requirements. 1.4. Occupational Health and Safety (OHS) hazards in the workplace are identified and reported to the supervisor.
2. Carry out basic routine maintenance	2.1. Suitable personal protective equipment is stored, selected, used and maintained according to OHS requirements. 2.2. Greasing, lubrication and other basic servicing of machinery and equipment are carried out according to operator's manual/manufacturer's specifications and supervisor's instructions. 2.3. Routine adjustments and repairs are made to machinery and equipment according to operator manual/manufacturer's specifications and supervisor's instructions. 2.4. Work is conducted according to OHS requirements and completed to supervisor's satisfaction.
3. Complete basic	3.1. Tools are cleaned, returned to operating order and

ELEMENT	PERFORMANCE CRITERIA
routine maintenance activities	<p>stored according to manufacturer's specifications and enterprise requirements.</p> <p>3.2.Environmental procedures are followed and waste from maintenance activities is collected, treated and disposed or recycled according to enterprise requirements.</p> <p>3.3.Work area is cleaned and maintained according to OHS and enterprise requirements.</p> <p>3.4.Malfunctions, faults, wear or damage to tools are reported to the supervisor according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- demonstrate safe and environmentally responsible workplace practices
- read and interpret manufacturers specifications, work and maintenance plans, safety decals and Material Safety Data Sheets (MSDSs)
- measure and calculate volumes, consumption and lubrication requirements
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- types, characteristics and functions of machinery and equipment
- machinery and equipment testing and operating procedures
- types, characteristics and functions of tools used in maintenance of machinery and equipment
- OHS legislative requirements
- Codes of Practice with regard to the use and control of hazardous substances and/or working in confined spaces
- environmental Codes of Practice with regard to maintenance activities and disposal of fuels and oils.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• test machinery and equipment to identify faults</li> <li>• carry out basic repairs</li> <li>• complete work records</li> <li>• clean up work area.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Maintenance may involve:	<ul style="list-style-type: none"> <li>• small engine machinery including hand tools and equipment.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCMOM201A Operate two wheel motorbikes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining and operating two wheel motor bikes. It defines the standard required to: perform routine pre-operational checks and maintenance as described in the manufacturer's operator's manual; recognise and control hazards and risks; safely operate two wheel motor bikes in a range of weather and terrain conditions; monitor and maintain vehicle records.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the agriculture, horticulture and conservation and land management sectors who use two wheel motor bikes as part of daily work routines within legislative requirements and enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare a two wheel motor bike for operation	<p>1.1. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p> <p>1.2. Two wheel motor bike is safely unloaded from transport (where applicable).</p> <p>1.3. Routine checks and maintenance of two wheel motor bike is conducted prior to use according to manufacturer's specifications and enterprise requirements.</p> <p>1.4. Ensure any items that are to be transported on the bike are safely secured.</p> <p>1.5. Two wheel motor bike and equipment faults or malfunctions are identified and reported for repair according to enterprise requirements.</p> <p>1.6. Areas and applications excluded to two wheel motor bikes are identified on the enterprise safety plan.</p> <p>1.7. Appropriate licenses for operation of two wheel motor bikes are obtained where required.</p> <p>1.8. Appropriate motor cycle is selected for the rider's size and skill and the task to be completed.</p>
2. Operate a two wheel motor bike	<p>2.1. Risks to self, others and the environment are recognised and controlled according to legislative and enterprise requirements.</p> <p>2.2. Suitable personal protective equipment is selected, used and maintained according to legislative and enterprise requirements.</p> <p>2.3. Legislation and enterprise policies are complied with</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>in regards to carrying passengers.</p> <p>2.4.Hazards are identified, anticipated and controlled through the application of safe riding techniques and monitored for performance and efficiency.</p> <p>2.5.Farm two wheel motor bikes are operated in a safe and controlled manner.</p> <p>2.6.Environmental implications associated with two wheel motor bike's operation are recognised and positive enterprise environmental procedures applied where relevant.</p>
<p>3. Complete and check two wheel motor bike operation</p>	<p>3.1.Shut-down procedures are conducted according to manufacturer's specifications and enterprise requirements.</p> <p>3.2.Malfunctions, faults, irregular performance or damage to ride-on vehicle is detailed and reported according to enterprise requirements.</p> <p>3.3.Two wheel motor bikes are cleaned, secured and stored according to enterprise requirements.</p> <p>3.4.Two wheel motor bike operational reports are maintained to industry standards according to enterprise requirements.</p> <p>3.5.Two wheel motor bikes are loaded and secured for transport.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- steer, manoeuvre and position two wheel motor bikes in a smooth and controlled manner
- apply hand-eye co-ordination and body positioning to achieve stable riding
- safely operate two wheel motor bikes in a range of weather and terrain conditions
- demonstrate safe and environmentally responsible workplace practices
- read and comprehend manufacturer's specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs)

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>effectively communicate faults and hazards</li> <li>interpret and apply task instructions</li> <li>report and maintain operational records</li> <li>use literacy skills to follow sequenced written instructions and record information accurately and legibly</li> <li>use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor</li> <li>use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>hazards and risks associated with two wheel bike use</li> <li>components, controls and features of two wheel motor bikes and their functions</li> <li>range of two wheel motor bikes and attached equipment and functional applications</li> <li>operating principles and operating methods</li> <li>load limits and the principles of weight distribution with regard to load shifting and bike movement</li> <li>effects of adverse weather and terrain conditions on the operation of two wheel motor bikes</li> <li>licensing requirements</li> <li>OHS legislative requirements, codes of practice and enterprise procedures</li> <li>codes of practice with regard to the use and control of hazardous substances</li> <li>environmental codes of practice for machinery operation.</li> <li>Standard Operating Procedures (SOPs)</li> <li>record keeping requirements</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• perform routine pre-operational checks and maintenance</li> <li>• attach and operate equipment</li> <li>• recognise and control hazards and risks</li> <li>• safely operate two wheel motor bikes in a range of weather and terrain conditions</li> <li>• match and attach equipment appropriate to work requirements</li> <li>• monitor and maintain vehicle records</li> <li>• safely load and unload two wheel motor bikes.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Two wheel motor bikes may include:	<ul style="list-style-type: none"> <li>• ag bikes</li> <li>• trail bikes</li> <li>• smaller off road bikes.</li> </ul>
Two wheel motor bikes exclude:	<ul style="list-style-type: none"> <li>• quad bikes</li> <li>• side by side utility vehicles</li> <li>• motor bikes designed exclusively for bitumen on road use</li> <li>• motor cross racing bikes.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCMOM202A Operate tractors

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating tractors with or without attached equipment and defines the standard required to: carry out pre-operational checks and maintenance including tagging defects; set and secure attachments according to manufacturer's directions; operate tractor in a safe and controlled manner; implement shut-down procedures; store machinery and equipment and record maintenance and operation details.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the agriculture, horticulture or land management sectors who operate tractors under some supervision with regular checking and within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare tractor for operation	<p>1.1. Occupational Health and Safety (OHS) hazards in the work area are identified and safety concerns reported to the supervisor.</p> <p>1.2. Routine checks of tractors are conducted prior to use according to manufacturer's specifications and enterprise requirements.</p> <p>1.3. Attached equipment is identified and selected appropriate to work requirements, checked for safety and set for operation.</p> <p>1.4. Tractor and attached equipment faults or malfunctions are identified and reported for repair according to enterprise requirements.</p>
2. Operate tractor	<p>2.1. Risks to self, others and the environment are recognised and avoided according to enterprise requirements.</p> <p>2.2. Suitable personal protective equipment is used, maintained and stored according to enterprise requirements.</p> <p>2.3. Tractor is operated according to low risk operating procedures in a controlled manner and monitored for performance and efficiency.</p> <p>2.4. Environmental impacts associated with tractor operation are recognised and minimised according to directions.</p>
3. Complete and check tractor operation	<p>3.1. Shut-down procedures are conducted according to manufacturer's specifications and enterprise requirements.</p> <p>3.2. Malfunctions, faults, irregular performance or</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>damage to tractor and attached equipment is detailed and reported according to enterprise requirements.</p> <p>3.3. Tractor and attached equipment is cleaned and decontaminated where necessary, secured and stored according to enterprise and OHS requirements.</p> <p>3.4. Tractor operational reports are maintained to industry standards according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- steer, manoeuvre and position tractor in a smooth and controlled manner
- utilise the various components and controls of tractors
- set and secure equipment for operation
- safely and effectively operate tractors in adverse weather and difficult terrain conditions
- demonstrate safe and environmentally responsible workplace practices
- interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs)
- effectively communicate faults and hazards, interpret and apply task instructions, report and maintain operational records
- calculate and measure distance, volumes and weights
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- tractor components, controls and features and operational functions
- tractor steering systems and features
- attached equipment, features and operational functions and procedures
- operating principles and operating methods
- load limits and the principles of weight distribution with regard to load shifting and tractor movement
- distinguishing characteristics of individual tractors including rated power

**REQUIRED SKILLS AND KNOWLEDGE**

- effects of adverse weather and difficult terrain conditions on tractor operation
- duty of care to self, others and the environment
- use and control of hazardous substances.
- relevant legislation with regard to machinery operation and licensing requirements
- environmental Codes of Practice with regard to machinery operation
- OHS legislative requirements, Codes of Practice, hazard identification and risk assessment.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include evidence of the following:

- carry out pre-operational checks and maintenance including tagging defects
- set and secure attachments according to manufacturer's directions
- operate tractor in a safe and controlled manner
- implement shut-down procedures
- store machinery and equipment
- record maintenance and operation details.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Tractors may include:	<ul style="list-style-type: none"> <li>• two wheel drive</li> <li>• four wheel drive</li> <li>• front wheel assist tractors.</li> </ul>
Steering systems may include:	<ul style="list-style-type: none"> <li>• conventional front-wheel steering</li> <li>• all wheel steering.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCMOM203A Operate basic machinery and equipment

## Modification History

June 2012: Edit for clarity to Range Statement

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating and maintaining machinery and equipment and defines the standard required to: carry out pre-operational checks and maintenance; tag and report defects if necessary; secure attachments according to manufacturer's directions; operate machinery in a safe and controlled manner; implement shut-down and storage procedures; record maintenance and operation details.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to workers who operate and maintain machinery and equipment for agricultural, horticultural or land management enterprises. It is usually conducted within established routines, methods and procedures within enterprise guidelines.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare basic machinery and equipment for use	<p>1.1.Machinery and equipment are identified and selected in accordance with supervisor's instructions.</p> <p>1.2.Routine pre-operational checks of machinery and equipment are carried out to manufacturer's specifications and/or enterprise procedures.</p> <p>1.3.Unsafe or faulty machinery and equipment are identified and segregated for repair or replacement in line with enterprise requirements.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p>
2. Operate basic machinery and equipment	<p>2.1.Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>2.2.Machinery and equipment are operated to manufacturer's specifications and in accordance with supervisor's instructions.</p> <p>2.3.Work is completed to supervisor's satisfaction and in accordance with OHS requirements.</p> <p>2.4.Environmental implications associated with machinery operation and maintenance are identified and accounted for.</p>
3. Check, clean and store basic machinery and equipment	<p>3.1.Machinery and equipment use is detailed and recorded in accordance with enterprise requirements.</p> <p>3.2.Machinery and equipment are cleaned, secured and stored to manufacturer's specifications and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>supervisor's instructions.</p> <p>3.3. Malfunctions, faults, wear or damage to machinery and equipment are identified and reported in line with enterprise requirements.</p> <p>3.4. Workplace areas are cleaned and maintained in line with OHS and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use, maintain and store personal protective clothing and equipment
- use safe operating procedures for basic machinery and equipment
- carry out pre start checks for basic machinery and equipment
- carry out basic servicing and maintenance of basic machinery and equipment
- operate basic machinery and equipment
- recognise caution or hazard signs and symbols
- interpret tasks or information from labels, manuals or written instructions
- record information accurately or verbally report information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- pre-operational and safety checks for basic machinery and equipment
- hazards associated with the operation of basic machinery and equipment
- operating principles and operating methods for basic machinery and equipment
- procedures for cleaning, securing and storing basic machinery and equipment
- risks associated with the operation of machinery and equipment in different weather and difficult terrain conditions
- relevant State/Territory legislation, regulations and Codes of Practice with regard

**REQUIRED SKILLS AND KNOWLEDGE**

- to workplace OHS requirements, and the use and control of hazardous substances
- environmental impacts and minimisation measures associated with the operation of basic machinery and equipment
  - enterprise policies with regard to machinery and equipment use, recording and reporting routines.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out pre-operational checks and maintenance
- tag and report defects if necessary
- secure attachments according to manufacturer's directions
- operate machinery in a safe and controlled manner
- implement shut-down and storage procedures
- record maintenance and operation details.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Basic machinery and equipment may include:	<ul style="list-style-type: none"> <li>• lawn mowers</li> <li>• line cutters</li> <li>• lawn edgers</li> <li>• mechanized horticultural tillage equipment</li> <li>• motorised machinery used in landscape and turf construction projects</li> <li>• motorised machinery used in nursery production</li> <li>• pneumatic pruners and cutters</li> <li>• power tools</li> <li>• conveyors and pumps as used in agriculture, horticulture and land management.</li> </ul>
Basic machinery and equipment does not include:	<ul style="list-style-type: none"> <li>• chainsaws</li> <li>• tractors</li> <li>• vehicles</li> <li>• earth moving equipment</li> <li>• other machinery described elsewhere in these standards.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCMOM204A Undertake operational maintenance of machinery

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of undertaking operational maintenance of machinery and defines the standard required to: select and prepare tools and equipment; carry out lubrication and basic servicing; conduct basic diagnostic tests; report simple faults or report and tag more serious faults; collect, remove and recycle or dispose of wastes; maintain records of machinery maintenance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the agriculture, horticulture and land management sectors who use non-specialist skills to perform basic servicing and repairs on a range of machinery according to scheduled maintenance programs. The operational maintenance of machinery will usually follow set routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for maintenance	1.1.Maintenance plans are accessed and understood prior to undertaking maintenance work. 1.2.Tools and supplies are selected appropriate to job requirements and confirmed against maintenance plan. 1.3.Tools are inspected for serviceability and prepared for use according to manufacturer's specifications and enterprise requirements. 1.4.Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.
2. Perform scheduled maintenance	2.1.OHS hazards are identified and safety concerns reported to the supervisor. 2.2.Greasing, lubrication and other basic servicing of machinery are carried out according to manufacturer's specifications and enterprise requirements. 2.3.Equipment is adjusted according to manufacturer's specifications and enterprise requirements. 2.4.Basic diagnostic techniques are applied and

ELEMENT	PERFORMANCE CRITERIA
	<p>mechanical faults are identified and rectified according to manufacturer's specifications.</p> <p>2.5. More serious or complex faults are reported for referral according to enterprise requirements.</p>
3. Complete maintenance activities	<p>3.1. Tools are cleaned and stored according to OHS and enterprise requirements.</p> <p>3.2. Waste from maintenance activities is collected, treated and disposed or recycled according to enterprise environmental requirements.</p> <p>3.3. Work areas are cleaned, returned to operating condition and maintained according to OHS and enterprise requirements.</p> <p>3.4. Relevant information is documented according to industry and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and apply safe work practices
- use tools and equipment safely
- carry out basic servicing of machinery
- carry out basic mechanical fault finding and diagnostic tests
- refer complex mechanical faults to appropriate technician
- follow procedures to dispose of waste
- recognise caution or hazard signs and symbols
- interpret tasks or information from labels, manuals or written instructions
- record information accurately or verbally report information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• types and uses of lubricants and other commonly used servicing materials</li> <li>• operational principles of machinery including mechanical and auto-electrical systems</li> <li>• servicing characteristics of plant and equipment</li> <li>• types, characteristics, uses and limitations of hand power tools</li> <li>• functions of components of common mechanical and hydraulic systems</li> <li>• working principles of 2-stroke, 4-stroke, petrol and diesel engines</li> <li>• set-up requirements of plant and equipment, and principles of calibration</li> <li>• basic diagnostic processes and techniques</li> <li>• environmental Codes of Practice with regard to maintenance activities</li> <li>• OHS and environmental legislative and enterprise requirements and Codes of Practice</li> <li>• hazard identification and OHS procedures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select and prepare tools and equipment</li> <li>• carry out lubrication and basic servicing</li> <li>• conduct basic diagnostic tests</li> <li>• report simple faults or report and tag more serious faults</li> <li>• collect, remove and recycle or dispose of wastes</li> <li>• maintain records of machinery maintenance.</li> </ul>
<b>Context of and specific resources for</b>	Competency requires the application of work practices

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Operational maintenance of machinery may include:	<ul style="list-style-type: none"> <li>the basic operational maintenance of a range of agricultural, horticultural or land management machinery.</li> </ul>
Machinery may include:	<ul style="list-style-type: none"> <li>sprayers</li> <li>tractors</li> <li>mechanical pruners</li> <li>harvesters</li> <li>turf mowers</li> <li>rotary hoes</li> <li>chainsaws</li> <li>hedge trimmers</li> <li>winches</li> <li>vehicles</li> <li>motorcycles.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCMOM205A Operate vehicles

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining and operating vehicles and defines the standard required to: carry out routine checks and maintenance; store loads securely; drive a range of vehicles safely and defensively; record details of vehicle use and maintenance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare vehicle for use	1.1. Occupational Health and Safety (OHS) hazards in the work area are identified and reported to the supervisor. 1.2. Routine checks and maintenance of vehicle are conducted prior to use according to manufacturers specifications and enterprise requirements. 1.3. Faults or malfunctions are identified and reported for repair according to enterprise requirements. 1.4. Loads are secured according to safe operational specifications, OHS, legislative and enterprise requirements.
2. Drive vehicle	2.1. Suitable personal protective equipment is selected, used, maintained and stored according to OHS and enterprise requirements. 2.2. Vehicle is driven in a safe and controlled manner and monitored for performance and efficiency. 2.3. Driving hazards are identified, anticipated and controlled through the application of safe and defensive driving techniques. 2.4. Environmental implications associated with vehicle operation are recognised and positive enterprise environmental procedures applied where relevant.
3. Complete and record vehicle performance	3.1. Shut-down procedures are conducted according to manufacturer's specifications and enterprise requirements. 3.2. Malfunctions, faults, irregular performance or damage to vehicle is detailed and reported according to enterprise requirements. 3.3. Vehicle is cleaned and decontaminated (where necessary), secured and stored according to enterprise and OHS requirements.

ELEMENT	PERFORMANCE CRITERIA
	3.4. Vehicle operational reports are maintained to industry standards according to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- steer, manoeuvre and position vehicles in a smooth and controlled manner in on and off-road conditions
- demonstrate safe and environmentally responsible workplace practices
- obtain relevant licenses and permits
- demonstrate emergency procedures and safe driving techniques
- read and comprehend operator manuals
- effectively communicate faults, malfunctions and workplace hazards
- interpret and apply task instructions, report and maintain operational records
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- components, controls and features of vehicles and their functions
- operating principles and operating methods
- load limits and the principles of weight distribution with regard to load shifting and vehicle movement
- effects of adverse weather and terrain conditions on the operation of vehicles
- OHS legislative requirements and Codes of Practice
- Environmental Codes of Practice with regard to the operation of vehicles
- Relevant State/Territory legislation and regulations with regard to licensing, road and traffic requirements.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• carry out routine checks and maintenance</li> <li>• store loads securely</li> <li>• drive a range of vehicles safely and defensively</li> <li>• record details of vehicle use and maintenance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Vehicles may include:	<ul style="list-style-type: none"> <li>• utilities</li> <li>• four wheel drive vehicles</li> <li>• light trucks.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCMOM206A Conduct grader operations

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of conducting grader operations in an earthworks environment and describes the standard required to: operate the machine safely; operate the machine's features and attachments consistent with operator manual; carry out day to day servicing and minor maintenance.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the operation and maintenance of graders used on rural lands.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for operations	<p>1.1.Safety rules and regulations, including site rules and legislation and site specific instructions are observed.</p> <p>1.2.Pre start checks are carried out in accordance with manufacturer's and site authorised procedures.</p> <p>1.3.Briefings or hand over details are received, interpreted and clarified in accordance with site requirements.</p>
2. Operate grader	<p>2.1.Start-up, park-up, shut-down and communications procedures are carried out in accordance with manufacturers and/or site specific requirements.</p> <p>2.2.Grader controls and functions, including blade, scarifiers, articulation, wheel tilt and manoeuvring are used to complete a range of tasks.</p> <p>2.3.Safe towing of equipment and plant is carried out in accordance with the authorised equipment and/or connection capabilities.</p>
3. Carry out basic operator maintenance	<p>3.1.Inspection and fault finding are conducted in accordance with manufacturer's specifications and/or site requirements.</p> <p>3.2.Routine operational servicing, lubrication and housekeeping tasks are carried out to manufacturers and/or site requirements.</p> <p>3.3.Minor maintenance is carried out to manufacturers and/or site requirements.</p> <p>3.4.Records are maintained in accordance with site requirements.</p> <p>3.5.Vehicle washing is carried out to manufacturer's</p>

ELEMENT	PERFORMANCE CRITERIA
	specifications and/or site requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- access, interpret and apply technical information
- maintain equipment records
- use relevant hand tools
- apply problem solving techniques
- work wearing personal protective equipment
- operate graders in accordance with site/manufacturer's specifications
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- site and equipment safety requirement
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures
- problem solving techniques.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• operate the machine safely</li> <li>• operate the machine's features and attachments consistent with operator manual</li> <li>• carry out day to day servicing and minor maintenance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Type of works conducted may include	<ul style="list-style-type: none"> <li>• irrigation channels</li> <li>• shed sites</li> <li>• tracks</li> <li>• erosion control.</li> </ul>
Types of machines include:	<ul style="list-style-type: none"> <li>• all types and sizes of graders deployed in rural landscapes.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCMOM207A Conduct front-end loader operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of using front-end loaders on rural lands and defines the standard required to: operate the machine safely; operate the machine's features and attachments consistent with operator manual; carry out day to day servicing and minor maintenance.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to the operation and maintenance of front-end loaders used on rural lands.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for operations	<p>1.1.Safety rules and regulations, including site rules and legislation and site specific instructions are observed.</p> <p>1.2.Pre start checks are carried out in accordance with manufacturer's and site authorised procedures.</p> <p>1.3.Briefings or hand over details are received, interpreted and clarified in accordance with site requirements.</p>
2. Operate front-end loader	<p>2.1.Start-up, park-up, shut-down and communication procedures are carried out in accordance with manufacturers' and/or site specific requirements.</p> <p>2.2.Front-end loader operations are conducted, controlled and monitored within equipment and operational limitations.</p> <p>2.3.Safe operating practices, including operating controls, monitoring gauges and systems, conducting safety checks and use of two way radio for communication are carried out within manufacturers' and/or site specific requirements.</p> <p>2.4.Loading technique is selected and modified to appropriately meet changing work conditions which may include variable grades, work under high faces, work with varying materials, haulage units and materials handling facilities.</p> <p>2.5.Safe towing practices are demonstrated in accordance with the authorised equipment and connection capabilities.</p>
3. Carry out basic operator maintenance	<p>3.1.Inspection and fault finding are conducted in accordance with manufacturers' specifications and/or site requirements and reported.</p> <p>3.2.Routine operational servicing and lubrication tasks are carried out to manufacturers' and/or site</p>

ELEMENT	PERFORMANCE CRITERIA
	requirements. 3.3.Minor maintenance is carried out to manufacturers' and/or site requirements. 3.4.Records are maintained in accordance with site requirements. 3.5.Vehicle washing and housekeeping is carried out to manufacturers' and/or site requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- access, interpret and apply technical information
- maintain equipment records
- use relevant hand tools
- work wearing personal protective equipment
- operate front-end loaders in accordance with site/manufacturer's specifications
- recognise caution or hazard signs and symbols
- interpret tasks or information from labels, manuals or written instructions
- record information accurately or verbally report information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- site and equipment safety requirement
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• operate the machine safely</li> <li>• operate the machine's features and attachments consistent with operator manual</li> <li>• carry out day to day servicing and minor maintenance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Applications may include:	<ul style="list-style-type: none"> <li>• all types of projects on farms and rural lands.</li> </ul>
Safe operations may include:	<ul style="list-style-type: none"> <li>• safe working limits (SWL) of machine</li> <li>• moving loads</li> <li>• working with other equipment and machinery</li> <li>• working near overhead powerlines and underground facilities.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCMOM208A Conduct excavator operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating excavators to undertake earthwork operations and defines the standard required to: operate the machine's features and attachments consistent with operator manual; carry out day to day servicing and minor maintenance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the operation and maintenance of excavators.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for operations	1.1.Safety rules and regulations, including site rules and legislation and site specific instructions are observed. 1.2.Pre start checks are carried out in accordance with manufacturer's and site authorised procedures. 1.3.Briefings or hand over details are received, interpreted and clarified in accordance with site requirements.
2. Operate excavator	2.1.Start-up, park-up and shutdown and communication procedures are carried out in accordance with manufacturers' and/or site specific requirements. 2.2.Safe operating practices, identification of hazards in the workplace including operating controls, monitoring gauges and systems, conducting safety checks and use of two way radio for communication are carried out within manufacturers' and/or site specific requirements. 2.3.Operating procedures to fill and load are conducted, controlled and monitored in accordance with manufacturers and/or site procedures including those covering truck loading. 2.4.Work is carried out in accordance with the agreed plan and outcomes and within the operating capacities/manufacturer's specifications of the allocated equipment. 2.5.Operations are carried out in accordance with site quality plan and consideration of environmental impact.
3. Carry out basic operator maintenance	3.1.Inspection and fault finding are conducted in accordance with manufacturers' specifications and/or site requirements and reported. 3.2.Routine operational servicing, lubrication and housekeeping tasks are carried out to manufacturers'

ELEMENT	PERFORMANCE CRITERIA
	and/or site requirements. 3.3.Minor maintenance is carried out to manufacturers' and/or site requirements. 3.4.Vehicle washing and housekeeping is carried out to manufacturer's and/or site requirements. 3.5.Records are maintained in accordance with site requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- access, interpret and apply technical information
- maintain equipment records
- use relevant hand tools
- work wearing personal protective equipment
- operate excavators in accordance with site/manufacturer's specifications
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- site and equipment safety requirement
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures
- environmental legislation and impacts of excavator operations.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• operate the machine safely</li> <li>• operate the machine's features and attachments consistent with operator manual</li> <li>• carry out day to day servicing and minor maintenance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Type of works conducted may include:	<ul style="list-style-type: none"> <li>• irrigation channels</li> <li>• shed sites</li> <li>• farm dams</li> <li>• tracks</li> <li>• silage pits</li> <li>• erosion control</li> </ul>
Types of machines include:	<ul style="list-style-type: none"> <li>• all types and sizes of excavators deployed in rural landscapes.</li> </ul>



## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCMOM209A Conduct dozer operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of using dozers to undertake earthwork operations and defines the standard required to: operate the machine safely; operate the machine's features and attachments consistent with operator manual; carry out day to day servicing and minor maintenance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the operation and maintenance of dozers to undertake earthworks projects.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Operate dozer	<p>1.1.Start-up, park-up, shut-down and communication procedures are carried out in accordance with manufacturers' requirements.</p> <p>1.2.Dozer controls and functions, including blade tilt and pitch and ripper, are effectively used to complete a range of tasks.</p> <p>1.3.Safe towing of equipment and plant is carried out in accordance with the authorised equipment and/or connection capabilities.</p> <p>1.4.Dozers are driven onto/off low loaders in accordance with site and Occupational Health and Safety (OHS) regulations and procedures.</p>
2. Carry out basic operator maintenance	<p>2.1.Inspection and fault finding are conducted in accordance with manufacturers' specifications and/or site requirements and reported.</p> <p>2.2.Routine operational servicing, lubrication and housekeeping tasks are carried out to manufacturers' and/or site requirements.</p> <p>2.3.Minor maintenance is carried out to manufacturers' and/or site requirements.</p> <p>2.4.Records are maintained in accordance with site requirements.</p> <p>2.5.Vehicle washing is carried out to manufacturers' specifications and/or site requirements and environmental aspects.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- access, interpret and apply technical information
- maintain equipment records
- use relevant hand tools
- work wearing personal protective equipment
- operate front end loaders in accordance with site/manufacture's specifications
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- site and equipment safety requirement
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures
- environmental legislation and impacts of dozer operations.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include

<b>EVIDENCE GUIDE</b>	
	<p>achievement of the following:</p> <ul style="list-style-type: none"> <li>• operate the machine safely,</li> <li>• operate the machine's features and attachments consistent with operator manual, and</li> <li>• carry out day to day servicing and minor maintenance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Type of works conducted may include	<ul style="list-style-type: none"> <li>• irrigation channels</li> <li>• shed sites</li> <li>• farm dams</li> <li>• tracks</li> <li>• silage pits</li> <li>• erosion control.</li> </ul>
Types of machines include:	<ul style="list-style-type: none"> <li>• all types and sizes of dozers deployed in rural landscapes.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery, equipment and technology
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCMOM210A Conduct scraper operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of using scrapers to undertake earthwork operations and defines the standard required to: operate the machine safely; operate the machine's features and attachments consistent with operator manual; carry out day to day servicing and minor maintenance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the operation and maintenance of scrapers used for earthwork projects.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for operations	1.1.Safety rules and regulations, including site rules and legislation and site specific instructions are observed. 1.2.Pre start checks are carried out in accordance with manufacturer's and site authorised procedures. 1.3.Briefings or hand over details are received, interpreted and clarified in accordance with site requirements.
2. Operate scraper	2.1.Start-up, park-up, shut-down and communication procedures are carried out in accordance with manufacturers' and/or site specific requirements. 2.2.Scraper operations are conducted, controlled and monitored with equipment and operational limitations.
3. Carry out basic operator maintenance	3.1.Inspection and fault finding are conducted in accordance with manufacturers' specifications and reported. 3.2.Routine operational servicing and lubrication tasks are carried out to manufacturers' specifications. 3.3.Minor maintenance is carried out to manufacturers' and/or site requirements. 3.4.Records are maintained in accordance with site requirements. 3.5.Washing vehicle and housekeeping is carried out to manufacturer's or site requirements.

## Required Skills and Knowledge

**REQUIRED SKILLS AND KNOWLEDGE**



**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit.

**Required skills**

- identify hazards and implement safe work procedures
- access, interpret and apply technical information
- maintain equipment records
- use relevant hand tools
- work wearing personal protective equipment
- operate front end loaders in accordance with site/manufacturer's specifications
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- site and equipment safety requirement
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures
- environmental legislation and impacts of scraper operations.

**Evidence Guide**

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>operate the machine safely</li> <li>operate the machine's features and attachments consistent with operator manual</li> <li>carry out day to day servicing and minor maintenance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Type of works conducted may include:	<ul style="list-style-type: none"> <li>irrigation channels and storages</li> <li>shed sites</li> <li>farm dams.</li> </ul>
Types of machines include:	<ul style="list-style-type: none"> <li>all types and sizes of scrapers deployed in rural landscapes.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCMOM211A Operate side by side utility vehicles

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the operation of side by side utility vehicles and defines the standard required to: conduct pre and post operational checks; operate side by side utility vehicles in a safe, efficient and controlled manner; perform minor maintenance and fault finding.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to operating of side by side utility vehicles which are used for general transport, carrying loads, towing small trailers and mustering stock.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare side by side utility vehicle for use	1.1. Appropriate personnel protective equipment is used and maintained according to enterprise requirements. 1.2. Conduct routine pre-operational checks. 1.3. Replace and/or report damaged or worn components. 1.4. Identify and report potential Occupational Health and Safety (OHS) hazards. 1.5. Secure loads and ensure weight does not exceed limits. 1.6. Attach equipment and loads that do not exceed the weight limitations or change the dynamic stability of the vehicle. 1.7. Appropriate licenses for operation of vehicles are obtained where required.
2. Operate side by side utility vehicle	2.1. Operate machinery and equipment in a safe, efficient and controlled manner. 2.2. Operate side by side utility vehicles in accordance with task requirements, conditions and manufacturers operating guidelines. 2.3. Assess and minimise potential risks to self, others and the environment. 2.4. Ensure that the vehicles seat belts and other safety features are functional and used. 2.5. Environmental implications associated with side by side utility vehicle operation are recognized and positive enterprise environmental procedures applied where relevant.
3. Complete work	3.1. Follow shut down procedures.

ELEMENT	PERFORMANCE CRITERIA
	3.2. Complete operational records. 3.3. Carry out routine operator servicing. 3.4. Identify and report malfunctions, faults, irregular performance or damage.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conduct pre-operational checks
- operate machinery in a safe, efficient and controlled manner
- perform operator maintenance tasks
- attach and uncouple associated equipment
- recognise caution or hazard signs and symbols
- interpret tasks or information from labels, manuals or written instructions
- record information accurately or verbally report information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- equipment characteristics, technical capabilities and limitations
- safe riding techniques including hilly terrain and crossing waterways
- transporting the side by side utility vehicles
- manufacturer's specifications and/or workplace requirements for pre-start checks, machinery operation techniques, load carrying operator level servicing and shutdown emergency procedures
- basic diagnostic techniques
- components and controls, features and functions.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>In order to confer competency, evidence must prove that the candidate is able to:</p> <ul style="list-style-type: none"> <li>• conduct pre and post operational checks;</li> <li>• operate side by side utility vehicles in a safe, efficient and controlled manner;</li> <li>• perform minor maintenance and fault finding; and</li> <li>• give due respect to:                             <ul style="list-style-type: none"> <li>• performance criteria;</li> <li>• application of knowledge and skills;</li> <li>• human exposure to health and safety hazards;</li> <li>• environmental impacts; and</li> <li>• animal welfare.</li> </ul> </li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>The variables for this unit may include:</p>	<ul style="list-style-type: none"> <li>• side by side utility vehicles used in agricultural, horticultural or conservation land management contexts.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCMOM212A Operate quad bikes

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of maintaining and operating quad bikes (four wheeled), and defines the standard required to: perform routine pre-operational checks and maintenance; match, attach and operate equipment as described in the manufacturer's operators manual; recognise and control hazards and risks; safely operate quad bikes in a range of weather and terrain conditions; monitor and maintain vehicle records.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to workers in agriculture, horticulture and conservation and land management sectors who use quad bikes as part of daily work routines within legislative requirements and enterprise guidelines.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare a quad bike for operation	<p>1.1. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p> <p>1.2. Routine checks and maintenance of quad bike is conducted prior to use according to manufacturer's specifications and enterprise requirements.</p> <p>1.3. Attached equipment suitable for quad bikes is fitted according to manufacturer's specifications.</p> <p>1.4. Attached equipment is selected appropriate to work requirements, checked for safety, and set for operation.</p> <p>1.5. Quad bike and equipment faults or malfunctions are identified and reported for repair according to enterprise requirements.</p> <p>1.6. Areas and applications excluded to quad bikes are identified on the farm safety plan.</p> <p>1.7. Appropriate licenses for operation of vehicles are obtained where required.</p> <p>1.8. Unload quad bike safely.</p>
2. Operate a quad bike	<p>2.1. Risks to self, others and the environment are recognised and controlled according to legislative and enterprise requirements.</p> <p>2.2. Suitable personal protective equipment is selected, used and maintained according to legislative and enterprise requirements.</p> <p>2.3. Legislation and enterprise policies are complied with in regards to carrying passengers only bikes</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>specifically equipped for passengers may be used.</p> <p>2.4.Hazards are identified, anticipated and controlled through the application of safe riding techniques.</p> <p>2.5.Farm quad bikes are operated in a safe and controlled manner and monitored for performance and efficiency.</p> <p>2.6.Environmental implications associated with quad bike operation are recognised and positive enterprise environmental procedures applied where relevant.</p>
3. Complete and check quad bike operation	<p>3.1.Shut-down procedures are conducted according to manufacturer's specifications and enterprise requirements.</p> <p>3.2.Malfunctions, faults, irregular performance or damage to ride-on vehicle is detailed and reported according to enterprise requirements.</p> <p>3.3.Quad bikes are cleaned, secured and stored according to enterprise requirements.</p> <p>3.4.Quad bike operational reports are maintained to industry standards according to enterprise requirements.</p> <p>3.5.Load and secure quad bike safely.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- steer, manoeuvre and position quad bikes in a smooth and controlled manner
- apply hand-eye co-ordination and correctly transfer body weight to maintain bike stability
- safely operate quad bikes in a range of weather and terrain conditions
- match and attach equipment to quad bikes according to manufacturer's specifications, legislative requirements, work requirements and enterprise safety policy
- demonstrate safe and environmentally responsible workplace practices
- read and comprehend manufacturer's specifications, work and maintenance plans,

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<p>and Material Safety Data Sheets (MSDSs)</p> <ul style="list-style-type: none"> <li>effectively communicate faults and hazards, interpret and apply task instructions, report and maintain operational records</li> <li>use literacy skills to follow sequenced written instructions and record information accurately and legibly</li> <li>use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor</li> <li>use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>hazards and risks associated with quad bike use</li> <li>components, controls and features of quad bikes and their functions</li> <li>range of quad bikes and attached equipment and functional applications</li> <li>operating principles and operating methods</li> <li>load limits and the principles of weight distribution with regard to load shifting and bike movement</li> <li>effects of adverse weather and terrain conditions on the operation of quad bikes</li> <li>licensing requirements</li> <li>OHS legislative requirements, codes of practice and enterprise procedures</li> <li>codes of practice with regard to the use and control of hazardous substances</li> <li>environmental codes of practice for machinery operation.</li> <li>Safe Operating Procedures (SOPs)</li> <li>record keeping requirements.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance</p>

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• perform routine pre-operational checks and maintenance</li> <li>• attach and operate equipment</li> <li>• recognise and control hazards and risks</li> <li>• safely operate quad bikes vehicles in a range of weather and terrain conditions</li> <li>• match and attach equipment appropriate to work requirements</li> <li>• monitor and maintain vehicle records.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Quad bikes may include:	<ul style="list-style-type: none"> <li>• the use of quad bikes (4 wheel motor bikes) in a range of off road situations including agriculture, horticulture conservation and land management and recreational situations.</li> </ul>
Quad bikes exclude:	<ul style="list-style-type: none"> <li>• two wheel motor bikes</li> <li>• side by side utility vehicles.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCMOMB01A Coordinate machinery and equipment maintenance and repair

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of coordinating machinery and equipment maintenance and repair for a small enterprise and defines the standard required to: seek technical advice on scale of repairs required where necessary; establish priorities for work to be carried out; calculate material and resource requirements and place orders; respond to contingencies and take corrective actions where necessary; monitor and document personnel, activities, timelines and materials usage; monitor and report on activities undertaken.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in agriculture, horticulture and land management who ensure that machinery and equipment for the enterprise is maintained and repaired in a way that allows the core business of the enterprise to continue with minimal disruption.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for maintenance and repair work	1.1. Requirements of the work responsibilities are clarified with the supervisor and according to enterprise guidelines. 1.2. Equipment and material resource requirements are identified according to the scope of the coordination work and the supervisor's instructions. 1.3. The priorities for maintenance and repair activities and time allocation is identified, documented and presented to the supervisor for verification. 1.4. The environmental implications of the proposed maintenance and repair work are identified and the likely outcomes assessed and reported to the supervisor. 1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented. 1.6. Personal Protective Equipment (PPE) is selected, used and maintained according to procedures.
2. Maintain and repair machinery and	2.1. Equipment/machinery is maintained and repaired as authorised by the supervisor and according to



ELEMENT	PERFORMANCE CRITERIA
equipment	<p>enterprise guidelines and work place priorities.</p> <p>2.2. Materials to assist in maintenance and repair work are purchased, stored and/or used as required.</p> <p>2.3. Delivery of materials to the site is organised according to workplace priorities.</p> <p>2.4. Machinery and equipment is organised to be on-site in good order when they are required.</p> <p>2.5. Maintenance and repairs requiring specialist attention and work are identified and organised according to enterprise guidelines.</p>
3. Co-ordinate and report on maintenance and repair activities	<p>3.1. Resources are coordinated and timed to suit the maintenance and repair activities and priority of work.</p> <p>3.2. Operators are informed of appropriate use and their responsibilities in respect to operational maintenance requirements of machinery and equipment.</p> <p>3.3. Personnel, activities, timelines and materials usage are monitored and documented according to enterprise guidelines.</p> <p>3.4. Contingency situations are recognised and reported to the supervisor and corrective actions taken according to enterprise guidelines.</p> <p>3.5. A simple report is written to inform management of maintenance and repair activities undertaken and completed.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- implement safe work procedures and ensure a safe workplace
- read and interpret documentation associated with work site activities
- calculate material and resource requirements
- co-ordinate a team to achieve optimum performance
- document results clearly and concisely
- perform an OHS risk assessment

## REQUIRED SKILLS AND KNOWLEDGE

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- work schedule programming
- possible causes of disruption to work activities and their effect on quality and time schedules
- responsibilities and requirements for maintaining and repairing machinery and equipment
- the range, use and availability of materials, equipment and machinery that may be required for the project
- environmental awareness associated with undertaking maintenance and repair work on machinery and equipment to ensure the impact on the environment is minimal
- OHS issues, legislative requirements and codes of practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- seek technical advice on scale of repairs required where necessary
- establish priorities for work to be carried out
- calculate material and resource requirements and place orders
- respond to contingencies and take corrective actions

<b>EVIDENCE GUIDE</b>	
	<p>where necessary</p> <ul style="list-style-type: none"> <li>• monitor and document personnel, activities, timelines and materials usage</li> <li>• monitor and report on activities undertaken.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Hazards may include:	<ul style="list-style-type: none"> <li>• disturbance of services</li> <li>• solar radiation</li> <li>• dust</li> <li>• noise</li> <li>• through traffic</li> <li>• uneven surfaces and holes</li> <li>• moving machinery and machinery parts</li> <li>• powered equipment and hand tools</li> <li>• hazards from use of hired equipment</li> <li>• overhead hazards including powerlines.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCMOM302A Perform machinery maintenance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the process of maintaining machinery and equipment that is used principally in agriculture, horticulture, and conservation and land management work and defines the standard required to: carry out engine/equipment checks according to operator manuals and enterprise requirements; carry out lubrication and replacement of oils and filters according to operator manuals; carry out transmission checks, including drive and steering clutches and oil levels; check machinery and equipment components for wear and tear, and replace, tag and report defects if necessary; dispose of replaced parts and oils according to legislation and enterprise procedures; and record all details of maintenance and requirements for monitoring.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to workers in agriculture, horticulture and land management who ensure that machinery and equipment for the enterprise is maintained in a way that allows the core business of the enterprise to continue with minimal disruption. Some problem solving and organisational skills are also required.</p>
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out engine/equipment checks	<p>1.1. Timed and regular engine equipment checks are carried out on specialised machinery and equipment as specified in operator manuals.</p> <p>1.2. All relevant grease or lubricant points are lubricated according to manufacturer specifications.</p> <p>1.3. Oils and filters are changed at intervals prescribed in operator manuals.</p> <p>1.4. Hydraulic hoses and systems checked for deterioration and defects actioned in line with supervisor's instructions.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented.</p>
2. Carry out transmission checks	<p>2.1. Drive and steering clutches are checked for operation and adjustment in line with operator manual.</p> <p>2.2. Transmission oil levels are checked in line with</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>operator manual.</p> <p>2.3.Tracks/wheels and undercarriage are checked for oil leaks and wear.</p> <p>2.4.Faulty seals or leaks are identified and corrective actions taken according to operator's instructions.</p> <p>2.5.Machine is regularly cleaned as an integral part of maintenance checks.</p>
3. Maintain components and attachments	<p>3.1.Personal protective equipment (PPE) is selected, used and maintained according to procedures.</p> <p>3.2.Machine operational replacement wear components are checked for wear and condition.</p> <p>3.3.Worn or unserviceable replacement components are replaced as part of daily routines.</p> <p>3.4.Component inspection and replacement activities are completed safely following enterprise and industry guidelines.</p> <p>3.5.Moving operational components are checked for wear and condition and adjusted to the tolerances specified in operator manuals where applicable.</p> <p>3.6.Work areas are cleaned, returned to operating condition and maintained according to enterprise and OHS requirements.</p>
4. Record maintenance	<p>4.1.Identified faults and defects are recorded in machine record.</p> <p>4.2.Maintenance procedures including duplicates usage are recorded in workshop record.</p> <p>4.3.Service or repair requirements are reported and actioned according to prescribed procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- carry out engine/equipment checks
- carry out transmission checks

## REQUIRED SKILLS AND KNOWLEDGE

- replace parts and carry out lubrication required at servicing
- maintain machinery and equipment components
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- engine function principles
- turbo charging and after cooling
- assessing engine specifications in line with power requirements
- all engine electric and hydraulic indicators and gauges
- transmission and drive systems
- machinery and equipment operation principles
- environmental impacts of machinery servicing and legislation covering disposal of fuels, oils and other wastes
- OHS and environmental legislation, enterprise requirements and codes of practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out engine/equipment checks according to operator manuals and enterprise requirements



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• carry out lubrication and replacement of oils and filters according to operators manual</li> <li>• carry out transmission checks including drive and steering clutches and oil levels</li> <li>• check machinery and equipment components for wear and tear, and replace, tag and report defects, if necessary</li> <li>• dispose of replaced parts and oils according to legislation and enterprise procedures</li> <li>• record all details of maintenance and requirements for monitoring.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of machinery may include:	<ul style="list-style-type: none"> <li>• machinery and equipment that is used on diverse agricultural, horticultural and rural enterprises. This includes: <ul style="list-style-type: none"> <li>• heavy earthmoving equipment</li> <li>• tractors</li> <li>• vehicles and trucks</li> <li>• skid steer loaders</li> <li>• self-propelled harvesters and pickers</li> <li>• front end loaders</li> <li>• forklifts</li> <li>• land levellers</li> <li>• pumps</li> <li>• grain handling equipment.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCMOMB04A Operate machinery and equipment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining and operating machinery and equipment and defines the standard required to: carry out pre-operational checks and maintenance and report defects if necessary; secure attachments according to manufacturer's directions; operate machinery in a safe and controlled manner; follow procedures to minimise environmental impacts; implement shut-down procedures and store machinery and equipment; record maintenance and operation details.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in agriculture, horticulture and land management who operate machinery and equipment for the enterprise. The unit is likely to be carried out under limited supervision with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare machinery and equipment for use	1.1. Machine and equipment is selected appropriate to job requirements and confirmed against a work plan. 1.2. Routine pre-operational checks of machinery and equipment are carried out to manufacturer's specifications and enterprise requirements. 1.3. Equipment is securely attached and calibrated for operation to manufacturer's specifications. 1.4. Faulty machinery and equipment is identified, safety tagged, and reported to supervisor according to enterprise requirements. 1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented.
2. Operate machinery and equipment	2.1. Machinery and equipment is operated in a safe and controlled manner, and monitored for performance and efficiency. 2.2. Risk to self, others and the environment are recognised and minimised according to enterprise and OHS requirements. 2.3. Personal Protective Equipment (PPE) is selected, used and maintained according to procedures. 2.4. Environmental implications associated with machinery operation are identified, assessed and taken into account.

ELEMENT	PERFORMANCE CRITERIA
3. Check and complete machinery and equipment operation	3.1.Machinery and equipment shut-down procedures are carried out to manufacturer's specifications and enterprise requirements. 3.2.Machinery and equipment operational records are maintained according to enterprise requirements. 3.3.Machinery and equipment damage, malfunctions or irregular performance are recorded and/or reported according to enterprise requirements. 3.4.Machinery and equipment is cleaned, secured and stored according to manufacturer's specifications and enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- complete pre-operational checks
- recognise and report defects
- operate machinery and equipment to industry standards
- demonstrate safe and environmentally responsible workplace practices
- read and interpret manufacturer's specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs)
- interpret and apply instructions, communicate with work team and supervisor, record and report equipment faults, workplace hazards, and accidents
- measure and calculate volumes, consumption and servicing requirements
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturers specifications for servicing of machinery and equipment
- operating principles and operating methods for machinery and equipment
- principles of weight distribution with regard to load shifting and machinery movement
- procedures for cleaning, securing and storing machinery, equipment and materials
- potential risks and hazards associated with the operation of machinery and

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
equipment <ul style="list-style-type: none"> <li>• use of hazardous substances</li> <li>• environmental impacts and minimisation measures associated with the operation of machinery and equipment</li> <li>• OHS and environmental legislation, regulations and Codes of Practice</li> <li>• relevant State/Territory legislation, regulations and Codes of Practice with regard to licensing, roads and traffic requirements.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• carry out pre-operational checks and maintenance and report defects if necessary</li> <li>• secure attachments according to manufacturer's directions</li> <li>• operate machinery in a safe and controlled manner</li> <li>• follow procedures to minimise environmental impacts</li> <li>• implement shut-down procedures and store machinery and equipment</li> <li>• record maintenance and operation details</li> <li>• evidence records must include details of the machinery and equipment that the candidate was assessed on.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Machinery and equipment may include:	<ul style="list-style-type: none"> <li>• hydraulic equipment</li> <li>• stationary engines</li> <li>• spraying equipment</li> <li>• mulching and chipping equipment</li> <li>• powered trailers and three point linkage equipment</li> <li>• excludes chainsaws, tractors, vehicles and earth moving equipment.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCMOMB305A Operate specialised machinery and equipment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the operation of specialised machinery and equipment and defines the standard required to: prepare and operate the machinery in accordance with manufacturer's specifications; operate the machinery in a safe, efficient and controlled manner; conduct pre and post operational checks; perform minor maintenance and fault finding; record work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in agriculture, horticulture and land management who operate specialised machinery and equipment for the enterprise. A high level of individual responsibility is involved, depending on the level and nature of risk involved and the project. This unit does not cover machinery and equipment described elsewhere in the AHC10 standards at the AQF 3 level.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select and prepare specialised machinery and equipment for use	<p>1.1. Specialised machinery and equipment is selected and prepared to job requirements and confirmed against work plan.</p> <p>1.2. Routine pre-operational checks of specialised machinery and equipment are completed to manufacturer's specifications and enterprise requirements.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented.</p>
2. Operate specialised machinery and equipment	<p>2.1. Machinery and equipment is operated in a safe and controlled manner and monitored for performance and efficiency.</p> <p>2.2. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly.</p> <p>2.3. Personal Protective Equipment (PPE) is selected, used and maintained according to procedures.</p> <p>2.4. Environmental implications associated with machinery operation are identified, assessed and reported to the supervisor.</p>
3. Complete and report on specialised machinery and	<p>3.1. Shut-down procedures for specialised machinery and equipment are completed to manufacturer's specifications and enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
equipment operation	<p>3.2. Specialised machinery and equipment operational records are completed and maintained according to enterprise requirements.</p> <p>3.3. Malfunctions, faults, irregular performance and damage to specialised machinery and equipment are detailed and reported according to enterprise requirements.</p> <p>3.4. Specialised machinery and equipment is cleaned, secured and stored according to OHS and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- select the appropriate machinery and equipment for the work plan
- determine and check operating methods with management
- carry out pre-operational checks on machinery
- examine faults or breakdowns and specify repairs
- use machinery or equipment in a safe and controlled manner to perform specific tasks by utilising the various components, controls and features
- maintain and monitor performance and maintenance records
- use environmentally responsible practices for operation of machinery and equipment, and to dispose of used oils and machinery parts
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturer's requirements and/or workplace requirements for:

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• pre-operational checks</li> <li>• machinery operation techniques</li> <li>• operator level servicing</li> <li>• shutdown</li> <li>• emergency procedures</li> <li>• basic diagnostic techniques</li> <li>• equipment characteristics, technical capabilities and limitations</li> <li>• components and controls features and functions</li> <li>• OHS and environmental legislation, Codes of Practice and enterprise requirements</li> <li>• licensing requirements for machinery.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare and operate the machinery in accordance with manufacturer specifications</li> <li>• operate the machinery in a safe, efficient and controlled manner</li> <li>• conduct pre and post operational checks</li> <li>• perform minor maintenance and fault finding</li> <li>• record work activities</li> <li>• Evidence records must include a description of the machinery and equipment that the candidate was assessed on.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or</p>

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Machinery and equipment may include:	<ul style="list-style-type: none"> <li>• feed mixers</li> <li>• specialised turf equipment</li> <li>• specialised nursery equipment</li> <li>• livestock feeding systems</li> <li>• filtering and pumping equipment</li> <li>• poultry performance monitoring equipment</li> <li>• fertilising application</li> <li>• grain handling equipment.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCMOMB06A Ground spread fertiliser and soil ameliorant

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit standard covers the process of spreading fertiliser and soil ameliorants according to environmentally sound practices to meet customer requirements and industry standards and defines required to: assess environmental and physical hazards that may be encountered when ground spreading and take appropriate action to minimise these risks; maintain and operate spreading equipment to meet industry standards for uniformity of application; maintain and operate spreading equipment to meet Occupational Health and Safety (OHS) requirements; apply fertiliser or soil ameliorants at rate agreed by customer to specified land area.
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### Application of the Unit

<b>Application of the unit</b>	This unit is carried out under limited or independently and follows established enterprise procedures and the requirements of the land owner. The work may be performed as part of a team. If load-shifting equipment is required then appropriate training/certification must be provided according to state and territory safety and licensing requirements
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Confirm customer requirements.	<p>1.1. Confirmation is sought from customer that fertiliser or soil ameliorant products to be spread are those that were ordered.</p> <p>1.2. Verification is obtained from customer that technical specification of product is acceptable for job.</p> <p>1.3. Customer's written fertiliser order is confirmed with customer and documented to enable trace back to depot or factory if required.</p> <p>1.4. Agreement for spreading services is documented according to enterprise or industry codes of practice.</p>
2. Identify features of the target area.	<p>2.1. Location and boundaries of area to be treated are identified, agreed with customer and recorded according to relevant industry codes of practice.</p> <p>2.2. Soil type and condition are assessed visually or advice is sought from customer.</p> <p>2.3. Environmentally sensitive areas are identified and operations are planned to ensure minimum adverse impact and to comply with any required buffer zones.</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>2.4. Features that may present a hazard to the operation are identified by inspection and by discussion with customer and appropriate action is taken.</p> <p>2.5. Location of services and utilities are identified from customer advice or local maps, and proposed spreading operation is adjusted if required.</p> <p>2.6. Local weather and climate conditions are identified and taken into account when preparing to begin operations.</p>
3. Perform pre-spreading checks.	<p>3.1. Rate of spreading is determined and buffer allowance is calculated.</p> <p>3.2. Before being moved onto site, machinery and equipment are confirmed to be clean of soil and/or plant material.</p> <p>3.3. Machinery and equipment are prepared according to enterprise procedures and manufacturer instructions to ensure they are serviceable and are set up and calibrated.</p>
4. Spread fertiliser	<p>4.1. Personal Protective Equipment (PPE) and clothing are selected and used by self and all personnel involved in spreading tasks.</p> <p>4.2. Fertiliser or soil ameliorant is applied in a manner that complies with guidelines on buffer zones, to minimise run-off into waterways and drains.</p> <p>4.3. Weather and other conditions are monitored to ensure that variations that may alter limits to operation are taken into account, and that operations are adjusted accordingly.</p> <p>4.4. Any existing site quarantine or biosecurity protocols are followed as required.</p> <p>4.5. All work is monitored to ensure that it is performed in an environmentally aware and safe manner and according to industry codes of practice.</p>
5. Perform follow up and clean-up activities on completion of spreading operations	<p>5.1. Machinery, equipment and hand tools are returned to depot or storage area after cleaning, checking for future serviceability, and carrying out basic preventative maintenance according to enterprise procedures.</p> <p>5.2. Faults are noted for remedial action.</p> <p>5.3. Records are completed legibly and accurately, according to enterprise procedures and industry codes of practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe work procedures
- communicating with clients to ensure a common understanding of task to be performed
- monitoring and recording activities performed
- operating equipment according to manufacturer recommendations and in line with equipment calibration
- using maps and interpreting written instructions regarding areas to be spread, and products and rates to be applied
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- equipment being used and understanding of appropriate service and safety checks
- environmental risks and how to identify and manage them
- operational limits of equipment being used with regard to uniformity of application and health and safety risks
- spreading characteristics of different fertiliser and soil ameliorant products.
- environmental impacts of fertiliser spreading including hazards to waterways
- OHS hazards including operating in rough or steep terrain.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess environmental and physical hazards that may be encountered when ground spreading and take appropriate action to minimise these risks</li> <li>• maintain and operate spreading equipment to meet industry standards for uniformity of application</li> <li>• maintain and operate spreading equipment to meet health and safety requirements</li> <li>• apply fertiliser or soil ameliorants at rate agreed by customer to specified land area.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Equipment and products may include:	<ul style="list-style-type: none"> <li>• all ground spreading machinery and equipment.</li> </ul>
Products to be spread include:	<ul style="list-style-type: none"> <li>• chemical and organic fertilisers, composts, lime and dolomite.</li> </ul>
Equipment must include	<ul style="list-style-type: none"> <li>• the tractors or other drive equipment used in the operation.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCMOMB07A Operate a cane harvester

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing and operating a cane harvester in the sugar cane production industry and defines the standard required to: conduct pre-start and shut-down procedures; communicate and co-operate with other personnel such as haul-out drivers; control cane spillage; demonstrate emergency driving procedures; effectively sterilise the harvester to prevent cross-property contamination; maintain operational records.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to correctly setting-up, calibrating and operating a cane harvester to maximise sustainable cane production. The work is likely to be carried out under routine supervision within enterprise guidelines.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare a cane harvester for operation	<p>1.1. Routine pre-operational checks of cane harvester are completed to manufacturer's specifications and enterprise requirements.</p> <p>1.2. Cabin drill is carried out according to enterprise instructions and safety routines.</p> <p>1.3. Potential and existing hazards in the workplace are recognised, risks assessed and controlled according to Occupational Health and Safety (OHS) requirements.</p> <p>1.4. Suitable personal protective equipment is selected, used and maintained according to OHS requirements.</p> <p>1.5. Crop class, variety and field for harvest is correctly located and selected.</p>
2. Carry out cane harvesting	<p>2.1. Harvester is set and operated in a safe, controlled and correct manner and monitored for performance and efficiency.</p> <p>2.2. Harvester is operated in co-ordination with haul out vehicles and other associated harvesting equipment.</p> <p>2.3. Cane is harvested in a productive, safe and controlled manner and correctly consigned.</p> <p>2.4. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly.</p> <p>2.5. Environmental implications associated with cane harvesting are identified, assessed and reported to the supervisor.</p>
3. Complete cane	3.1. Shut-down procedures for cane harvester are

ELEMENT	PERFORMANCE CRITERIA
harvesting operations	<p>completed to manufacturer's specifications and enterprise requirements.</p> <p>3.2. Harvester is sterilised at scheduled times according to operators manual and enterprise requirements.</p> <p>3.3. Records are completed and maintained according to enterprise requirements.</p> <p>3.4. Malfunctions, faults, irregular performance and damage to cane harvester are identified, detailed and reported according to enterprise requirements.</p> <p>3.5. Cane harvester is cleaned, secured and stored according to OHS and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- readily familiarise self with local conditions
- perform routine safety, basic service and maintenance procedures on cane harvesters
- demonstrate emergency operating procedures
- obtain licenses and permits
- demonstrate safe and environmentally responsible workplace practices
- read and interpret property maps, operators manuals, manufacturers specifications, work and maintenance plans, and MSDS
- communicate faults, malfunctions and workplace hazards, report and maintain operational records
- comprehend and apply task instructions
- measure and calculate volumes, feed rates, consumption and servicing requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• components, controls and features of cane harvesters and their functions</li> <li>• operating principles and operating methods for cane harvesters</li> <li>• cane harvester processes and spillage minimisation techniques</li> <li>• legislative requirements with regard to licensing</li> <li>• harvest and haulage processes and procedures</li> <li>• principles of the safe removal of obstacles from harvesters and adjustment of harvester settings</li> <li>• OHS and environmental protection legislation, codes of practice and enterprise procedures</li> <li>• environmental impacts and minimisation measures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• conduct pre-start and shut-down procedures</li> <li>• communicate and co-operate with other personnel such as haul-out drivers</li> <li>• control cane spillage</li> <li>• demonstrate emergency driving procedures</li> <li>• effectively sterilise the harvester to prevent cross-property contamination</li> <li>• maintain operational records.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Hazards may include:	<ul style="list-style-type: none"> <li>• disturbance of services</li> <li>• solar radiation</li> <li>• dust</li> <li>• noise</li> <li>• through traffic</li> <li>• uneven surfaces and holes</li> <li>• moving machinery and machinery parts</li> <li>• overhead hazards including powerlines.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCMOM308A Operate broadacre and row crop harvest machinery and equipment

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating broadacre or row crop harvesting machinery and equipment and defines the standard required to: pre and post operational check operate machinery and equipment in a safe, efficient and controlled manner; perform minor maintenance and fault finding; record work activities.
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## Application of the Unit

<b>Application of the unit</b>	This unit requires a high level of individual responsibility for the care and efficient operation of the equipment, the quality of output harvested, and the potential operating hazards involved.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare machinery for use	1.1. Select and use appropriate personnel protective equipment. 1.2. Conduct routine pre-operational checks and house keeping tasks. 1.3. Replace and/or report damaged or worn components. 1.4. Identify and report potential Occupational Health and Safety (OHS) hazards. 1.5. Identify and report potential environmental implications. 1.6. Attach ancillary equipment and check for correct operation.
2. Operate machinery and equipment	2.1. Operate machinery and equipment in a safe, efficient and controlled manner. 2.2. Operate machinery in accordance with task requirements, conditions and manufacturers operating guidelines. 2.3. Monitor machinery performance and efficiency and make adjustments as required. 2.4. Assess and minimise potential risks to self, others and the environment.
3. Complete work	3.1. Follow shut down procedures. 3.2. Complete operational records. 3.3. Carry out routine operator servicing. 3.4. Identify and report malfunctions, faults, irregular performance or damage.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conduct pre-operational checks
- operate machinery in a safe, efficient and controlled manner
- perform operator maintenance tasks
- attach and uncouple associated equipment.
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturer's requirements and/or workplace requirements for:
  - pre-operational checks
  - machinery operation techniques
  - operator level servicing
  - shutdown
  - emergency procedures
  - basic diagnostic techniques
  - equipment characteristics, technical capabilities and limitations
  - components and controls features and functions

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• conduct pre and post operational checks</li> <li>• operate machinery and equipment in a safe, efficient and controlled manner</li> <li>• perform minor maintenance and fault finding</li> <li>• record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of machinery and equipment may include:	<ul style="list-style-type: none"> <li>• machinery and equipment used in harvesting broadacre or row crops.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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# AHCMOM309A Operate broadacre sowing machinery and equipment

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating broadacre sowing machinery and equipment and defines the standard required to: conduct pre and post operational checks; operate broadacre sowing machinery and equipment in a safe, efficient and controlled manner; perform minor maintenance and fault finding; record work activities.
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## Application of the Unit

<b>Application of the unit</b>	This unit requires a high level of individual responsibility for the care and efficient operation of the equipment, the accurate seed placement required for optimal production, and the operating hazards involved.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare machinery for use	<p>1.1. Select and use appropriate personnel protective equipment.</p> <p>1.2. Conduct routine pre-operational checks and house keeping tasks.</p> <p>1.3. Replace and/or report damaged or worn components.</p> <p>1.4. Identify and report potential Occupational Health and Safety (OHS) hazards.</p> <p>1.5. Identify and report potential environmental implications.</p> <p>1.6. Attach ancillary equipment and check for correct operation.</p>
2. Operate machinery and equipment	<p>2.1. Operate machinery and equipment in a safe, efficient and controlled manner.</p> <p>2.2. Operate machinery in accordance with task requirements, conditions and manufacturers operating guidelines.</p> <p>2.3. Monitor machinery performance and efficiency and make adjustments as required.</p> <p>2.4. Assess and minimise potential risks to self, others and the environment.</p>
3. Complete work	<p>3.1. Follow shut down procedures.</p> <p>3.2. Complete operational records.</p> <p>3.3. Carry out routine operator servicing.</p> <p>3.4. Identify and report malfunctions, faults, irregular performance or damage.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- conduct pre-operational checks
- operate machinery in a safe, efficient and controlled manner
- perform operator maintenance tasks
- attach and uncouple associated equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturer's requirements and/or workplace requirements for:
- pre-operational checks
- machinery operation techniques
- operator level servicing
- shutdown
- emergency procedures
- basic diagnostic techniques
- equipment characteristics, technical capabilities and limitations
- components and controls features and functions.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• conduct pre and post operational checks</li> <li>• operate broadacre sowing machinery and equipment in a safe, efficient and controlled manner</li> <li>• perform minor maintenance and fault finding</li> <li>• record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of crops to be sown may include:	<ul style="list-style-type: none"> <li>• grains</li> <li>• non-permanent horticultural crops.</li> </ul> <p>It does not cover row crops.</p>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCMOMB310A Operate land-forming machinery and equipment

## Modification History

Not Applicable

## Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of operating land forming machinery and equipment and defines the standard required to: operate land forming machinery and equipment in a safe, efficient and controlled manner; conduct pre and post operational checks; perform minor maintenance and fault finding; record work activities.</p>
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## Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to the operation of land forming machinery and related equipment. Work is carried out with limited supervision and there is some requirement to make decisions and deal with contingencies. A level of technical understanding is required to use equipment for efficient land-forming operations which achieve the required environmental outcomes.</p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare machinery for use	1.1. Select and use appropriate personnel protective equipment. 1.2. Conduct routine pre-operational checks and house keeping tasks. 1.3. Replace and/or report damaged or worn components. 1.4. Identify and report potential Occupational Health and Safety (OHS) hazards. 1.5. Identify and report potential environmental implications. 1.6. Attach ancillary equipment and check for correct operation.
2. Operate machinery and equipment	2.1. Operate machinery and equipment in a safe, efficient and controlled manner. 2.2. Operate machinery in accordance with task requirements, conditions and manufacturers operating guidelines. 2.3. Monitor machinery performance and efficiency and make adjustments as required. 2.4. Assess and minimise potential risks to self, others and the environment.
3. Complete work	3.1. Follow shut down procedures. 3.2. Complete operational records. 3.3. Carry out routine operator servicing. 3.4. Identify and report malfunctions, faults, irregular

ELEMENT	PERFORMANCE CRITERIA
	performance or damage.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- conduct pre-operational checks
- operate machinery in a safe, efficient and controlled manner
- perform operator maintenance tasks
- attach and uncouple associated equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturer's requirements and/or workplace requirements for:
- pre-operational checks
- machinery operation techniques
- operator level servicing
- shutdown
- emergency procedures
- basic diagnostic techniques
- equipment characteristics, technical capabilities and limitations
- components and controls features and functions including precision controls
- general land forming concepts and practices including:
- contouring, surface drainage and erosion
- slope requirements
- survey and set out.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• operate land forming machinery and equipment in a safe, efficient and controlled manner</li> <li>• conduct pre and post operational checks</li> <li>• perform minor maintenance and fault finding</li> <li>• record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of machinery and equipment may include:	<ul style="list-style-type: none"> <li>• machinery and equipment used to reshape the surface of land to planned grades.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCMOMB311A Operate precision control technology

## Modification History

Not Applicable

## Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the operation of precision technology used in the control of specialised machinery and equipment and defines the standard required to: conduct pre- and post-operational checks; operate precision control technology; perform minor maintenance and fault finding; and record work activities.</p>
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## Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit is used to optimise specialised machinery performance. It is likely to be carried out under limited supervision within enterprise guidelines. A level of technical understanding is required to make best use of the equipment and recognise operating faults and anomalies.</p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare precision technology for use	1.1. Complete routine pre-operational checks in accordance manufacturer specifications. 1.2. Carry out and record minor routine servicing and house keeping tasks. 1.3. Identify and report Occupational Health and Safety (OHS) hazards. 1.4. Check ancillary equipment for correct operation. 1.5. Check that data complies with job specifications.
2. Use precision technology	2.1. Operate technology in accordance with task requirements, conditions and manufacturer operating guidelines. 2.2. Monitor activities to ensure that machinery is operating in an efficient and controlled manner and make adjustments as required. 2.3. Assess and minimise potential risks to self, others and the environment during operation.
3. Complete work	3.1. Follow shutdown procedures. 3.2. Download data and/or complete operational records. 3.3. Perform basic diagnostic procedures. 3.4. Identify and report malfunctions, faults and irregular performance.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conduct pre-operational checks
- use technology to operate machinery in an efficient and controlled manner
- perform routine maintenance tasks
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturer specifications and requirements for:
  - pre-operational checks
  - precision instrument controls, feature and functions
  - minor servicing
- uploading and downloading of data
- basic diagnostic techniques
- characteristics, technical capabilities and limitations of associated machinery and equipment
- components and controls features and functions.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• conduct pre- and post-operational checks</li> <li>• operate precision control technology</li> <li>• perform minor maintenance and fault finding</li> <li>• record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The types of machinery and equipment may include:	<ul style="list-style-type: none"> <li>• on-board and fixed precision control technology.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCMOMB312A Operate row crop planting and seeding machinery and equipment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the operation of row crop planting and seeding machinery and equipment and defines the standard required to: conduct pre and post operational checks; operate planting and seeding machinery and equipment in a safe, efficient and controlled manner; perform minor maintenance and fault finding; record work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in production horticulture and agriculture and requires a high level of individual responsibility for the care and efficient operation of the equipment, the accurate seed or plant placement required for optimal production, and the potential operating hazards involved.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare machinery for use	<p>1.1. Occupational Health and Safety (OHS) hazards for working with machinery are identified, risks assessed and risk controls are implemented.</p> <p>1.2. Appropriate personnel protective equipment is selected, used and maintained.</p> <p>1.3. Routine pre-operational checks and house keeping tasks are conducted.</p> <p>1.4. Damaged or worn components are replaced and/or reported.</p> <p>1.5. Ancillary equipment and check for correct operation is attached.</p>
2. Operate machinery and equipment	<p>2.1. Machinery and equipment is operated in a safe, efficient and controlled manner.</p> <p>2.2. Machinery is operated in accordance with task requirements, conditions and manufacturer's operating guidelines.</p> <p>2.3. Machinery performance and efficiency is monitored and adjustments made as required.</p> <p>2.4. Potential environmental risks of operating sowing equipment are assessed and minimised.</p>
3. Complete work	<p>3.1. Shut down procedures are followed.</p> <p>3.2. Operational records are completed.</p> <p>3.3. Routine operator servicing is carried out.</p> <p>3.4. Malfunctions, faults, irregular performance or</p>

ELEMENT	PERFORMANCE CRITERIA
	damage are identified and reported.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- conduct pre-operational checks
- operate machinery in a safe, efficient and controlled manner
- follow planting requirements
- perform operator maintenance tasks
- attach and uncouple associated equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturer's requirements and/or workplace requirements for:
- pre-operational checks
- machinery operation techniques
- operator level servicing
- shutdown
- emergency procedures
- precision agriculture and controlled traffic
- basic diagnostic techniques
- equipment characteristics, technical capabilities and limitations
- components and controls features and functions
- OHS legislation and requirements for operators
- risks to environment from operating sowing equipment for row crops.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• conduct pre and post operational checks</li> <li>• operate planting and seeding machinery and equipment in a safe, efficient and controlled manner</li> <li>• perform minor maintenance and fault finding</li> <li>• record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Type of machinery may include:	<ul style="list-style-type: none"> <li>• machinery and equipment used in establishing row planted crops.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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# AHCMOM313A Operate mobile irrigation machinery and equipment

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating mobile irrigation machinery and equipment and defines the standard required to: conduct pre and post operational checks; operate mobile irrigation machinery and equipment in a safe, efficient and controlled manner; perform minor maintenance and fault finding; record work activities.
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## Application of the Unit

<b>Application of the unit</b>	This unit requires a high level of individual responsibility for the care and efficient operation of the equipment, the need to meet plant water needs efficiently, and the potential operating hazards involved.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare machinery for use	<p>1.1. Select and use appropriate personnel protective equipment.</p> <p>1.2. Conduct routine pre-operational checks and house keeping tasks.</p> <p>1.3. Replace and/or report damaged or worn components.</p> <p>1.4. Identify and report potential Occupational Health and Safety (OHS) hazards.</p> <p>1.5. Identify and report potential environmental implications.</p> <p>1.6. Attach ancillary equipment and check for correct operation.</p>
2. Operate machinery and equipment	<p>2.1. Operate machinery and equipment in a safe, efficient and controlled manner.</p> <p>2.2. Operate machinery in accordance with task requirements, conditions and manufacturers operating guidelines.</p> <p>2.3. Monitor machinery performance and efficiency and make adjustments as required.</p> <p>2.4. Assess and minimise potential risks to self, others and the environment.</p>
3. Complete work	<p>3.1. Follow shut down procedures.</p> <p>3.2. Complete operational records.</p> <p>3.3. Carry out routine operator servicing.</p> <p>3.4. Identify and report malfunctions, faults, irregular performance or damage.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conduct pre-operational checks
- operate machinery in a safe, efficient and controlled manner
- perform operator maintenance tasks
- attach and uncouple associated equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturer's requirements and/or workplace requirements for:
  - pre-operational checks
  - machinery operation techniques
  - operator level servicing
  - shutdown
  - emergency procedures
  - basic diagnostic techniques
  - equipment characteristics, technical capabilities and limitations
  - components and controls, features and functions.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• conduct pre and post operational checks</li> <li>• operate mobile irrigation machinery and equipment in a safe, efficient and controlled manner</li> <li>• perform minor maintenance and fault finding</li> <li>• record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The types of machinery and equipment may include:	<ul style="list-style-type: none"> <li>• lateral and centre pivot mobile irrigation machinery and equipment used for the irrigation of broadacre and horticultural crops.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCMOMB14A Transport machinery

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of safe movement, loading and securing of machinery for the purpose of transport and defines the standard required to: load and tie down machinery for transport; arrange permits and escorts as required by legislation; drive machinery to destination; complying with requirements for moving wide loads; unload machinery safely.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in agriculture, horticulture and land management who transport machinery and equipment for the enterprise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Load machines	<p>1.1.The enterprise safe operating procedures for transporting machinery are sourced and complied with.</p> <p>1.2.Trailer or float is prepared for loading according to contractor policy.</p> <p>1.3.Machine is loaded in compliance with safe operating procedures.</p> <p>1.4.Tying down procedures are completed in line with recognised industry standards.</p> <p>1.5.Machine is secured to prevent movement in transport according to industry practice.</p> <p>1.6.Legal requirements for signs indicating oversized loads are met.</p> <p>1.7.Legal requirements for permits, clearances and escorts for transporting oversized loads are arranged.</p>
2. Transport machines	<p>2.1.Machines are driven on or off road in compliance with relevant legislation.</p> <p>2.2.Machinery is loaded and driven safely to destination in compliance with relevant legislation.</p> <p>2.3.Selected transport route for oversized loads complies with permits, clearances and relevant legislation.</p> <p>2.4.Machines are unloaded safely in line with accepted workplace policy.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- load and unload earthmoving machines
- secure machinery as a transport load
- provide an escort to wide loads
- travel earthmoving machines
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the provisions, requirements and legislation pertaining to heavy transport
- principles for machine operation
- tying down procedures for large machinery.
- Occupational Health and Safety (OHS), vehicle and operator licensing, and road transport legislation
- OHS and environmental legislation, codes of practice and enterprise requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• load, tie down and secure machinery for transport</li> <li>• arrange permits and escorts as required by legislation</li> <li>• drive machinery to destination, complying with requirements for moving wide loads</li> <li>• unload machinery safely.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The types of machinery may include may include:	<ul style="list-style-type: none"> <li>• safe movement, loading and securing of machinery for the purpose of transport, including large machinery such as that used for earthmoving or agricultural operations.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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# AHCMOMB315A Operate chemical application machinery and equipment

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating chemical application machinery and equipment and defines the standard required to: prepare the machinery in accordance with manufacturer specifications; operate the machinery in a safe, efficient and controlled manner; conduct pre and post operational checks; perform minor maintenance and fault finding; record work activities.
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## Application of the Unit

<b>Application of the unit</b>	The operation of specialised liquid chemical and granular application machinery and equipment is likely to be carried out under limited supervision within enterprise guidelines. A high level of individual responsibility is involved to control risks to operators and other exposed workers and the environment, and to minimise the risk of residues levels being exceeded.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare machinery for use	1.1. Select and use appropriate personal protective equipment. 1.2. Conduct routine pre-operational checks and house keeping tasks. 1.3. Replace and/or report damaged or worn components. 1.4. Identify and report potential Occupational Health and Safety (OHS) hazards. 1.5. Identify and report potential environmental impacts. 1.6. Calibrate/set up equipment in accordance with spray/application plan. 1.7. Attach ancillary equipment and check for correct operation. 1.8. Undertake and record pre-operational checks.
2. Operate machinery and equipment	2.1. Operate machinery and equipment in a safe, efficient and controlled manner. 2.2. Operate machinery in accordance with task requirements, conditions and manufacturers operating guidelines. 2.3. Monitor machinery performance and efficiency and

ELEMENT	PERFORMANCE CRITERIA
	<p>make adjustments as required.</p> <p>2.4. Assess and minimise potential risks to self, others, product integrity and the environment.</p> <p>2.5. Monitor meteorological conditions during application</p> <p>2.6. Wear appropriate personal protective equipment during operation and clean up.</p>
3. Complete work	<p>3.1. Follow shut down procedures.</p> <p>3.2. Clean/flush components in accordance with manufacturer's specifications and chemical label requirements.</p> <p>3.3. Complete operational records in accordance with legislative and/or regulatory requirements.</p> <p>3.4. Carry out routine operator servicing.</p> <p>3.5. Identify and report malfunctions, faults, irregular performance or damage.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- conduct pre-operational checks
- calibration/set up of application components
- operate machinery in a safe, efficient and controlled manner
- perform operator maintenance tasks
- attach and uncouple associated equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- manufacturers specifications and/or workplace requirements for:
  - pre-operational checks
  - machinery operation techniques
  - operator level servicing
  - shutdown emergency procedures
- features and function of application equipment components:
  - liquid spray - nozzles, tanks, agitation systems, pumps, filters, pressure regulation valves etc
  - granular applicators/dusters - hoppers, flow control valves etc
- effect of meteorological conditions on chemical application
- equipment characteristics, technical capabilities and limitations
- basic diagnostic techniques
- equipment characteristics, technical capabilities and limitations
- components and controls features and functions
- environmental impacts including spray drift.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare the machinery in accordance with manufacturer specifications
- operate the machinery in a safe, efficient and controlled manner
- conduct pre and post operational checks
- perform minor maintenance and fault finding



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Machinery and equipment may include:	<ul style="list-style-type: none"> <li>specialised liquid chemical and granular application machinery</li> <li>equipment used for crop protection and pest management.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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# AHCMOM401A Conduct major repair and overhaul of machinery and equipment

## Modification History

Not Applicable

## Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers conducting major repair and overhaul of machinery and equipment and defines the standard required to: diagnose faults and repair requirements; dismantle and reassemble parts and components of machinery and equipment; select and use tools and materials appropriate to the task; carry out repairs and servicing of a range of machinery and equipment; determine appropriate cutting and welding techniques; operate welding equipment safely and effectively.</p>
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## Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to those working in a technical role to ensure that machinery and equipment for the enterprise is repaired or overhauled in a way that allows the core business of the enterprise to continue with minimal disruption.</p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<p><b>Prerequisite units</b></p>		

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to carry out major repairs and overhaul of machinery and equipment	1.1. Major repairs and overhaul requirements for machinery and equipment are identified and resources organised according to manufacturer's recommendations and enterprise requirements. 1.2. Tools and equipment are identified, accessed and confirmed against job requirements. 1.3. Potential and existing hazards in the workplace are risk assessed and controlled according to Occupational Health and Safety (OHS) and enterprise requirements. 1.4. Suitable personal protective equipment is used and maintained according to OHS and enterprise requirements.
2. Conduct major repairs and overhaul of machinery and equipment	2.1. Machinery and equipment faults and malfunctions are located and confirmed. 2.2. Scope and costing for repairs or overhaul are estimated for approval by management. 2.3. Repair and replacement process is implemented for major repairs according to enterprise requirements, manufacturer's specifications and OHS procedures.

ELEMENT	PERFORMANCE CRITERIA
	2.4. Worn or damaged parts in need of overhaul are identified, removed and overhauled. 2.5. Appropriate personnel are consulted as necessary in regard to overhaul requirements and major repairs according to enterprise requirements.
3. Carry out advanced welding repairs and workplace engineering	3.1. Cutting and welding equipment and materials are selected, set-up and started according to industry and OHS standards and enterprise requirements. 3.2. OHS hazards are identified, risks assessed and risk controls are implemented, monitored and reviewed. 3.3. Cutting and welding is conducted to industry and safety standards and according to enterprise requirements. 3.4. Workplace engineering tasks to modify design or manufacture parts are carried out according to enterprise and job requirements.
4. Complete major repairs and overhaul operation	4.1. Tools and equipment are shut down, adjusted, cleaned and stored consistent with manufacturer's specifications and enterprise requirements. 4.2. Waste from repair and maintenance activities is collected, treated and disposed or recycled according to enterprise environmental requirements. 4.3. Work areas are cleaned, returned to operating condition and maintained according to OHS and enterprise requirements. 4.4. Records of breakdowns, major repairs, overhauls, incidents and work conducted is detailed and recorded according to enterprise, industry and legislative requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- recognise and replace deteriorated or worn parts
- plan and meet seasonal deadlines

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<ul style="list-style-type: none"> <li>• identify most effective and economic option in the replacement, repair and overhaul of components</li> <li>• use and maintain welding and thermal cutting equipment</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• assemblies and components of drive, electrical and hydraulic systems</li> <li>• operational requirements of machinery and equipment</li> <li>• detailed knowledge of mechanics and equipment operating systems</li> <li>• storage and use of welding equipment</li> <li>• OHS legislative and enterprise requirements</li> <li>• environmental codes of practice with regard to the major repair of machinery and equipment.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• diagnose faults and repair requirements</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• dismantle and reassemble parts and components of machinery and equipment</li> <li>• select and use tools and materials appropriate to the task</li> <li>• carry out repairs and servicing of a range of machinery and equipment</li> <li>• determine appropriate cutting and welding techniques</li> <li>• operate welding equipment safely and effectively.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Machinery and equipment may include:	<ul style="list-style-type: none"> <li>• harvesters</li> <li>• tractors</li> <li>• seeding machines with components such as metering systems, air flow control, blower drives, air system, electronic monitoring systems, hydraulic hoses and couplings</li> <li>• engines</li> <li>• boom spray units</li> <li>• harvesters</li> <li>• associated grain-handling equipment.</li> </ul>
The repair and replacement process for machinery may involve:	<ul style="list-style-type: none"> <li>• rectifying major faults and restoring machinery and equipment systems to an acceptable status of operation by replacing worn, failed, faulty or damaged mechanical, hydraulic, basic electrical or frame and support structure parts and components.</li> </ul>
The repair and replacement process for machinery may include:	<ul style="list-style-type: none"> <li>• carrying out tests and making adjustments</li> <li>• rectifying faults by welding, aligning, tightening, securing or adjusting components that are not a part of normal service operations</li> <li>• Major repairs may require dismantling and</li> </ul>

**RANGE STATEMENT**

	assembly operations.
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**Unit Sector(s)**

<b>Unit sector</b>	Machinery operation and maintenance
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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# AHCMOM402A Supervise maintenance of property machinery and equipment

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising maintenance of property machinery and equipment and defines the standard required to: schedule and cost the maintenance requirements of machinery; order materials, allocate resources and schedule maintenance; carry out maintenance with regard to timelines, costs and safety; deal with contingencies and reschedule maintenance where necessary; dispose of waste products according to environmental legislation and enterprise procedures.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes supervising the maintenance of property, machinery and equipment.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare maintenance plan	<p>1.1. Maintenance requirements for property, machinery and equipment are identified from relevant information sources.</p> <p>1.2. Maintenance costs are identified and quantified.</p> <p>1.3. Maintenance requirements are checked against warranty, insurance agreements and indemnity provisions.</p> <p>1.4. Maintenance plan is developed to promote and sustain performance and production systems in line with enterprise requirements.</p> <p>1.5. Effective workplace communication strategies are established with regard to maintenance plan, environmental and Occupational Health and Safety (OHS) policies, and enterprise requirements.</p>
2. Implement maintenance plan	<p>2.1. Resource and supply requirements are identified, secured and included in enterprise budgets and operational considerations.</p> <p>2.2. Prepared maintenance schedules and procedures are effectively communicated to staff, contractors and suppliers to minimise negative impacts on production and costs.</p> <p>2.3. Maintenance plan is implemented and scheduled to minimise disruption to enterprise operations.</p> <p>2.4. Potential risks are assessed with regard to staff and supply problems, and contingency plans prepared accordingly.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Tasks required are aligned to staff capability, and training is provided where required.</p> <p>2.6. Machinery and equipment are operated to manufacturer's specifications, OHS and enterprise requirements.</p>
3. Monitor maintenance plan	<p>3.1. Maintenance activities and performance are monitored against maintenance plan for efficiency and effectiveness.</p> <p>3.2. Workplace hazards and environmental implications associated with maintenance procedures are monitored and controlled in line with OHS and enterprise requirements.</p> <p>3.3. Costs are monitored and controlled within enterprise budget requirements.</p> <p>3.4. Relevant information with regard to the maintenance plan is documented in accordance with enterprise requirements.</p> <p>3.5. Property, machinery and equipment are maintained in clean and safe operational conditions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and oversee safe work practices
- plan, cost and schedule maintenance requirements
- establish and monitor performance targets for maintenance team
- monitor and access performance of maintenance activities
- observe the emergence and supervise the removal of workplace hazards and risks
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<p>workplace measures and data</p> <ul style="list-style-type: none"> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• types of maintenance requirements with regard to property, machinery and equipment</li> <li>• maintenance and servicing cycles for property, machinery and equipment</li> <li>• relevant State/Territory legislation, regulations and Codes of Practice with regard to workplace OHS and environmental protection requirements, and the use and control of hazardous substances</li> <li>• hazards and risks and respective control measures</li> <li>• training and instruction techniques for directing the learning of staff.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• schedule and cost the maintenance requirements of machinery</li> <li>• order materials, allocate resources and schedule maintenance</li> <li>• carry out maintenance with regard to timelines, costs and safety</li> <li>• deal with contingencies and reschedule maintenance where necessary</li> <li>• dispose of waste products according to environmental legislation and enterprise procedures.</li> </ul>

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Supervision may include:	<ul style="list-style-type: none"> <li>the range of maintenance programs performed in agriculture horticulture industry enterprises.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCMOM501A Manage machinery and equipment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing machinery and equipment and defines the standard required to: develop machinery and equipment operation and maintenance procedures in compliance with environmental Codes of Practice and Occupational Health and Safety (OHS) and hazardous substances legislation; schedule, supervise and record the service and maintenance of machinery and equipment; monitor machinery and equipment operations and maintenance and review risk assessments periodically to ensure a safe operating environment; assess staff capability in machinery maintenance and operation and provide training and mentoring; calculate the total running cost of machines.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role it is to manage machinery and equipment in agriculture, horticulture and land management to ensure that machinery and equipment for the enterprise is managed in a way that allows the core business of the enterprise to operate efficiently.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Evaluate machinery and equipment	<p>1.1. Operations of available machinery and equipment are reviewed and matched to production processes and OHS requirements.</p> <p>1.2. Operation and servicing costs of machinery and equipment are calculated to justify total purchasing price.</p> <p>1.3. Productivity returns from machinery and equipment are estimated to identify benefit to production processes.</p> <p>1.4. Machinery and equipment replacement cycles are monitored to identify improvement options and maximise life cycles of components.</p> <p>1.5. Machinery and equipment is accessed through appropriate procurement options.</p>
2. Coordinate maintenance	<p>2.1. Maintenance and service cycles are identified and scheduled to ensure servicing is according to manufacturer's specifications and production processes.</p> <p>2.2. Storing and housing of machinery and equipment is</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>costed and organised.</p> <p>2.3.Maintenance is documented and recorded to ensure operational and service history.</p> <p>2.4.OHS hazards in the workplace are identified, risk assessed, and risk controls are recorded and reviewed according to enterprise requirements.</p> <p>2.5.Suitable personal protective equipment is provided, used, maintained and stored according to OHS requirements.</p> <p>2.6.Repair and maintenance routines are developed and monitored according to manufacturer's specifications and OHS requirements.</p>
3. Monitor operation	<p>3.1.Consumables and operational support materials are made available, maintained and disposed of according to enterprise requirements.</p> <p>3.2.Environmental implications and workplace safety practices are monitored according to enterprise requirements.</p> <p>3.3.Operational procedures are clear, documented and followed according to manufacturer's specifications.</p> <p>3.4.Operators are provided with competent instruction and appropriate supervision according to OHS requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe systems of work
- monitor machinery and equipment operations
- evaluate machinery and equipment
- identify skill needs of staff
- identifying, assessing and controlling hazards
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• servicing and maintaining machinery and equipment within area of responsibility</li> <li>• methods of calculating the cost of machines and their contribution</li> <li>• training and instruction techniques for directing the learning of staff</li> <li>• relevant OHS and environmental issues, legislative requirements and Codes of Practice</li> <li>• OHS hazard identification, risk assessment and developing risk controls</li> <li>• environmental legislation and Codes of Practice with regard to maintenance of machinery and equipment, disposal of wastes and hazardous substances</li> <li>• legislative and enterprise requirements for OHS.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop machinery and equipment operation and maintenance procedures in compliance with environmental Codes of Practice and OHS and hazardous substances legislation</li> <li>• schedule, supervise and record the service and maintenance of machinery and equipment</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• monitor machinery and equipment operations and maintenance and review risk assessments periodically to ensure a safe operating environment</li> <li>• assess staff capability in machinery maintenance and operation and provide training and mentoring</li> <li>• calculate the total running cost of machines.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Machinery covered by this standard may include:	<ul style="list-style-type: none"> <li>• hydraulic equipment</li> <li>• agricultural and horticultural machinery and equipment</li> <li>• engines</li> <li>• irrigation equipment</li> <li>• earth moving equipment</li> <li>• spraying equipment</li> <li>• solar and wind powered equipment</li> <li>• lifting/elevated equipment</li> <li>• all vehicles/motorcycles</li> <li>• all types of park and turf maintenance machinery and equipment.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Machinery operation and maintenance
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCMOM502A Implement a machinery management system

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the implementation of a machinery management system and defines the standard required to: identify machinery and equipment requirements for the property; source machinery services provided by external suppliers where required; manage machinery and equipment maintenance; manage machinery and equipment operation.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes establishing a system for the management of machinery.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify machinery and equipment requirements for the property	<p>1.1. Machinery and equipment requirements are identified for the enterprises being conducted.</p> <p>1.2. Alternative options to machinery ownership are evaluated for applicability.</p> <p>1.3. Storage and housing requirements for machinery and equipment are identified and addressed.</p> <p>1.4. Machinery innovations are monitored and assessed for applicability.</p> <p>1.5. Inventory of machinery and equipment is maintained as required by the enterprise.</p>
2. Select and manage the range of machinery services provided by off-farm suppliers	<p>2.1. Services to be provided by off-property suppliers are identified.</p> <p>2.2. Criteria to select and monitor the provision of services are developed.</p> <p>2.3. Agreements and transactions are appropriately recorded and monitored.</p>
3. Manage machinery maintenance	<p>3.1. Maintenance requirements of machinery and equipment are determined from manufacturer's instructions, and maintenance schedules are established.</p> <p>3.2. Systems for recording machinery use and maintenance are established.</p> <p>3.3. Machinery maintenance is monitored to ensure adherence to schedules and manufacturers instructions.</p>
4. Manage machinery and equipment	<p>4.1. Machinery and equipment use is monitored and recorded according to enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
operation	<p>4.2. Machinery operation is monitored to ensure compliance with manufacturers instructions.</p> <p>4.3. Procedures for the safe operation of machinery are determined and adherence to safe procedures is monitored and ensured.</p> <p>4.4. Staff are trained in the safe operation of machinery and the required procedures for the maintenance of machinery.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and manage safe systems of work
- identify machinery and equipment requirements for the property or enterprise
- select and manage the range of machinery services provided by off-farm suppliers
- manage machinery maintenance
- manage machinery and equipment operation
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- cultural operations and their associated machinery requirements
- costs associated with the use of machinery
- maintenance requirements of machinery and equipment
- storage and housing requirements of machinery
- negotiation and the development of agreements
- safe operating procedures for machinery

**REQUIRED SKILLS AND KNOWLEDGE**

- systems for monitoring machinery maintenance and operation
- licensing requirements for the operation of machinery
- Occupational Health and Safety (OHS) and environmental legislation, codes of practice and enterprise requirements
- staff training.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify machinery and equipment requirements for the property
- source machinery services provided by external suppliers where required
- manage machinery and equipment maintenance
- manage machinery and equipment operation.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**



**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Machinery and equipment will include:

- all vehicles and attachments
- stationary and mobile plant used by the enterprise.

**Unit Sector(s)**

<b>Unit sector</b>	Machinery operation and maintenance
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCMOM601A Analyse machinery options

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the analysis of machinery options within an agricultural, horticultural or land management enterprise and defines the standard required to: calculate the total running cost of machinery; review the machinery needs of the enterprise and evaluate costed alternative options; budget the calculated rate of return on investments using benchmarks of energy efficiency; compare the productivity and suitability of different types and brands of machinery; analyse the financial costs, tax impact and investment risk for different types of machinery; document the analysis and define the preferred option; and review the investment plan and analysis of options.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to the analysis of machinery options within an agricultural, horticultural or land management enterprise and requires expertise of benchmarking practices and procedures, energy efficiency, capital budgeting techniques, relevant taxation provisions relating to investment, risks associated with investments and analysis and planning processes.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Calculate costs associated with machinery and use to assist decision making	1.1.Overhead, operating and intangible costs related to machinery are calculated. 1.2.Relevant benchmark data that relates machinery costs to enterprise productivity is sourced and compared to own enterprise data. 1.3.Comparison of productivity and suitability of different types and brands of machinery is made.
2. Review machinery requirements	2.1.Machinery inventory is reviewed in the context of the goals of the business, and current and future productivity and profitability levels. 2.2.Alternatives to ownership are identified, costed and evaluated. 2.3.Tax impact of the capital investment is identified through appropriate professional support and incorporated into the analysis. 2.4.Risks associated with high capital investment in machinery are assessed and controlled in making machinery decisions.

ELEMENT	PERFORMANCE CRITERIA
3. Analyse returns from major capital investments in machinery	3.1. Capital budgeting techniques including energy efficiency are used to calculate the rate of return on major investment decisions. 3.2. Plan and analysis of machinery options are reviewed and refinements are recorded.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- calculate costs associated with machinery
- review machinery inventory and requirement
- evaluate and cost options
- assess investment risk
- budget and incorporate benchmarks
- calculate returns from major capital investments in machinery
- document a comprehensive report
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- benchmarking practices and procedures, including energy efficiency, carbon footprint and water use efficiency
- capital budgeting techniques
- relevant taxation provisions relating to investment
- risks associated with investments
- analysis and planning processes.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• calculate the total running cost of machinery</li> <li>• review the machinery needs of the enterprise and evaluate costed alternative options</li> <li>• budget the calculated rate of return on investments using benchmarks of energy efficiency</li> <li>• compare the productivity and suitability of different types and brands of machinery</li> <li>• analyse the financial costs, tax impact and investment risk for different types of machinery</li> <li>• document the analysis and define the preferred option</li> <li>• review the investment plan and analysis of options.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The factors may include:	<ul style="list-style-type: none"> <li>• the range of farming systems</li> <li>• financing arrangements</li> <li>• machinery types</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• budgeting variables, including energy efficiency</li> <li>• machinery ownership options.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Machinery operations and maintenance
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCNAR101A Support natural area conservation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting natural area conservation and defines the standard required to: prepare tools and equipment; assist others with conservation works; remove and stockpile waste materials and clean up site, tools and equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking conservation works in areas such as parks, natural areas, agricultural lands or areas undergoing rehabilitation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for conservation work	<p>1.1.The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2.Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3.Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use</p> <p>1.5.Conservation support is provided according to Occupational Health and Safety (OHS) requirements and according to workplace information.</p> <p>1.6.OHS hazards are identified and reported to the supervisor.</p>
2. Undertake conservation work as directed	<p>2.1.Instructions and directions provided by supervisor are followed and clarification sought when necessary.</p> <p>2.2.Conservation work is undertaken in a safe and environmentally appropriate manner according to work site guidelines.</p> <p>2.3.Interactions with other staff and clients are carried out in a positive and professional manner.</p> <p>2.4.Policy and procedures in relation to workplace handling and disposal of materials is observed.</p> <p>2.5.Problems or difficulties in completing work to required standards or timelines are reported to</p>



ELEMENT	PERFORMANCE CRITERIA
	supervisor.
3. Store and stockpile materials	3.1.Plant debris and waste material produced during conservation activities are stored in a designated area according to supervisor's instructions. 3.2.Plant debris and waste materials are prepared and processed in an appropriate and safe manner according to supervisor's instructions. 3.3.Surplus materials are stockpiled for removal according to supervisor's instructions. 3.4.A clean and safe work site is maintained while completing conservation activities.
4. Clean up on completion of conservation work	4.1.Plants and materials are stored in a designated area according to supervisor's instructions. 4.2.Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions. 4.3.Work outcomes are reported to the supervisor.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safe work practices
- participate in teams and contribute to team objectives
- understand instructions
- read labels, site plan measurements and OHS symbols
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- tools and equipment used in conservation work
- revegetation techniques including planting, direct seeding, assisted natural

**REQUIRED SKILLS AND KNOWLEDGE**

- regeneration and protection of remnant vegetation
- maintenance tasks for conservation areas
  - common bushland weeds
  - personal protective equipment
  - team work and following instructions
  - techniques for cleaning a site and disposing of debris
  - OHS and environmental protection legislation and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare tools and equipment
- assist others with conservation works
- remove and stockpile waste materials
- clean up site, tools and equipment.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Revegetation activities may include:	<ul style="list-style-type: none"> <li>• assisting with planting programs</li> <li>• direct seeding operations</li> <li>• assisted natural regeneration</li> <li>• assisting with natural regeneration</li> <li>• protection of remnant vegetation</li> <li>• removal of weeds by hand</li> <li>• cleaning up of on-site debris</li> <li>• release of animals</li> <li>• collecting plants or seeds for propagation.</li> </ul>
Maintenance of conservation areas may include:	<ul style="list-style-type: none"> <li>• weed and disease control</li> <li>• mulching</li> <li>• pruning</li> <li>• fertilising</li> <li>• pruning</li> <li>• watering</li> <li>• securing plants (e.g. staking, tying)</li> <li>• repair of installation of guards and protective fencing.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Natural area restoration
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCNAR102A Support native seed collection

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting native seed collection and defines the standard required to: apply safe work practices in collecting seed; provide seed collecting support to others; assist with cleaning up after completion; prepare, use and clean tools and equipment for seed collection.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to the work required to support native seed collection across a range of landscapes and environments.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for seed collection	<p>1.1.The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2.Checks are conducted on all materials, tools and equipment, with insufficient or faulty items reported to the supervisor.</p> <p>1.3.Techniques used when loading and unloading materials demonstrate correct manual handling.</p> <p>1.4.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5.Seed collection support is provided according to Occupational Health and Safety (OHS) requirements and workplace information.</p> <p>1.6.OHS hazards are identified and reported to the supervisor.</p>
2. Support seed collection	<p>2.1.Assistance is provided to support the seed collection activities of others and instructions and directions provided by supervisor are followed, and clarification sought when necessary.</p> <p>2.2.Seed collection work is undertaken in a safe and environmentally appropriate manner in accordance with relevant legislation and regulations.</p> <p>2.3.Support is provided to collect seeds from a range of plants and from different areas of plants.</p> <p>2.4.Assistance is given to separate seeds from other materials, weigh and store the seeds.</p> <p>2.5.Directions to place seed in clean containers and label</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>the containers are followed.</p> <p>2.6. Instructions to record seed information are completed.</p>
3. Clean up on completion of seed collection work	<p>3.1. Seeds and plant materials are stored according to supervisor's instructions and OHS requirements.</p> <p>3.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions.</p> <p>3.3. Work outcomes are reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- comply with legislation, regulations, standards, codes of practice and established safe
- practices and procedures for collecting seed
- review and accurately identify work requirements
- use and maintain relevant tools and equipment
- identify problems and equipment faults and demonstrate appropriate response procedures
- accurately record and maintain information including details of seed species, weight and place of origin
- efficiently and safely carry out seed collecting procedures
- apply appropriate mathematical techniques to calculate seed weights and quantities
- identify a range of seed species and apply accurate identifying information
- use a range of seed collection methods and related equipment
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- basic knowledge and understanding of applicable Commonwealth, State or Territory licensing

## REQUIRED SKILLS AND KNOWLEDGE

- legislative, regulatory or certification requirements and codes of practice relevant to the full
- range of processes for collecting, treating and storing seed
- organisational and site standards, requirements, policies and procedures for collecting seed
- principles of cultural diversity and access and equity
- environmental requirements for the collecting, treating and storing of seed and the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of seed collecting resources and equipment and procedures for their safe use, operation and maintenance
- procedures for the recording, reporting and maintenance of workplace records and information
- hazards associated with the collection, treatment and storage of seed
- range of seed species and appropriate collection, treatment and packaging processes
- range of seed treatments and storage requirements for different seed species
- types of diseases and pests likely to infect a range of seed species
- appropriate mathematical procedures for estimation, measurement and calculation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- apply safe work practices in collecting seed
- provide seed collecting support to others
- assist with cleaning up after completion
- prepare, use and clean tools and equipment for seed



<b>EVIDENCE GUIDE</b>	
	collection.
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Seed collection may include:	<ul style="list-style-type: none"> <li>the range of sites and methods used for seed collection</li> <li>the range of species available for seed collection.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCNAR201A Carry out natural area restoration works

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of carrying out natural area restoration work and defines the standard required to: establish the task and site with supervisor by referring to a revegetation plan; carry out weed removal and ground preparation as part of a team; transport tools, plants and planting materials to the site; carry out planting and regeneration techniques and protect the restored area; remove any waste.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervised workers in land management programs who carry out natural area restoration work as part of a team and work under routine supervision with intermittent checking. The work is usually within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for natural area restoration works	<p>1.1. Services are located using site and natural area restoration plans and in consultation with the supervisor.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p> <p>1.3. The environmental implications of natural area restoration works are identified and the likely outcomes assessed and reported to the supervisor.</p> <p>1.4. Natural area restoration tools, equipment and machinery are selected and prepared for use according to enterprise work procedures and native plant species to be established.</p> <p>1.5. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</p> <p>1.6. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p>
2. Apply weed control measures	<p>2.1. Species and quantities of weeds requiring control are identified according to enterprise work procedures.</p> <p>2.2. Herbicides are prepared, where necessary, according to manufacturer's specifications and enterprise work procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Weed control measures are undertaken according to the weed and non-target species physiological characteristics, and enterprise work procedures.</p> <p>2.4. Work practices and control measures employed cause damage only to the target weed species.</p>
<p>3. Prepare the soil for natural area restoration</p>	<p>3.1. Soil treatments are selected according to the soil condition, species requirements and enterprise work procedures.</p> <p>3.2. Intact natural soil profiles are protected from damage.</p> <p>3.3. Soil treatments are applied either broadly or at specific restoration sites according to enterprise work procedures.</p>
<p>4. Replace native vegetation on the natural area restoration site</p>	<p>4.1. Vegetation replacement methods are determined and assisted natural regeneration, planting, seeding or transplanting treatments are prepared according to the restoration plan and enterprise work procedures.</p> <p>4.2. Assisted regeneration treatments are applied to remnant vegetation and intact soil profiles where required according to enterprise work procedures.</p> <p>4.3. Seed (and fertiliser if required) is sown either by hand in discrete areas or broadly using sowing and/or ripping trailed machinery.</p> <p>4.4. Containerised plants or transplants are positioned according to the restoration plan and planted firmly ensuring good contact between roots and surrounding soil according to enterprise work procedures.</p> <p>4.5. Hand watering or irrigation, where specified, is undertaken to establish newly sown or planted vegetation.</p> <p>4.6. The natural area restoration works are undertaken according to OHS requirements.</p>
<p>5. Complete natural area restoration work</p>	<p>5.1. Plant guards and/or fencing are installed and maintained according to the natural area restoration plan and enterprise work procedures.</p> <p>5.2. Multiple follow up weed control treatments are undertaken, as necessary, according to enterprise work procedures.</p> <p>5.3. Waste material is removed from the natural area restoration site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>5.4. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p> <p>5.5. A clean and safe area is maintained throughout and upon completion of work according to enterprise work procedures.</p> <p>5.6. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- participate in teams and contribute to team objectives
- read written instructions, understand and interpret work procedures
- calibrate tools, equipment and machinery, measure distance, calculate area, planting and seeding rates, volumes and treatment application rates
- minimise noise, dust, high activity vehicle traffic and water run-off to prevent nuisance-level environmental disturbance
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- common names of native plants
- common names of native animals
- common names of weeds and pest animals
- the importance and value of the local provenance species
- natural area restoration techniques
- basic plant and animal ecology
- map and plan reading
- OHS and environmental legislative and enterprise requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the task and site with supervisor by referring to a revegetation plan</li> <li>• carry out weed removal and ground preparation as part of a team</li> <li>• transport tools, plants and planting materials to the site</li> <li>• carry out planting and regeneration techniques</li> <li>• protect the restored area and remove any waste.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Natural area restoration works may include:	<ul style="list-style-type: none"> <li>• soil stabilisation</li> <li>• weed suppression and control</li> <li>• planting of terrestrial and aquatic plant species as containerised or bare rooted plants</li> <li>• direct seeding of native species by hand or machine</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• protection and maintenance of remnant vegetation</li> <li>• encouragement of natural regeneration.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Natural area restoration
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCNAR202A Maintain wildlife habitat refuges

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining wildlife habitats and refuges to protect desirable animal species from predators and defines the standard required to: confirm the features required for a wildlife habitat refuge; identify native species that are present in the wildlife refuge; provide harbours and modify habitat where necessary to provide refuge for native species; assess the risk of vertebrate pest predators within the refuge; implement strategies to control vertebrate pests in a wildlife habitat.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervised workers in land management projects who operate with intermittent checking within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess the scope of the refuge maintenance job	<p>1.1.Desirable wildlife species to be protected are identified and their behaviour pattern determined.</p> <p>1.2.Characteristics of wildlife habitat refuges are identified.</p> <p>1.3.Locations of wildlife habitat refuges are determined.</p> <p>1.4.Time required to complete the wildlife habitat refuge maintenance job is estimated.</p> <p>1.5.Hazards associated with the wildlife habitat refuge maintenance job are identified in accordance with Occupational Health and Safety (OHS) standards.</p> <p>1.6.Environmental risks associated with the wildlife habitat refuge maintenance job are identified in accordance with statutory and local authority requirements.</p> <p>1.7.Vehicles, equipment and materials required to complete the wildlife habitat refuge maintenance job are identified.</p>
2. Prepare for the refuge maintenance job	<p>2.1.Location and boundaries for the wildlife habitat refuge maintenance job are determined in accordance with the vertebrate pest management strategy and monitoring program.</p> <p>2.2.Precautions to minimise hazards associated with the wildlife habitat refuge maintenance job are taken in accordance with OHS standards.</p> <p>2.3.Precautions to minimise environmental risks associated with the wildlife habitat refuge</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>maintenance job are taken in accordance with statutory and local authority requirements.</p> <p>2.4.Vehicles, equipment and materials are checked for serviceability in accordance with manufacturer's specifications and relevant policies.</p>
<p>3. Maintain wildlife habitat refuges for protection of desirable species from predators</p>	<p>3.1.Vehicles and equipment are operated and/or driven in accordance with manufacturer's instructions, statutory requirements and industry practice.</p> <p>3.2.Wildlife habitat refuges which protect desirable animal species are maintained in accordance with industry practice and environmental statutory requirements.</p> <p>3.3.Desirable animal species are protected as required in accordance with environmental statutory requirements.</p> <p>3.4.Debris is disposed of in accordance with industry practice.</p>
<p>4. Clean and store equipment and material</p>	<p>4.1.Equipment and materials are cleaned and stored in accordance with relevant standards and policies.</p> <p>4.2.Job completion is reported or recorded in accordance with relevant policies and procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare for the refuge maintenance job
- identify wildlife species and their requirements
- maintain wildlife habitat refuges for protection of desirable animal species from predators
- identify hazards and follow safety procedures
- use and maintenance of tools and equipment
- record and report task completion and, where necessary, observations of property status
- clean and store equipment and materials
- use literacy skills to follow sequenced written instructions and record information

## REQUIRED SKILLS AND KNOWLEDGE

accurately and legibly

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- vertebrate pest life cycles and behaviours
- harbours used by vertebrate pests
- wildlife habitats used by desirable animal species
- wildlife habitat modification techniques
- predator behaviour and control techniques
- common law principles relating to property, stock, duty of care and due diligence
- risks to land users' posed by vertebrate pests including exotic diseases and zoonoses
- OHS, environment and threatened species legislative and enterprise requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- confirm the features required for a wildlife habitat refuge
- identify native species that are present in the wildlife refuge
- provide harbors and modify habitat where necessary to provide refuge for native species
- assess the risk of vertebrate pest predators within the

<b>EVIDENCE GUIDE</b>	
	refuge <ul style="list-style-type: none"> <li>implement strategies to control vertebrate pests in a wildlife habitat.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Wildlife refuges may include:	<ul style="list-style-type: none"> <li>a range of types of wildlife refuges to suit the native species being conserved.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCNAR301A Maintain natural areas

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining natural areas and defines the standard required to: prepare to carry out maintenance activities; consult with stakeholders, including traditional owners; carry out agreed maintenance works; make good the site and remove surplus materials and waste; report on completion of activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on land management projects who carry out the maintenance of natural areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan maintenance works	<p>1.1.Movement through place is planned to minimise disturbance and degradation.</p> <p>1.2.Legislative requirements, Codes of Practice and the relevant management strategy and plan are identified.</p> <p>1.3.Equipment, machinery and materials for maintenance works are determined and obtained.</p> <p>1.4.Where required, stakeholders are consulted about pending maintenance works.</p>
2. Undertake maintenance	<p>2.1.Activity maintenance works conform to relevant risk control measures and practices, and are in accordance with enterprise guidelines.</p> <p>2.2.Interim protective measures are taken to avoid degradation and disturbance during maintenance works.</p> <p>2.3.Activities of personnel and visitors are monitored to reduce risks to the significance of the place.</p>
3. Report completion of activities	<p>3.1.Site is made good on completion of works.</p> <p>3.2.Equipment and machinery is cleaned and stored according to enterprise guidelines.</p> <p>3.3.Excess materials are removed from site and stored or disposed of according to enterprise guidelines.</p> <p>3.4.Completed maintenance works are reported to supervisors to enterprise and legislative requirements and best practice guidelines and Codes of Practice.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan maintenance works to achieve minimal deleterious impacts
- undertake maintenance with minimal deleterious impacts
- make good sites after restoration works
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- ecology in land based, coastal zones and/or marine parks
- marine, shore and land based species
- natural and human threats to places of natural significance
- pollution sources and damage potential
- basic protection/rehabilitation methods
- legislation under which enterprise operates
- enterprise procedures for reporting maintenance works
- selection and application of protective structures, devices and signs
- applicable State/Territory and Commonwealth legislation covering parks, conservation, environmental protection and heritage.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare to carry out maintenance activities</li> <li>• consult with stakeholders, including traditional owners</li> <li>• carry out agreed maintenance works</li> <li>• make good the site and remove surplus materials and waste</li> <li>• report on completion of activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Natural areas may include:	<ul style="list-style-type: none"> <li>• water catchments</li> <li>• river systems</li> <li>• urban areas</li> <li>• coastal and marine environments.</li> </ul>
Factors may include:	<ul style="list-style-type: none"> <li>• species diversity</li> <li>• ecosystem diversity and community diversity</li> <li>• rarity of species and uniqueness of related ecosystems</li> <li>• geological diversity including land forms</li> <li>• degree to which geological features and land forms are significant</li> <li>• potential natural integrity</li> <li>• impact of any degradation and/or disturbance</li> <li>• potential interrelationship with cultural values</li> </ul>

<b>RANGE STATEMENT</b>	
	including Indigenous and other values <ul style="list-style-type: none"> <li>• organisation policy and practice</li> <li>• aesthetic dimensions</li> <li>• interface/integration with productive lands</li> <li>• presence of minerals.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCNAR302A Collect and preserve biological samples

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of collecting and preserving biological samples as part of a monitoring program and defines required to: establish the equipment and facilities to take biological samples; carry out biological sampling; preserve and record samples and forward for testing if required; record sampling data and observations; report outcomes of collection.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of collecting and preserving biological samples and is likely to be under limited supervision from others with checking only related to overall progress. It requires knowledge of industry biological sampling and preserving guidelines and protocols, flora and fauna, environmental legislation, and sampling and preserving methods.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan for collection	<p>1.1.Sampling schedule is read/heard and confirmed with manager.</p> <p>1.2.Sampling site location is confirmed and approval obtained for site access following enterprise and legislative guidelines.</p> <p>1.3.Samples to be collected and preserved are identified by supervisory staff.</p> <p>1.4.Equipment requirements for biological sampling and preserving are determined and arranged.</p> <p>1.5.Range of likely operating conditions, hazards and difficult/sensitive environments are assessed for impact on sampling and testing.</p>
2. Prepare equipment and resources	<p>2.1.Equipment required for sampling and preserving is sourced according to sampling procedures.</p> <p>2.2.Equipment is checked for availability and serviceability in accordance with enterprise procedures.</p> <p>2.3.Data or record sheets/books are collected for use.</p> <p>2.4.Equipment, data sheets and personnel are moved to sampling sites without injury or damage and readied for use.</p>
3. Carry out biological sampling and preserving	<p>3.1.Samples are collected in accordance with sampling plan and enterprise procedures and industry protocols/guidelines.</p>

ELEMENT	PERFORMANCE CRITERIA
procedures	<p>3.2. Samples are preserved and recorded in accordance with sampling standards and guidelines.</p> <p>3.3. Samples for external analysis are prepared, packaged and sent to laboratory in accordance with sampling schedule and laboratory standards.</p> <p>3.4. Specific and general observations including information on relevant ambient and antecedent environmental conditions are made in accordance with monitoring schedule.</p> <p>3.5. Equipment operation and work practices conform to occupational health and safety requirements.</p> <p>3.6. Collection outcomes including presentation of samples are reported and delivered in accordance to enterprise guidelines.</p>
4. Complete collection of biological sampling activities	<p>4.1. Equipment and clothing is cleaned, sanitised, repaired and stored in accordance with enterprise procedures.</p> <p>4.2. Damaged or malfunctioning equipment is repaired on site sampling results and observations are accurately recorded on data sheets and forwarded in accordance with enterprise procedures.</p> <p>4.3. Changes in field conditions and equipment are conveyed to supervisor according to enterprise procedures.</p>

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• plan for collection</li> <li>• prepare equipment and resources</li> <li>• carry out biological sampling and preserving procedures</li> <li>• complete collection of biological sampling activities</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as</li> </ul>

**REQUIRED SKILLS AND KNOWLEDGE**

specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- hydrological cycle
- field procedures for biological sampling and preservation
- collecting equipment and methods
- preservation equipment and processes
- basic habitat assessment
- water quality issues.
- fauna and flora recognition relevant to sampling activities
- relevant environmental legislation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- establish the sampling purpose and requirements
- prepare equipment and facilities to take biological samples
- carry out biological sampling
- preserve and record samples and forward for testing if required
- record sampling data and observations
- report outcomes of collection.

**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Types of samples may include:

- collecting and preserving biological samples of macro invertebrates, aquatic vegetation, intertidal organisms, soil and water
- equipment used to collect and preserve biological specimens.

**Unit Sector(s)**

**Unit sector**

Natural area restoration

**Co-requisite units**

Co-requisite units		



## Competency field

Competency field	
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## AHCNAR303A Implement revegetation works

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing revegetation works and defines the standard required to: prepare the site for revegetation works; conduct a site hazard identification and risk control assessment; recognise and treat plant diseases on a revegetation site; treat weeds and competing plants; carry out revegetation works; and clean and maintain the revegetated site.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers re-establishing vegetation in natural restoration areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare equipment and materials	<p>1.1. Tools and materials are selected for the task to be undertaken according to manufacturer guidelines and Occupational Health and Safety (OHS) regulations.</p> <p>1.2. Plant materials are identified, obtained and stored according to enterprise guidelines.</p> <p>1.3. Labour and machinery requirements are estimated and organised.</p> <p>1.4. Schedule of works is prepared and provided to management/client.</p>
2. Prepare the revegetation site	<p>2.1. Site hazards are identified, risks assessed and suitable risk controls implemented.</p> <p>2.2. Site preparation is undertaken according to planting plan and/or supervisor's instructions.</p> <p>2.3. Soil ameliorants are used, if necessary, according to plan specifications.</p> <p>2.4. Revegetation site is marked out according to supervisor's directions and/or plans.</p> <p>2.5. All competing plants, debris and pollutants are treated according to the plan specifications and risk controls implemented.</p> <p>2.6. Treatments are selected according to the risk controls selected and applied according to documented guidelines and manufacturer instructions.</p> <p>2.7. Protective structures are installed where indicated by the risk controls implemented.</p>
3. Effect revegetation works	<p>3.1. Revegetation works are implemented according to enterprise guidelines.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. All plants materials are inspected prior to revegetation works and defective materials are discarded.</p> <p>3.3. Plant materials to be installed are treated according to documented guidelines.</p> <p>3.4. Plant materials are installed according to planting program.</p> <p>3.5. Remedial action is undertaken to ensure all of the revegetation program requirements have been implemented.</p> <p>3.6. Potential threats to revegetation works are identified and reported.</p>
4. Maintain revegetated site	<p>4.1. Site is maintained according to the planting program requirements.</p> <p>4.2. Remedial action and plant protection is undertaken according to the needs of the species.</p> <p>4.3. Tools and equipment are cleaned, maintained and stored consistent with manufacturer specifications.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare equipment and materials
- prepare a planting site
- effect revegetation works
- maintain revegetated site
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- revegetation techniques
- ecosystems, provenance and habitat requirements
- factors affecting the timing and method of planting
- identification of pests and diseases of trees
- principles and methods relating to the prevention and control of pests and diseases
- safety requirements when handling and using hazardous goods
- nutrient requirements of a range of plant species and cultivars
- physiology of plant growth
- techniques for protecting and securing/anchoring trees and shrubs
- plant selection and culture
- soils and nutrients
- calculations for materials.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare the site for revegetation works
- conduct a site hazard identification and risk control assessment
- recognise and treat plant diseases on a revegetation site
- treat weeds and competing plants
- carry out revegetation works
- clean and maintain the revegetated site.

#### Context of and specific resources for

Competency requires the application of work practices

**EVIDENCE GUIDE****assessment**

under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

The types of establishment methods may include:

- a range of establishment methods covering:
  - hand planting
  - mechanical planting
  - direct seeding
  - encouragement of natural regeneration
  - mechanical sowing
  - fire.

Earthworks may include:

- irrigation
- drainage
- ripping
- cultivating
- clearing debris.

**Unit Sector(s)****Unit sector**

Natural area restoration

**Co-requisite units****Co-requisite units**

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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCNAR304A Undertake direct seeding

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the direct seeding of regeneration sites and defines the standard to: prepare the site for seeding with consideration to environmental impacts; conduct seeding to maximise germination response; complete seeding operations in line with site stability and environmental requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the regeneration of natural areas that require specialist seeding requirements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Organise for direct seeding	<p>1.1. Conducts work according to site procedures, regulations, Occupational Health and Safety (OHS), other relevant legislation, manufacturer's specifications safely and efficiently.</p> <p>1.2. Receives, interprets and clarifies shift change over details.</p> <p>1.3. Selects appropriate type of equipment and/or attachments according to job specifications and to maximise efficiency and effectiveness of work activities.</p> <p>1.4. Appropriate materials are selected according to site conditions and rehabilitation plan.</p> <p>1.5. Identifies and manages potential risks and hazards according to the work plan to ensure safe and efficient seeding.</p> <p>1.6. Uses appropriate personal protective equipment.</p> <p>1.7. Conducts equipment pre-start (visual) checks to ensure equipment is ready for operation.</p> <p>1.8. Manages site environmental and heritage issues.</p> <p>1.9. Collects seeds for use in rehabilitation activities from local plants near the rehabilitation site to promote native plant growth.</p> <p>1.10. Determines type and proportion of cover crop according to rehabilitation plan and site conditions.</p> <p>1.11. Avoids introduction of foreign species or incompatible species (where applicable).</p> <p>1.12. Communicates with other personnel using approved communication methods.</p>

ELEMENT	PERFORMANCE CRITERIA
	1.13. Adheres to emergency procedures to ensure safety of personnel, plant and equipment.
2. Conduct direct seeding operations	2.1.Ensures direct seeding method provides adequate plant coverage according to plant type, rehabilitation plan and environmental guidelines. 2.2.Minimises damage to site utilising direct seeding equipment and appropriate techniques. 2.3.Conducts seeding activities within appropriate season and growing conditions. 2.4.Completes all required records and documentation accurately and promptly indicating result of seeding activities. 2.5.Carries out seeding and fertilising activities according to site conditions, flora type, rehabilitation plan and environmental guidelines. Applies appropriate seed mix and fertiliser according to site and weather conditions, accessibility and future land use.
3. Conduct housekeeping activities	3.1.Cleans equipment. 3.2.Cleans and stores attachments and other ancillary equipment. 3.3.Completes all required records and documentation accurately and promptly.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- ancillary equipment operation, maintenance, cleaning
- apply diagnostic techniques
- decision making
- directing
- equipment adjustment
- equipment operation, maintenance (minor), cleaning
- hazard identification
- hazardous goods handling techniques

## REQUIRED SKILLS AND KNOWLEDGE

- interpret ground conditions
- interpretation of plans, reports, maps, specifications
- maintain records
- monitoring
- organise work tasks
- plan and document reading
- report defects
- safe work practices
- seed application (machine or hand)
- select and fit personal protective equipment
- team work
- trouble shooting
- use computer systems
- use relevant hand tools
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## Required knowledge

- cover crop methods
- emergency procedures
- environmental and heritage procedures
- equipment processes, technical capability and limitations
- equipment safety requirements
- fertiliser characteristics and application methods
- foreign species identification
- future land use principles
- geological and technical data
- hazardous goods procedures and consequences of spills
- isolation procedures
- night and day working procedures
- occupational health and safety procedures
- open cut procedures
- operational procedures and checks
- seeding methods
- shutdown procedures
- site procedures
- site safety requirements

**REQUIRED SKILLS AND KNOWLEDGE**

- soil dynamics
- start up procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare the site for seeding with consideration to environmental impacts
- conduct seeding to maximise germination response
- complete seeding operations in line with site stability and environmental requirements.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Equipment may include:

- aircraft (helicopter, fixed winged craft)
- machinery that can be calibrated
- seeding equipment.

<b>RANGE STATEMENT</b>	
Materials may include:	<ul style="list-style-type: none"> <li>• chemicals</li> <li>• fertiliser</li> <li>• seeds.</li> </ul>
Future land use may be:	<ul style="list-style-type: none"> <li>• agriculture</li> <li>• re-establish vegetation which fulfils the functions of the original native vegetation</li> <li>• restore to native vegetation.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCNAR401A Supervise natural area restoration works

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising natural area restoration works and defines the standard required to: scope the natural area restoration works required and compare to specifications of work on the contract; develop a work program and source labour and equipment to undertake the work; maintain the supply of materials and access to equipment to allow restoration work to proceed; monitor the work program and make adjustments to task schedule where required; inspect work to ensure specifications are met and environmental impact is minimised; arrange for inspection of completed works and complete project report.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervisors of revegetation programs.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify scope of natural area restoration works	<p>1.1. Nature of restoration works and extent of responsibilities are identified and checked against relevant contract documentation.</p> <p>1.2. Personnel and other resources (in-house or by contractor) required to undertake restoration works are identified according to the scope of the project and relevant documentation provided.</p> <p>1.3. A work program is developed according to the needs of management and/or the client to ensure that project outcomes are reached within designated time lines.</p> <p>1.4. Potential environmental impacts of the proposed restoration works is determined and advised to manager/client.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented, monitored and reviewed.</p>
2. Coordinate the supply of materials/equipment	<p>2.1. Material quantities and equipment requirements are calculated and coordinated to ensure an on-going work program is maintained according to the scope of the project.</p> <p>2.2. Materials are ordered, checked for specified quantity and quality then stockpiled according to enterprise guidelines.</p> <p>2.3. Specific delivery requirements are conveyed and confirmed with suppliers to ensure materials are delivered to suit the work program.</p> <p>2.4. Rejected materials or products are sent back to the</p>

ELEMENT	PERFORMANCE CRITERIA
	supplier for replacement according to enterprise guidelines.
3. Monitor restoration works	<p>3.1. The work program is monitored and adjusted, if necessary, to ensure that project outcomes are reached within designated time lines or to accommodate any client changes or directions.</p> <p>3.2. Work is monitored and adjusted, if necessary, to ensure project outcomes are achieved.</p> <p>3.3. Project contract direction is periodically given to the contractor for action in written instructions.</p> <p>3.4. Issues likely to cause delays, or alter the scope of the works, are identified, recorded and reported to management and/or the client according to enterprise guidelines.</p> <p>3.5. Alterations to the scope of the work are costed using agreed unit rates by the contractor and variations are forwarded in writing for approval by the client.</p> <p>3.6. Periodic inspection of work are undertaken to ensure project outcomes are achieved and to make progress payments.</p> <p>3.7. The work site is monitored to ensure it remains in a clean, tidy and safe condition throughout and on completion of restoration works.</p>
4. Prepare site for completion	<p>4.1. Site is inspected prior to practical completion to ensure all works have been undertaken according to contract documents and the relevant documentation.</p> <p>4.2. Any works not complying are noted and rectified according to the contract specification as outstanding items.</p> <p>4.3. A completed restoration works report is produced, recorded and communicated to management and/or the client according to enterprise guidelines.</p> <p>4.4. Following completion of outstanding items a Practical Completion Certificate is forwarded to the contractor.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and ensure safe systems of work are in place
- inspect and assess site for restoration needs and potential
- identify native plants and establish their role in the ecosystem
- assess the risk of weeds and pests and plan integrated control methods
- identify native fauna and their requirements and ecosystem role
- identify vertebrate pests and options for control
- minimise environmental disturbance
- inspect and assess personnel for work quality
- monitor the quality of work to achieve specified outcomes
- monitor timelines and resource requirements to ensure project outcomes are met
- coordinate a team to achieve optimum performance
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- strategies and techniques to avoid negative environmental impacts
- work programming
- responsibilities and requirements of contracts and other relevant documentation
- common and scientific names of native plants
- common names of weeds, native and pest animals
- importance and value of local provenance species
- natural area restoration techniques
- ability to assess restoration potential of sites
- basic plant and animal ecology
- knowledge of different ecosystems
- map and plan reading
- team supervision

**REQUIRED SKILLS AND KNOWLEDGE**

- strategies for monitoring work quality and progress
- OHS and environmental legislation, codes of practice and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- scope the natural area restoration works required and compare to specifications of work on the contract
- develop a work program and source labour and equipment to undertake the work
- maintain the supply of materials and access to equipment to allow restoration work to proceed
- monitor the work program and make adjustments to task schedule where required
- inspect work to ensure specifications are met and environmental impact is minimised
- arrange for inspection of completed works and complete project report.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Revegetation programs include:	<ul style="list-style-type: none"> <li>• assisted natural regeneration</li> <li>• planting and direct seeding</li> <li>• weed and animal control</li> <li>• conservation earthworks</li> <li>• construction of pathways and visitor facilities</li> <li>• erosion control.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCNAR402A Plan the implementation of revegetation works

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning the implementation of revegetation works and defines the standard required to: establish the purpose and client preferences for the site to be revegetated; carry out a site visit and confirm any planning requirements; develop a plan for the site, detailing the resources required and the program of works; develop timelines for the establishment and maintenance phases of the project; document the staged implementation plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervisors of revegetation programs who plan the implementation of revegetation works.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out preliminary planning activities for revegetation works	<p>1.1. Client preferences and contract requirements including the scope of the work for the revegetation project are confirmed and verified.</p> <p>1.2. Specific statutory obligations and site responsibilities that may affect the implementation of works are identified.</p> <p>1.3. An initial site visit is conducted to verify the biophysical and other factors of the project area including environmental considerations and historical modifications.</p> <p>1.4. Occupational Health and Safety (OHS) obligations associated with the revegetation works are identified, OHS hazards are assessed and controls developed, costed and documented in the implementation plan according to enterprise guidelines.</p> <p>1.5. The availability, quantity and costs of plants and other materials listed in the project schedules are verified.</p>
2. Prepare a staged plan of work	<p>2.1. Resources, tools and equipment required for revegetation procedures and ongoing maintenance of the site are identified, costed and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.2. Site access and establishment issues are investigated to consider and plan for the environmental impacts of site work practices, avoid safety hazards to workers or the public, and minimise disruption to site works during the construction period.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. A program of works is prepared to provide a sequential allocation of resources and work tasks to meet the project contract timelines.</p> <p>2.4. Timelines are developed for site establishment, the establishment period and maintenance of works.</p> <p>2.5. Seasonal factors and impacts are incorporated in the staging strategy to allow for planting supply and care, wet day access, machinery use, fire hazards and establishment period.</p> <p>2.6. Where required, special project works related to habitat resource development and enhancement are included in the staged implementation plan.</p> <p>2.7. Document the staged implementation plan.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess a site for opportunities and constraints associated with implementation of revegetation works
- prepare schedules for implementation of revegetation works
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- awareness of the role of revegetation works in the restoration of the environment
- practical understanding of the environmental issues associated with undertaking revegetation works, and the need to comply with legislation and ensure that the

## REQUIRED SKILLS AND KNOWLEDGE

- impact on the environment is minimal
- principles of ecology including specific native plant and animal relationships and habitat requirements
  - identification, propagation and establishment techniques of specific native plant species
  - site evaluation techniques including methods of analysing soils, waterways and their condition
  - practical understanding of the advantages and disadvantages of a range of revegetation procedures
  - chemical, cultural and biological weed and feral animal control techniques
  - soil conservation and enhancement techniques and their advantages and disadvantages in reference to specific sites and habitats
  - soil erosion control and stormwater management techniques
  - maintenance requirements and practices for native plants prior to and after initial establishment
  - growth habits and cultural requirements of specific native plants under a range of soil and environmental conditions
  - OHS hazards associated with undertaking revegetation works and the controls necessary to remove or minimise risks associated with them
  - contract documents including specifications, plans of landscape works, services, supplies and surveyors documents.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- establish the purpose and client preferences for the site to be revegetated
- carry out a site visit and confirm any planning

<b>EVIDENCE GUIDE</b>	
	<p>requirements</p> <ul style="list-style-type: none"> <li>• develop a plan for the site, detailing the resources required and the program of works</li> <li>• develop timelines for the establishment and maintenance phases of the project</li> <li>• document the staged implementation plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Revegetation works may include:	<ul style="list-style-type: none"> <li>• works for disturbed, degraded or remnant natural sites.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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## Co-requisite units

<b>Co-requisite units</b>		



## Competency field

Competency field	
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## AHCNAR501A Manage natural areas on a rural property

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers management of natural areas on a rural property and defines the standard required to: determine features and characteristics of natural areas; assess the ecological value of natural areas on a property; consult with neighbouring landholders, local authorities and interest groups; carry out work in natural areas according to management strategies and within statutory requirements; and prepare and implement management strategies.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to rural property owners who implement programs on a rural property that enhance the ecological and economical sustainable capacity of the land and outcomes for an enterprise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine location, size and type of natural area to be managed	<p>1.1. Location of natural area confirming property ownership and boundaries are mapped following industry guidelines.</p> <p>1.2. Lists of native animal and plant species specific to natural area are obtained in line with scientific guidelines.</p> <p>1.3. Vegetation structure and conservation value data for natural area is sourced and accuracy confirmed.</p> <p>1.4. Details of the presence of and threats from pest plants and animals are obtained following industry guidelines.</p> <p>1.5. Documented evidence of physical impacts on natural area is compiled.</p>
2. Prepare management plan	<p>2.1. Boundary control is designed appropriate to natural area protection guidelines.</p> <p>2.2. Restoration/maintenance strategies for natural area are planned consistent with relevant industry principles.</p> <p>2.3. Environmental concerns are adhered to when developing management strategies in accordance with relevant national, state, territory and local legislation and/or regulations.</p> <p>2.4. Physical impacts reduced/corrected utilising industry endorsed strategies.</p> <p>2.5. Appropriate planning and specialist personnel, and local authorities are liaised with according to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>organisation policy and guidelines.</p> <p>2.6.Habitat enhancement strategies are developed in line with industry guidelines.</p> <p>2.7.Strategies to integrate management of natural areas into land use and production systems of property are developed.</p> <p>2.8.Management plan is prepared and presented according to enterprise guidelines and industry best practice</p>
3. Implement management strategies	<p>3.1.Work schedules are developed incorporating objectives and timelines consistent with rural production requirements.</p> <p>3.2.Organisational Occupational Health and Safety (OHS) procedures, practices, policies and precautions are observed and followed.</p> <p>3.3.Work is carried out in natural areas according to management strategies and within statutory requirements.</p> <p>3.4.People, materials and equipment required for the work in natural areas are coordinated and scheduled in accordance with enterprise guidelines.</p> <p>3.5.Schedule for natural area works is organised in conjunction with operational personnel and sources of equipment, and takes seasonal weather conditions into consideration according to enterprise policy guidelines.</p> <p>3.6.Any permits or licenses required for the natural area works are identified, sought and obtained.</p> <p>3.7.Neighbouring landholders, local authorities and interest groups are consulted with, as required, during the implementation of works.</p> <p>3.8.Staff, clients, and contractors are communicated with regularly during implementation work.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- determine features and characteristics of natural areas
- source topographical information and conservation data about a site
- develop strategies for restoration and maintenance of habitat
- prepare management strategies
- implement management strategies
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- natural area restoration and management principles
- advantages and limitations of sustainable land management practices, including environment sustainability as a 'whole-system' approach
- property planning, financial management and enterprise budgeting systems and procedures
- identification of native plants, animals, weeds and vertebrate pests
- strategies to maximise opportunities and minimise environment impact
- environmental issues especially in regard to water catchments, air, noise, ecosystems, habitat and waste minimisation
- fencing and barriers, stocking options and control
- ecological systems in regard to business operation
- relevant state/territory legislative requirements with regard to environmental protection and control standards.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine features and characteristics of natural areas</li> <li>• assess the ecological value of natural areas on a property</li> <li>• consult with neighbouring landholders, local authorities and interest groups</li> <li>• carry out work in natural areas according to management strategies and within statutory requirements</li> <li>• prepare and implement management strategies.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Natural areas may include:	<ul style="list-style-type: none"> <li>• areas of native grassland</li> <li>• wetlands</li> <li>• bushland</li> <li>• any other area that is protected from agriculture.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCNAR502A Conduct biological surveys

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved with conducting biological surveys and defines the standard required to: identify the scope, objectives and constraints for a biological survey according to client requirements, the biological components to be surveyed and enterprise policy; assess the availability of current data and determine data collection and processing needs; identify biological indicators that are repeatable and statistically representative; document survey methods and indicators as a survey plan; schedule survey activities and establish access to the site; conduct a biological survey with data collection staged and recorded according to the survey plan; produce a biological survey report with detailed analysis and conclusion, including a description and assessment of the specified biological components.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to land restoration managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out preliminary design activities for the biological survey	<p>1.1. Survey scope, objectives and constraints are identified according to client requirements, biological components to be surveyed and enterprise policy.</p> <p>1.2. All current data relevant to survey requirements is sourced, collated and evaluated according to enterprise policy.</p> <p>1.3. Processes for data collection are developed, consistent with the survey scope, objectives and constraints.</p> <p>1.4. Processes for data processing are developed, consistent with the survey scope, objectives and constraints.</p> <p>1.5. A survey design that reflects client requirements and survey scope, objectives and constraints is developed and presented to the client for discussion and approval.</p>
2. Determine requirements of the biological survey	<p>2.1. Survey indicators are identified and constraints and opportunities for data collection identified and evaluated.</p> <p>2.2. Data collection points are identified that are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>repeatable and statistically representative for the biological survey.</p> <p>2.3.OHS hazards associated with conducting a biological survey are identified; risks assessed and controls developed according to enterprise guidelines, costed and documented in the survey design.</p> <p>2.4.Tools, equipment and machinery required for the biological survey are identified, costed and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.5.Scheduling of survey activities and surveyor access are determined according to the survey design.</p> <p>2.6.Survey procedures and schedules are documented according to scientific conventions and the survey scope and objectives, and are presented to appropriate personnel and the client for briefing and acceptance.</p>
3. Conduct the biological survey	<p>3.1.Field visits are conducted to verify and consolidate previously collected data and to gather further information on species frequency, distribution, and health and/or habitat values.</p> <p>3.2.The biological survey is conducted according to the survey design and enterprise policy.</p> <p>3.3.Survey activities are monitored for accuracy, compliance to the survey design and out-of-specification procedures or events.</p> <p>3.4.Staged data collection is undertaken according to survey design, survey scheduling and surveyor access requirements.</p> <p>3.5.All monitoring and survey data is recorded promptly and accurately, according to the specifications of the survey design.</p>
4. Compile a biological survey report	<p>4.1.Analysis of collected data is undertaken according to industry policies and guidelines.</p> <p>4.2.Conclusions about the biological survey are drawn from relevant information and are based on appropriate evidence and reasoned arguments.</p> <p>4.3.A biological survey report is produced which conforms to industry standards for presentation, structure and content, and is presented to the client for acceptance.</p> <p>4.4.The report describes biological survey findings</p>

ELEMENT	PERFORMANCE CRITERIA
	according to the survey scope and objectives, identifies areas requiring remedial action for improvement and details recommendations for action.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and evaluate information
- assess survey findings and produce written reports and conclusions based on appropriate evidence and reasoned arguments
- comply with legislative requirements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- biological classification systems
- plant/animal recognition
- environmental factors that impact on vegetation/animal populations
- ecological principles and terminology
- energy flows and trophic structures of communities
- legal requirements relating to the protection and clearance of vegetation and/or animal species
- assessment, reporting and client liaison procedures and best practice techniques
- enterprise work team management guidelines
- Occupational Health and Safety (OHS) legislative requirements and Codes of Practice
- hazard identification, assessment and control.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify the scope, objectives and constraints for a biological survey according to client requirements, the biological components to be surveyed and enterprise policy</li> <li>• assess the availability of current data and determine data collection and processing needs</li> <li>• identify biological indicators that are repeatable and statistically representative</li> <li>• document survey methods and indicators as a survey plan</li> <li>• schedule survey activities and establish access to the site</li> <li>• conduct a biological survey with data collection staged and recorded according to the survey plan</li> <li>• produce a biological survey report with detailed analysis and conclusion, including a description and assessment of the specified biological components.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The scope of biological surveys may include:	<ul style="list-style-type: none"> <li>• the size of the area to be surveyed</li> <li>• the type of plant/animal community and the quantity and species within the community that are to be directly surveyed</li> <li>• regularity and replication of survey periods</li> <li>• the extent of analysis and recommendations required.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCNAR503A Design a natural area restoration project

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the design of a natural area restoration project and defines the standard required to: establish the project purpose, scope and extent, and costs and benefits; prepare a base plan incorporating landforms, soils, fauna and flora and habitat; determine options for natural area restoration and incorporate into a concept design and; produce a final design with supporting documentation, including costings.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to restoration managers designing a natural area restoration project.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop a design brief	<p>1.1.The client is consulted to establish the purpose and requirements of design.</p> <p>1.2.The ecological aims and objectives for the restoration project are developed and confirmed with client.</p> <p>1.3.The design brief is developed and scope of extent of project is agreed with the client.</p> <p>1.4.The project budget is prepared in liaison with the client.</p> <p>1.5.A base plan of the site is obtained or prepared.</p> <p>1.6.Existing site data and information is reviewed prior to visiting the site.</p>
2. Undertake a site analysis	<p>2.1.The project site is visited and inspected at the first stage of the design work.</p> <p>2.2.Physical elements and features of the site, its physical and biological condition and the presence of threats are quantified and mapped onto the base plan.</p> <p>2.3.Soil, topography, aspect, habitat resources, existing vegetation and climatic factors are recorded on the base plan and in the site report.</p> <p>2.4.Legal requirements and constraints on restoration work are assessed.</p> <p>2.5.The potential for natural regeneration is assessed and the limiting factors are identified and recorded.</p> <p>2.6.Options for passive and active interventions are determined.</p> <p>2.7.Other relevant information is assessed and recorded.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Develop a concept design	<p>3.1. Concept design is prepared to illustrate location and layout of the proposed restoration project according to the design brief.</p> <p>3.2. Consultation with the client is undertaken to establish agreement on options and approaches for development in accord with the proposed ecological aims and goals.</p> <p>3.3. A professional graphic format is used to present the concept design with supporting written information and justification or reasons for the proposed actions.</p>
4. Produce a final design	<p>4.1. A detailed plan is prepared and drafted according to the design brief, concept design and enterprise guidelines.</p> <p>4.2. Information on the design is relevant and precise and must clearly communicate the project works in a sequential manner.</p> <p>4.3. Plan, notes and specifications are included on the design to give an interpretation of the plan, to establish the quality and standard of the works, and the responsibilities of the contractor during implementation.</p> <p>4.4. Appropriate construction and engineering principles are applied to restoration design according to accepted industry standards and regulations.</p> <p>4.5. Further design documentation is organised and/or prepared according to the design brief and enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use a range of graphic techniques for illustrating design concepts
- source and review site data
- assess ecological restoration needs and prescribe solutions
- carry out natural resource mapping for a site



## REQUIRED SKILLS AND KNOWLEDGE

- prepare a concept design
- use a professional graphic format
- interpret legislation and regulations in relation to natural area restoration works.
- prepare a Bill of Quantities
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- design process.
- construction principle and practices
- graphical presentation and drafting techniques
- recognition of plant species and a range of ecological communities
- natural regeneration potential and limits
- ecological restoration theory and techniques
- drafting techniques
- cost estimating
- calculations of materials, labour, machinery and equipment
- environmental implications of restoration works.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the project purpose, scope and extent, and costs and benefits</li> <li>• prepare a base plan incorporating landforms, soils, fauna and flora and habitat</li> <li>• determine options for natural area restoration and incorporate into a concept design</li> <li>• produce a final design with supporting documentation, including costings.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Restoration projects include:	<ul style="list-style-type: none"> <li>• seeding/planting of vegetation</li> <li>• release and/or protection of native animal species</li> <li>• weed and pest animal control</li> <li>• assisted natural regeneration</li> <li>• protection of remnant plant species and communities</li> <li>• maintenance and protection of sites of cultural or natural significance.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCNAR504A Manage natural area restoration programs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers management of natural area restoration programs and defines the standard required to carry out a site assessment for restoration; select vegetation restoration techniques; plan a natural area restoration program; calculate staff and resources required; supervise natural area restoration works; and review natural area restoration program against issues identified in the management plan for the area.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to land restoration managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Inspect and assess site for replacement of vegetation	<p>1.1.A vegetation assessment report is prepared.</p> <p>1.2.Site conditions, level of degradation and potential for natural area restoration are determined.</p> <p>1.3.Threats to existing ecosystem, flora, fauna and property from natural area restoration works are assessed.</p> <p>1.4.Range of likely operating conditions, hazards and difficult/sensitive environments are assessed for impact on natural area restoration works.</p>
2. Plan natural area restoration program	<p>2.1.Plans and specifications for natural area restoration works are prepared according to program/management aims and objectives.</p> <p>2.2.Natural area restoration techniques are selected to meet management plans and enterprise requirements.</p> <p>2.3.Staging strategy for works is outlined.</p> <p>2.4.Protective structures are planned to ensure compliance with Occupational Health and Safety (OHS) and relevant legislation.</p> <p>2.5.Appropriately skilled personnel are selected.</p> <p>2.6.Equipment and personnel are transported to natural area restoration sites without injury or damage according to enterprise procedures.</p> <p>2.7.Appropriate permits/licenses and authorisations are obtained according to legislative and enterprise requirements.</p> <p>2.8.Equipment and materials required for natural area restoration work is sourced according to enterprise</p>

ELEMENT	PERFORMANCE CRITERIA
	procedures.
3. Monitor natural area restoration works	3.1.Observations are made according to natural area restoration plans and to enterprise procedures. 3.2.Checks are made that the site is prepared according to specifications. 3.3.Plant materials, machinery and equipment are checked to ensure compliance with enterprise guidelines and natural area restoration plan. 3.4.Natural area restoration works are effected according to enterprise guidelines. 3.5.Work is monitored to ensure remedial action is undertaken as required. 3.6.Occupational health and safety management conforms to legislative requirements and enterprise policies and procedures.
4. Review natural area restoration programs	4.1.Site is monitored to ensure compliance with maintenance program plans and specifications or enterprise guidelines. 4.2.Site is assessed to determine whether natural area restoration works are addressing factors and issues consistent with management plans. 4.3.Changes to natural area restoration techniques are reported to enterprise procedures for adoption in future works.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- inspect and assess site for restoration
- plan natural area restoration program
- monitor natural area restoration works
- review natural area restoration program
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports

## REQUIRED SKILLS AND KNOWLEDGE

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- plant species and community recognition
- natural regeneration potential and limits
- ecological restoration theory and techniques
- factors affecting the timing and method of plant establishment
- identification of plant and animal threats to treated areas
- principles and methods relating to the prevention and control of pests and diseases
- safety requirements when handling and using hazardous goods
- soils and nutrients, plant selection and culture
- calculations for materials
- legislative requirements
- preparation of plans and specifications
- OHS.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out a site assessment for restoration
- select vegetation restoration techniques

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• plan a natural area restoration program</li> <li>• calculate staff and resources required</li> <li>• supervise natural area restoration works</li> <li>• review natural area restoration program against issues identified in the management plan for the area.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Restoration techniques may include:	<ul style="list-style-type: none"> <li>• assisted natural regeneration</li> <li>• hand planting</li> <li>• mechanical planting</li> <li>• direct seeding</li> <li>• mechanical sowing.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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## Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCNAR505A Plan river restoration works

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning of river restoration works and defines the standard required to: restoration strategies are checked for compliance and discussed with client; develop erosion and sediment control measures; follow industry guidelines to establish fauna habitat and vegetation species; document the strategy and submit to the relevant consent authority; prepare a detailed works plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to restoration and rehabilitation project managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish client need	<p>1.1.The client expectations is discussed and confirmed.</p> <p>1.2.Current impacting legislation and policies are explained to the client.</p> <p>1.3.Possible strategies are discussed with the client and the best option confirmed in writing.</p>
2. Develop the strategy to utilise restoration works	<p>2.1.Property ownership and boundaries are confirmed by checking maps and titles.</p> <p>2.2.Profiles of river sections are determined from survey and aerial photographs.</p> <p>2.3.Erosion control measures are developed and are consistent with industry principles and selection criteria.</p> <p>2.4.Sediment control measures are developed consistent with industry principles and selection criteria.</p> <p>2.5.Fauna habitats are developed following industry recommendations.</p> <p>2.6.Vegetation species utilised within restoration project comply with industry guidelines.</p> <p>2.7.River restoration strategies are established and documented in co-operation with the client and relevant consent authority.</p>
3. Prepare a detailed works plan	<p>3.1.Selection criteria for earthwork structures or measures are checked against industry guidelines.</p> <p>3.2.Habitat enhancement strategies checked against industry guidelines.</p> <p>3.3.Plan is prepared according to enterprise guidelines and industry best practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- establish requirements of the project
- establish the suitability of a project proposal
- develop erosion and sediment control strategies
- develop a river restoration strategy
- design structural works, and prepare a river restoration plan
- prepare a detailed works plan
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant environmental protection, planning and groundwater legislation
- river processes and restoration techniques
- erosion and sediment control techniques
- planning procedure for erosion and sediment control
- erosion control and design principles
- soils and soil formation
- levels and levelling
- design principles
- earthmoving principles
- restoration principles and techniques
- total catchment issues
- legal requirements - permits
- environmental issues
- biodiversity
- managing peak water flows

**REQUIRED SKILLS AND KNOWLEDGE**

- subsurface and surface drainage principles and systems.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- restoration strategies are checked for compliance and discussed with client
- develop erosion and sediment control measures
- follow industry guidelines to establish fauna habitat and vegetation species
- document the strategy and submit to the relevant consent authority
- prepare a detailed works plan.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Erosion control measures may

- embankment stabilising structures and

<b>RANGE STATEMENT</b>	
include:	techniques.
Sediment control measures may include:	<ul style="list-style-type: none"> <li>• coffer dams</li> <li>• site management</li> <li>• sediment fences</li> <li>• sediment traps</li> <li>• sediment curtains</li> <li>• sediment retention basins.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCNAR506A Develop and implement sustainable land use strategies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing and implementing sustainable land use strategies and defines the standard required to: assess the threats to sustainability for an area or region; manage water resources and riparian zones; manage vegetation and plant succession for an area; manage the health and sustainability of soils; incorporate sustainability principles into land use practices.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managers of agricultural and production horticulture enterprises whose job role includes developing land use strategies that lead to improved ecological sustainability of land under production.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess requirements for improved land use	<p>1.1.The natural resource base of the area is audited and threats to sustainability identified.</p> <p>1.2.The organisation's production and management plans are reviewed to incorporate sustainable land use principles.</p> <p>1.3.Water quality and impacts of run off are assessed for risk of erosion.</p> <p>1.4.Soil health and fertility is assessed according to the requirements of the organisations production and management plans.</p> <p>1.5.Vegetation types and coverage is assessed and required changes identified.</p> <p>1.6.Land protection measures and structures are planned and prioritised to address threats to sustainability.</p>
2. Carry out structural improvements to address threats to sustainability	<p>2.1.Sites are inspected and measured, key features noted, and pegs or markers are placed as appropriate for structural improvements if required.</p> <p>2.2.Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented, monitored and reviewed.</p> <p>2.3.Materials required for the construction of the improvement(s) are calculated from the plans, observations and discussions with colleagues.</p> <p>2.4.Materials, personnel and equipment are obtained and organised to be on site at the appropriate times.</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Equipment to be used is checked and calibrated, if necessary, prior to commencement.</p> <p>2.6. Structural works are constructed and the area is revegetated and secured from livestock if required.</p>
3. Integrate sustainable land use principles into production	<p>3.1. Fences or boundaries are realigned to land classes and soil conservation works.</p> <p>3.2. Contour banks are protected and repaired as necessary.</p> <p>3.3. Water carrying structures are constructed or repaired as necessary.</p> <p>3.4. Tree, other vegetation and shelter belts are established for crop and stock protection.</p> <p>3.5. Soil cultivation and planting practices are reviewed and amended to prevent erosion and minimise soil run-off.</p> <p>3.6. Grazing strategies are planned to maximise ground cover and avoid damage through foot tracks or damage to banks.</p>
4. Treat areas of land degradation	<p>4.1. Fences or boundaries are realigned to land classes and soil conservation works.</p> <p>4.2. Contour banks are protected and repaired as necessary.</p> <p>4.3. Water carrying structures are constructed or repaired as necessary.</p> <p>4.4. Tree, other vegetation and shelter belts are established for crop and stock protection.</p> <p>4.5. Soil cultivation and planting practices are reviewed and amended to prevent erosion and minimise soil run-off.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- handle and manoeuvre equipment
- assess soil health and stability in a landscape

## REQUIRED SKILLS AND KNOWLEDGE

- assess vegetative cover in a landscape
- assess water resources and threats to water quality or soil erosion
- incorporate principles of sustainability into land use planning
- read and interpret manufacturers specifications, work and maintenance plans, and Materials Safety Data Sheets (MSDSs)
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- the role of biodiversity in farming systems
- sustainable land and water use principles and practices applicable in the region
- sustainable soil management
- soil appraisal and remediation strategies
- environmental controls and codes of practice applicable to the business and to the improvement works
- the whole farm plan
- relevant legislation and regulations relating to soil and water degradation issues and chemical use, building construction
- relevant OHS and environmental protection legislation, regulations and codes of practice
- causes of land degradation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess the threats to sustainability for an area or region</li> <li>• manage water resources and riparian zones</li> <li>• manage vegetation and plant succession for an area</li> <li>• manage the health and sustainability of soils</li> <li>• incorporate sustainability principles into land use practices.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Causes of land degradation may include:	<ul style="list-style-type: none"> <li>• rising water tables</li> <li>• wind eroded areas</li> <li>• saline areas</li> <li>• weed infestations</li> <li>• unstable soils</li> <li>• poorly drained areas</li> <li>• shelter requirements.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural area restoration
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCNRM501A Develop a coastal rehabilitation strategy

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the process of developing, implementing and evaluating a rehabilitation strategy for a natural area in a coastal zone. It requires the ability to inspect and assess the condition of the coastal area, assess threats to the stability of the environment, plan for rehabilitation and/or maintenance of the area and natural resources within the area, implement, monitor and review the rehabilitation program. The unit includes the development of strategies. Developing a strategy to rehabilitate a coastal area requires knowledge of ecological principles, coastal zone habitats, landforms and processes, identification of flora and fauna, biodiversity, identification of pest species, identification of environmental degradation processes and threats, coastal habitat restoration techniques, pest control techniques and monitoring techniques.
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### Application of the Unit

<b>Application of the unit</b>	This unit is suitable for persons working in enterprises, organizations or groups who are responsible for the management of natural resources within the coastal zone.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and describe coastal resource/assets	<p>1.1. Identify existing sources of information including advice from the relevant land manager, organization or group on the coastal zone resource/assets in the area to be managed.</p> <p>1.2. Conduct site survey to determine physical/biological entities and processes including threatening processes.</p> <p>1.3. Identify cultural and heritage sites within the resource zone and arrange for an archaeological assessment if required.</p> <p>1.4. Identify OH&amp;S risks and hazards that may impact on management operations at the site.</p> <p>1.5. Identify resource use and management stakeholders for the area and the requirements and opportunities</p>

ELEMENT	PERFORMANCE CRITERIA
	for consultation.
2. Establish condition of coastal area	2.1. Evaluate current condition of resources and or assets within the area. 2.2. Assess threatening processes in terms of the level of impact on the resources/assets within the area. 2.3. Present preliminary findings on the coastal resource and its condition to the appropriate audience.
3. Establish a strategy to rehabilitate the coastal area	3.1. Analyse information gathered to facilitate decisions on management options. 3.2. Present findings to management authority and seek direction on drafting management actions. 3.3. Implement processes for consultation with management, enterprise staff, consultants and stakeholders where required in accordance with enterprise policies and procedures. 3.4. Establish and prioritise strategy for asset rehabilitation and improvement. 3.5. Design management action plan for implementation of the strategy. 3.6. Document acceptance of the action plan by management and other stakeholders according to organisational policies and procedures. 3.7. Formal consent gained from relevant land manager/authority as required.
4. Implement and monitor the strategy and action plan	4.1. Seek funds/volunteer assistance to undertake actions in accordance with organisational plans and procedures, OH&S and legislative requirements. 4.2. Co-ordinate activities with other relevant organizations, community groups, individuals or stakeholders. 4.3. Monitor progress of works in accordance with strategy plans, organisational policies and procedures. 4.4. Review strategies and actions with recommendations for change processed in accordance with organisational policies and procedures.
5. Evaluate rehabilitation strategy	5.1. Evaluate changes in resource condition and effectiveness of strategy. 5.2. Report findings to management and stakeholders with recommendations for adjustments to strategy.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- undertake site research
- assess condition of resources
- identify and recommend rehabilitation strategies
- evaluate and monitor rehabilitation strategy
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- coastal zone geomorphology and processes
- ecological principles and environmental assessment techniques
- native flora and fauna identification, habitat requirements, vulnerable and endangered species
- techniques and strategies for use in the management, rehabilitation of natural communities and species within the coastal zone
- environmental degradation processes
- management of cultural and heritage sites
- natural resource management planning and issues
- pest plant and animal management
- relevant legislative and regulatory requirements
- preparing reports.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the



<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The critical requirements that are valuable for this unit of competency as a whole are listed below.</p> <p>Assessment must confirm one's ability to:</p> <ul style="list-style-type: none"> <li>• assess the condition of a natural area within a coastal zone and identify threats</li> <li>• determine management options to facilitate the development of a strategy and action plan</li> <li>• monitor and evaluate the implementation of the strategy.</li> </ul>
<b>Context of and specific resources for assessment</b>	For valid and reliable assessment of this unit, competency should be consistently demonstrated over a period of time and observed by the assessor.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Sources of information may include:	<ul style="list-style-type: none"> <li>• existing local, regional, state or national management plans or strategies impacting on the resource, previous surveys, maps and studies on or relating to the site.</li> </ul>
Resource/assets may be:	<ul style="list-style-type: none"> <li>• a natural resource or physical asset within the area e.g. <ul style="list-style-type: none"> <li>• a natural resource such as a fishery</li> <li>• natural communities of significant ecological value</li> <li>• site specific where there may be several resources/assets and may include a</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	statement of significance for each resource/asset.
Cultural and heritage sites may include:	<ul style="list-style-type: none"> <li>• archaeological remains of aboriginal occupation and cultural sites</li> <li>• remains of early European settlement and other historic values</li> <li>• shipwrecks</li> <li>• recreational values</li> <li>• landscape values</li> <li>• scientific sites of significance.</li> </ul>
Threats and disturbances that may affect a coastal zone include:	<ul style="list-style-type: none"> <li>• coastal development</li> <li>• degradation and destabilisation of habitats</li> <li>• pollution and degradation of coastal water quality</li> <li>• terrestrial and/or marine pest impact on ecosystems</li> <li>• erosion and sedimentation</li> <li>• overfishing</li> <li>• recreational pressures</li> <li>• major event</li> <li>• poaching</li> <li>• marine industries/fisheries and aquaculture.</li> </ul>
Strategies may include:	<ul style="list-style-type: none"> <li>• protecting or rehabilitating dunes</li> <li>• estuaries and wetlands and other coastal and marine habitats</li> <li>• removing threats</li> <li>• monitoring beach conditions</li> <li>• flora and fauna</li> <li>• removing inappropriate structures</li> <li>• regulate recreational and commercial activities</li> <li>• controlling pedestrian or vehicular traffic</li> <li>• education and training activities that raise community awareness of coastal and marine conservation issues</li> <li>• temporary control measures may be included</li> <li>• strategies to include monitoring criteria.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural resource management
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCNRM502A Develop a water quality monitoring program

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit of competency covers the process of developing a water-quality monitoring program. It requires the ability to assess the requirements of such a program, determine the type and extent of data to be collected, store and manage data, interpret and analyse the data, assess water quality, assess factors contributing to water quality, monitor and evaluate the program. Developing a water quality monitoring program required knowledge of the hydrological cycle, catchment and coastal management issues contributing to surface and groundwater quality, water quality parameters, chemical principles, sampling techniques, analytical techniques, data storage and management and accepted scientific process.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit is appropriate for persons working in the role of coordinator/manager in an organization, group or enterprise concerned with gathering information for land or water management purposes. The role is likely to include delegation of implementation tasks and may include consultation with specialists such as hydrologists, hydrographers etc.</p>
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine water quality monitoring program requirements	1.1. Survey client to identify scope, objectives and constraints of project and intended use of the data. 1.2. Research, collate and evaluate background information relevant to survey type and site. 1.3. Determine water quality indicators to be measured, frequency and volume of sampling required to meet scope, objectives and constraints of project. 1.4. Determine that procedures required for data collection and processing and reporting format are consistent with the survey scope, objectives and constraints of program and legislative requirements. 1.5. Seek estimates of costs involved and/or sources of

ELEMENT	PERFORMANCE CRITERIA
	<p>funds for the program as required by the client and according to enterprise policies and procedures.</p> <p>1.6. Provide a survey strategy to client that reflects project requirements, scope, objectives and constraints for discussion and approval.</p>
2. Undertake a site analysis	<p>2.1. Identify and record physical and biological features at the site of the monitoring program.</p> <p>2.2. Identify and record resource management factors that are contributing to water quality.</p> <p>2.3. Survey biota as required to meet the scope and objectives of the program.</p> <p>2.4. Identify and assess OH&amp;S hazards and risks associated with conducting the sampling program.</p> <p>2.5. Identify and evaluate sampling points for safety, accessibility and opportunities for repeatable data collection.</p>
3. Plan monitoring program	<p>3.1. Evaluate information gathered to select suitable monitoring sites for repeatable monitoring and to obtain representative samples.</p> <p>3.2. Source and cost laboratory and field equipment, tools, machinery and other material required for the monitoring program, assess for suitability/reliability and confirm availability with suppliers, contractors and enterprise personnel.</p> <p>3.3. Confirm surveyor access to site with land manager for the duration of the monitoring program.</p> <p>3.4. Determine and document OH&amp;S controls and emergency procedures required for the program to be presented to appropriate personnel according to enterprise policies and guidelines.</p> <p>3.5. Document methods of data collection, monitoring and field techniques for field operators according to enterprise policies and guidelines.</p> <p>3.6. Present to appropriate personnel and the client for briefing and acceptance, survey schedules and procedures developed in accordance with enterprise guidelines and relevant legislation.</p>
4. Monitor water quality	<p>4.1. Carry out surveying tasks out in line with monitoring plan and enterprise/agency guidelines/protocols and in accordance with OH&amp;S guidelines.</p> <p>4.2. Store and transport and treat samples with regard to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>temperature, maximum holding periods and other variables and according to enterprise/agencies guidelines and policies.</p> <p>4.3. Monitor surveying process for accuracy, compliance with the survey plans and procedures, OH&amp;S policies and regulatory requirements.</p> <p>4.4. Assess and evaluate for errors and inconsistencies, implementing contingency plans when problems arise with the monitoring plans and procedures.</p>
5. Evaluate program	<p>5.1. Analyse data collected according to industry policies and guidelines and scientific standards.</p> <p>5.2. Outcomes, conclusions and/or trends from the monitoring program are drawn from relevant information including industry standards for interpretation of water quality data and are based on appropriate evidence and reasoned arguments.</p> <p>5.3. Advice is sought from client as to satisfaction with monitoring program in terms of the process and outcomes.</p> <p>5.4. Provide report on outcomes to client with recommendations for changes and improvements any further monitoring activities.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate effectively with the client, enterprise staff, managers, community groups and consultants both orally and in writing
- research and evaluate information
- collect, store and evaluate data
- produce written reports and conclusions based on appropriate evidence and reasoned arguments
- comply with legislative requirements
- undertake water quality monitoring
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• hydrological cycle</li> <li>• catchment and coastal management issues contributing to surface and groundwater quality</li> <li>• aquatic ecology</li> <li>• water quality indicators</li> <li>• standard techniques to assess ecological health of aquatic sites</li> <li>• chemical principles</li> <li>• sampling techniques</li> <li>• analytical techniques</li> <li>• data storage and management</li> <li>• accepted scientific process</li> <li>• statistical analysis</li> <li>• OH&amp;S and other related legislative requirements</li> <li>• hazard identification, assessment and control.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The critical requirements that are valuable for this unit of competency as a whole are listed below.</p> <p>Assessment must confirm one's ability to:</p> <ul style="list-style-type: none"> <li>• determine water quality monitoring requirements for a project brief</li> <li>• undertake research and a site analysis to select suitable monitoring sites</li> <li>• develop the monitoring plan</li> <li>• monitor and evaluate the program.</li> </ul>
<b>Context of and specific resources for</b>	For valid and reliable assessment of this unit,



**EVIDENCE GUIDE****assessment**

competency should be consistently demonstrated over a period of time and observed by the assessor.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Survey scope may include:

- the time over which the water-quality monitoring program is to be undertaken
- size of the area to be surveyed
- the type of monitoring
- frequency of sampling
- the extent of analysis and recommendations required.

Objectives may include:

- monitoring of the health of an aquatic system
- measuring trends in quality over time
- measuring outcomes in response to changes in catchment or coastal management
- conforming to regulatory requirements related to quality of discharge water from an enterprise.

Processes for data collection may include:

- the sampling techniques
- treatment
- storage and transport of samples
- measurement standards
- identification of species

Processes may include:

- data recording
- organising
- storage
- analysis and presentation techniques including

Methods of data collection, monitoring and field techniques to

- the scope and frequency of monitoring reports
- the collecting, recording and storing of data

**RANGE STATEMENT**

be documented may include:

(eg. logbooks, recording sheets, dataloggers).

- techniques and guides for the field identification of species
- recording of site information and use of information for classification, coding systems etc
- checklists for equipment, tools and machinery for field trips
- the storage, transport, calibration, maintenance and safe operation of equipment, tools and machinery including the manufacturers instructions
- guidelines for the treatment, preservation, transport and storage of specimens.

**Unit Sector(s)**

<b>Unit sector</b>	Natural resource management
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCNRM503A Support the implementation of waterways strategies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit of competency covers the implementation of catchment plans relevant to waterways improvement using a diverse range of strategies. The determination of priorities and targets and the support of specific strategies are within the legislative and policy context. It requires knowledge of legislation relevant to waterways, changes to waterways management and planning and their impact on traditional approaches to and arrangements for managing waterways. It requires skills in assessing the relevance of diverse and interrelated strategies in achieving regional priorities and targets, encouraging and supporting stakeholder participation and evaluating the success of strategies in meeting overall targets. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to persons who have a role in waterways development and management and are responsible for implementing waterways improvement plans by working with a range of stakeholders using a range of strategies.</p>
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### Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Confirm the arrangements for waterways planning and management within a catchment area	<p>1.1. The roles and responsibilities of key stakeholders relevant to waterways planning and management are identified.</p> <p>1.2. The purpose, scope and impact of legislation relevant to waterways planning and management are reviewed.</p> <p>1.3. The impact of changes to waterways planning and management arrangements and current trends are reviewed.</p> <p>1.4. The impact of government policies and plans on waterways planning and management is reviewed.</p>
2. Establish priorities	2.1. Catchment plans are reviewed based on relevant

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
for implementing catchment plans for waterways improvement	<p>legislation and policies, management targets and priorities.</p> <p>2.2.Information on the specific needs of waterways is collected and assessed.</p> <p>2.3.Consultation with colleagues and stakeholders (as relevant) is undertaken to establish priorities, targets and funding requirements.</p> <p>2.4.Strategies including existing local, state and national programs are assessed for relevance to achievement of priorities and targets.</p>
3. Facilitate stakeholder participation	<p>3.1.Priorities and targets are communicated to stakeholders.</p> <p>3.2.Funding and other opportunities that support strategies for action are communicated to stakeholders.</p> <p>3.3.The development of submissions/plans that identify aims, outcomes, steps, evaluation and reporting methodology are supported.</p> <p>3.4.Cooperation and partnerships between stakeholders is facilitated.</p>
4. Advise and support stakeholders	<p>4.1.Support is provided to ensure that all legislative requirements, including occupational health and safety, are met.</p> <p>4.2.Ensure that variations to planned approaches are notified to the appropriate agencies/stakeholder.</p> <p>4.3.Timely and appropriate support is provided that meets with stakeholder needs.</p> <p>4.4.Communication and negotiation skills are used to resolve conflicts where they arise.</p>
5. Evaluate the achievement of priorities and targets	<p>5.1.Monitoring strategies appropriate to a range of strategies are used.</p> <p>5.2.Monitoring information is collected and analysed against priorities and targets.</p> <p>5.3.Findings are communicated to stakeholders and other relevant agencies.</p> <p>5.4.Evaluation findings are documented for use in future planning and reported to stakeholders.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prioritise projects (based on regional targets)
- identify enterprise funding mechanisms
- undertake project planning and support including the:
  - identification of aims, risks, outcomes, stages
  - selection of resources and equipment e.g. project management software
  - use of evaluation and reporting methods
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures.

#### Required knowledge

- environmental legislation
- obligations of landholders
- contemporary regional catchment strategies
- principles of community capacity building and engagement
- policies applying across all levels of government and within the specific region, including those under catchment plans
- Occupational Health and Safety requirements for community groups
- waterways improvement techniques including:
  - fencing
  - revegetation
  - habitat restoration
  - pest plant control.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	It is critical that the candidate is able to facilitate a diverse range of strategies and approaches to achieve the priorities and related targets derived from catchment plans. They must be able to liaise with, and give feedback to a wide range of stakeholders and to solve conflicts as they arise. Candidates must display skills in evaluating the achievement of priorities and targets.
<b>Context of and specific resources for assessment</b>	Assessment of this unit could take place in the workplace or in a simulated environment where candidates support a range of strategies for waterways improvement by working with one or more stakeholders.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislation may include:	<ul style="list-style-type: none"> <li>• the Environment Protection and Biodiversity Conservation Act 1999</li> <li>• Catchment and Land Protection Act 1994</li> <li>• Planning and Environment Act 1987</li> <li>• Environmental Protection Act 1970</li> <li>• Coastal Management Act 1995</li> <li>• Water Act 1989.</li> </ul>
Policies and plans may include:	<ul style="list-style-type: none"> <li>• State Environment Protection Policies</li> <li>• regional River Health Strategies</li> <li>• Weed Action Plans</li> <li>• regional Rabbit Action Plans</li> <li>• regional Landcare Plans</li> <li>• soil health strategies</li> <li>• local catchment management plans.</li> </ul>

<b>RANGE STATEMENT</b>	
Strategies may include:	<ul style="list-style-type: none"> <li>• community education programs</li> <li>• small and large scale projects</li> <li>• information dissemination</li> <li>• awareness campaigns</li> <li>• field days.</li> </ul>
Variations may include:	<ul style="list-style-type: none"> <li>• availability of or use of alternative materials and equipment</li> <li>• completion dates</li> <li>• human resource requirements</li> <li>• data availability</li> <li>• project design.</li> </ul>
Monitoring information may include:	<ul style="list-style-type: none"> <li>• qualitative surveys of perceptions or values</li> <li>• quantitative surveys such as water quality data</li> <li>• before and after project</li> <li>• establishing photo points</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Natural resource management
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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# AHCNRM504A Interpret and report on catchment hydrology

## Modification History

Not Applicable

## Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit of competency covers the interpretation of catchment hydrology and reporting on water quantity and quality within a catchment. It requires knowledge of hydrogeology, geology, geomorphology, hydrology and contemporary water allocation issues. It requires skills in interpreting geological maps and hydrological data, predicting water movement in catchments, identifying processes that have a negative impact on water quality and quantity and the use of software in hydrological data reporting. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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## Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit is applicable to a person employed in a technical capacity to collect, collate, analyse and report on hydrological data for use in floodplain management, asset protection and water allocation.</p>
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## Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

<p><b>Prerequisite units</b></p>		

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collate and evaluate catchment information	1.1.Data collection priorities are determined in consultation with supervisor or team where appropriate. 1.2.Sources of information are used to access catchment information. 1.3.The accuracy and currency of information is evaluated and additional data requirements are identified. 1.4.Land uses within the catchment are identified. 1.5.Management units within the catchment are determined.
2. Analyse the hydrological processes of a catchment using	2.1.Natural ground and surface water processes within the catchment are analysed. 2.2.Man-made ground and surface water movement within a catchment are identified.

ELEMENT	PERFORMANCE CRITERIA
available data	<p>2.3.Man-made impacts on water quantity within the catchment are determined and analysed.</p> <p>2.4.Appropriate representative sites for field surveys are identified for the collection of additional data where required.</p>
3. Design and implement field surveys and assess findings	<p>3.1.Objectives, locations and resource requirements for site assessments are determined in consultation with supervisor or team.</p> <p>3.2.Physical entities and processes, including threats, within representative management units are assessed.</p> <p>3.3.Site data is collected according to enterprise policies, practices and guidelines.</p>
4. Report on catchment hydrology	<p>4.1.A written overview on catchment hydrological behaviour is prepared, according to enterprise guidelines and templates.</p> <p>4.2.A visual overview of catchment hydrological behaviour is presented to meet the needs of stakeholders.</p> <p>4.3.Advice and guidance on remediation measures consistent with catchment management objectives is outlined.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- access and collate existing hydrological information
- analyse surface and groundwater hydrological processes in catchments
- undertake field site assessments for the collection of hydrological data
- identify and evaluate non-sustainable practices in catchments
- estimate and assess the impact of hydrological events
- present and interpret hydrological data in an appropriate form
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of

**REQUIRED SKILLS AND KNOWLEDGE**

cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- hydrological cycle
- chemical and physical properties of water
- rock and soil types including weathering processes
- fluvial geomorphology including:
  - drainage basin function
  - factors influencing stream flow rates
  - interactions between ground and surface water
  - stream hierarchy and ordering
  - human impacts on surface water quality and quantity
- hydrogeology including:
  - aquifer types and properties
  - aquifer discharge and recharge
  - rates of water movement through aquifers
  - human impacts on groundwater quality and quantity
- sustainable use of ground and surface water including:
  - uses of water in catchments
  - water allocation
  - policies and strategies determining water use.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate must be able to locate, collect and assess a wide range of hydrological data. This data must then be interpreted and presented according to the requirements of the task. The candidate must be capable of determining the movement of water within a catchment from existing data and report on the impacts of

<b>EVIDENCE GUIDE</b>	
	environmental change on water quantity and quality in a catchment
<b>Context of and specific resources for assessment</b>	<p>For valid assessment to take place candidates should have access to:</p> <ul style="list-style-type: none"> <li>• equipment used to analyse water quality and quantity</li> <li>• hydrological data in electronic form</li> <li>• geological maps and appropriate remotely sensed data</li> <li>• water management plans.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Sources of information may include:	<ul style="list-style-type: none"> <li>• hydrological information</li> <li>• previous monitoring studies</li> <li>• geological data</li> <li>• hydrogeological data</li> <li>• land use studies</li> <li>• aerial photography</li> <li>• satellite imagery</li> <li>• maps</li> <li>• water quality and or irrigation data</li> <li>• environmental management studies</li> <li>• anecdotal information from land owners.</li> </ul>
Field surveys may include:	<ul style="list-style-type: none"> <li>• slope analysis</li> <li>• land uses</li> <li>• soil surveys</li> <li>• occurrence of erosion and sedimentation</li> <li>• bed and bank stability</li> <li>• water quality and quantity.</li> </ul>

<b>RANGE STATEMENT</b>	
Management objectives may include:	<ul style="list-style-type: none"> <li>• erosion control</li> <li>• water quality</li> <li>• salinity reduction</li> <li>• sustainable irrigation and environmental flows</li> <li>• flood protection</li> <li>• ground water usage.</li> </ul>
Threats may include:	<ul style="list-style-type: none"> <li>• erosion and sedimentation</li> <li>• pest plant and animal infestation</li> <li>• loss of biodiversity</li> <li>• salinity</li> <li>• poor land use practices</li> <li>• point and diffuse sources of pollution</li> <li>• nutrient management issues.</li> </ul>
Remediation measures may include:	<ul style="list-style-type: none"> <li>• fencing</li> <li>• revegetation</li> <li>• installation of sediment control structures</li> <li>• flood control structures</li> <li>• pest plant control</li> <li>• implementation of nutrient management strategies</li> <li>• changes to agricultural practices</li> <li>• community awareness programs.</li> </ul>
Management objectives may include:	<ul style="list-style-type: none"> <li>• erosion control</li> <li>• water quality improvement</li> <li>• salinity reduction</li> <li>• sustainable irrigation environmental flows</li> <li>• flood protection</li> <li>• ground water usage.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural resource management
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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# AHCNRM505A Provide technical advice on sustainable catchment management

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the provision of technical advice on sustainable catchment management to land managers in a catchment area or region. It requires knowledge of land degradation, catchment management principles, regional priorities for land management, ecological processes and the roles and responsibilities of stakeholders. Providing technical advice on sustainable catchment management requires the ability to identify land management issues, analyse the causes and provide advice to land managers on alternative practices. This unit is not intended for use in providing advice on land development. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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## Application of the Unit

<b>Application of the unit</b>	This unit is applicable to persons who have a catchment management role and are responsible for identifying and managing land degradation as well as providing advice and information on programs and funding for the sustainable management of farms, small properties, recreational land and land used for commercial activities e.g. mining.
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## Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Respond to requests for advice	<p>1.1. Enterprise guidelines are followed when responding to requests from land managers.</p> <p>1.2. Information on location, land management/production objectives and land management concern/s including degradation is sought from land managers.</p> <p>1.3. State and regional legislation, regulations and strategies relevant to the region are reviewed in relation to potential constraints.</p> <p>1.4. Options and processes for provision of advice are confirmed with land managers.</p>
2. Identify and analyse	2.1. A site assessment is conducted to collect information

ELEMENT	PERFORMANCE CRITERIA
land management issues	<p>on geological characteristics, ecological processes and biodiversity.</p> <p>2.2.The site visit is used to collect detailed information on land uses and land management techniques.</p> <p>2.3.Site information is interpreted to land managers and other relevant stakeholders in a supportive and non-threatening manner.</p> <p>2.4.The site assessment evaluates the types and levels of land degradation.</p>
3. Provide advice on sustainable land management	<p>3.1.Advice complies with State and regional legislation, regulations and strategies.</p> <p>3.2.Options for changing land management practices take into account economic factors, technical difficulty, practical feasibility, social and/or environmental acceptability, including the highlighting of examples.</p> <p>3.3.Advice to land manager includes information on outcomes of analysis, sustainable land management techniques, whole property planning and remediation measures.</p> <p>3.4.Resource materials and information on supportive programs and funding are provided to land managers.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify and analyse the issues, processes and techniques in sustainable land management
- provide advice on sustainable land management
- gather information and undertake research
- recommend funding programs
- recognise limits to advice
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

**REQUIRED SKILLS AND KNOWLEDGE**

- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- geology
  - rock types
  - weathering
  - soil formation and soil types
- ecological processes
  - energy flow through ecological systems
  - matter flow through ecological systems
  - nutrient cycling
- land degradation processes and impacts including:
  - soil compaction
  - erosion
  - tree decline
  - pest plant and animal infestations
  - eutrophication
  - acidification
  - salinity
  - fertility decline
- catchment Management principles
  - catchment planning priorities and programs
  - Victorian Planning Provision Framework
  - roles and responsibilities of land users in catchments
- biodiversity
  - basic plant identification techniques
  - animal identification
  - ecological vegetation communities
- whole property planning principles
  - energy flows
  - sustainable water management
  - land capability
- extension
  - principles of extension
  - funding.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The candidate must be able to source information on legislation, regulations and strategies relevant to the responsibilities of land managers. The candidate must be capable of assessing land management practices in relation to the long-term objectives of a catchment or region. The ability to source and communicate advice on sustainable land management practices to a variety of land managers in a knowledgeable and non-threatening manner is critical.</p>
<b>Context of and specific resources for assessment</b>	<p>Specific resources required for assessment of this unit include access to monitoring equipment used in undertaking site assessments and documenting site information.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Land management issues may include:</p>	<ul style="list-style-type: none"> <li>• overgrazing</li> <li>• stock access to waterways</li> <li>• nutrient runoff from intensive farming or industry</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• riverbed and bank erosion</li> <li>• soil erosion</li> <li>• pest plant and animal infestations</li> <li>• salinity</li> <li>• native vegetation clearing or decline.</li> </ul>
Types and levels of land degradation may include:	<ul style="list-style-type: none"> <li>• processes such as erosion</li> <li>• soil structure decline</li> <li>• eutrophication</li> <li>• sedimentation</li> <li>• loss of ecosystem diversity</li> <li>• reduction in water quality</li> <li>• excess nutrients</li> <li>• pollution.</li> </ul>
Remediation measures may include:	<ul style="list-style-type: none"> <li>• fencing remnant vegetation</li> <li>• pest plant and animal control</li> <li>• tree-planting</li> <li>• construction of shelterbelts</li> <li>• conservation earthworks</li> <li>• waste water re-use</li> <li>• relocation of stock watering points.</li> </ul>
Resource materials may include:	<ul style="list-style-type: none"> <li>• fact sheets such as Landcare notes and Agnotes</li> <li>• information on websites</li> <li>• information on local demonstration sites</li> <li>• before and after pictures of similar issues.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Natural resource management
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCNRM506A Plan and monitor works projects in catchments and waterways

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit of competency covers the process of planning, implementing and reviewing works projects in catchments and waterways. It requires the ability to assist in the planning of works projects, monitor and support the works project and report on the works project. Planning and monitoring work projects in catchments and waterways requires knowledge of catchment health, wetland and floodplain processes and function, heritage and cultural values of waterways and monitoring and evaluation tools for works projects. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit could be applied in a variety of workplaces that undertake or contract project works in catchments and waterways. Works projects could be undertaken with community based participants, enterprise colleagues and/or contractors.</p>
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### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Inspect and assess catchment and waterways sites for inclusion in a works program	<p>1.1.The environmental outcomes and priorities of the works program are established.</p> <p>1.2.Site assessments are undertaken to confirm the physical characteristics and health of catchment and waterways.</p> <p>1.3.The range of likely operating conditions, hazards and sensitive environments are assessed for impact on any proposed works project/s.</p> <p>1.4.The heritage and cultural values of sites are assessed.</p> <p>1.5.Potential project partners and investors are consulted on the scope and purpose of the works program.</p>
2. Plan works projects	2.1.Project priorities are determined in consultation with stakeholders based on catchment plans, project

ELEMENT	PERFORMANCE CRITERIA
	<p>impact and availability of funding.</p> <p>2.2.The requirements for permits, licenses and other authorisations are met.</p> <p>2.3.Equipment and materials required for project/s are determined and sourced using enterprise guidelines.</p> <p>2.4.Terms and conditions of project work are confirmed with project partners and investors.</p> <p>2.5.Plans and specifications for works project/s are prepared according to enterprise guidelines.</p> <p>2.6.Project documentation is completed and details are finalised and communicated, as required.</p>
3. Monitor works project/s	<p>3.1.Monitoring program is established using data collection guidelines, data collection parameters and timelines.</p> <p>3.2.Data benchmarks for evaluating the outcomes of project/s are established.</p> <p>3.3.Occupational health and safety (OHS) arrangements are monitored against legislative requirements and other relevant policies.</p> <p>3.4.The ongoing requirements of contractors and project workers are met.</p> <p>3.5.Appropriate and timely support that meets the requirements of the project is provided.</p> <p>3.6.The condition of the project site is monitored to ensure it is left in an agreed condition.</p>
4. Review works program	<p>4.1.Individual projects are evaluated to ensure compliance with agreed outcomes.</p> <p>4.2.Sites are assessed to determine whether projects are meeting the environmental outcomes.</p> <p>4.3.Changes to the works program are recommended to better achieve catchment and waterways priorities.</p> <p>4.4.A relational data management system is used for recording monitoring data and reporting to stakeholders.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- assist in project planning and requirements for implementation
- provide support to project partners during project implementation
- monitor the impact of projects on sustainable catchment management
- monitor and ensure the regulatory requirements of works project
- record, review and report on works project utilising enterprise methods
- develop waterway monitoring programs including the selection of representative water quality and macro invertebrate monitoring sites incorporating the use and maintenance of relevant equipment and indicator
- identify examples of degraded catchments and waterways
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- wetland and floodplain processes and function including:
  - factors that influence stream flow
  - stream dynamics
  - stream formation
  - eutrophication
  - impacts of land use on waterways
- indicators of catchment health including:
  - pest plant and animal infestations
  - vegetation decline
  - soil erosion
  - stream bank erosion
  - water quality decline
- water quality parameters including:
  - physical and chemical properties of water
  - biological indicators of water quality
- use of relational data management systems
  - data input
  - data analysis

**REQUIRED SKILLS AND KNOWLEDGE**

- data output
- project planning including:
  - establishing priorities
  - monitoring and reviewing
  - working with partner, investors and contractors
  - resource and equipment requirements
- regulatory requirements
  - responsibilities under the OHS Act
  - permits and licences required for on-ground works
  - local cultural and heritage values.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate must be able to research and determine the environmental conditions of project worksites in relation to the wider catchment and be able to determine the physical and human resources necessary for project success. The candidate must be able to determine suitable monitoring procedures and evaluate the environmental benefits of the works program utilising existing techniques and reporting guidelines.

**Context of and specific resources for assessment**

Specific resources required for assessment of this unit include access to monitoring equipment used in the collection of catchment health data such as Waterwatch kits, pH meters and EC meters.

Assessment of this unit could take place in conjunction with VBP584 Provide technical advice on sustainable catchment management.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Environmental outcomes may include:	<ul style="list-style-type: none"> <li>• reductions in salinity</li> <li>• increase in vegetation cover</li> <li>• improvements in water quality parameters</li> <li>• reducing or stabilising erosion</li> <li>• nutrient losses from land to water</li> <li>• protection of heritage or cultural values.</li> </ul>
Site assessment may include:	<ul style="list-style-type: none"> <li>• an environmental assessment</li> <li>• establishing conditions before works</li> <li>• identifying cultural significance</li> <li>• assessing access issues for equipment and machinery</li> <li>• assessing access issues for workers</li> <li>• establishing seasonal issues i.e. site saturation or dryness for works.</li> </ul>
Works project details may include:	<ul style="list-style-type: none"> <li>• landholder contact details</li> <li>• description of project works</li> <li>• partner details</li> <li>• funding amounts</li> <li>• permits and approvals</li> <li>• contractor requirements</li> <li>• resources.</li> </ul>
Monitoring programs may include:	<ul style="list-style-type: none"> <li>• monitoring programs that contribute data to assess indicators of catchment health such as:             <ul style="list-style-type: none"> <li>• Waterwatch</li> <li>• Saltwatch</li> </ul> </li> <li>• index of stream condition</li> <li>• macro invertebrate monitoring sites</li> <li>• SEPP water quality monitoring</li> <li>• stream flow management plans</li> <li>• EVC mapping</li> <li>• Australian Bureau of Statistics data.</li> </ul>
Data benchmarks may include:	<ul style="list-style-type: none"> <li>• quantitative data for site or catchment</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• social indicators such as Landcare membership</li> <li>• qualitative history of management and attitudes to sustainable catchment management.</li> </ul>
Contractor and project workers requirements may include:	<ul style="list-style-type: none"> <li>• management of materials and equipment resources and invoicing</li> <li>• resource procurement</li> <li>• timesheets</li> <li>• OHS.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Natural resource management
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCNRM507A Manipulate and analyse data within geographic information systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit relates to extracting, comparing and manipulating data in response to customer requests.
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### Application of the Unit

<b>Application of the unit</b>	This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop procedures for manipulation and analysis of data	1.1.Desired data format is specified and based on job requirements. 1.2.Parameters are specified for manipulation of the data sets. 1.3.New procedures are documented clearly explaining the procedure and rationale for development.
2. Establish models required to provide outcome	2.1.Applicability of existing tools, models, theories, applications and solutions is evaluated. 2.2.Feasible parameters, equations and assumptions are specified. 2.3.Models required to provide specified outcome are established.
3. Analyse data	3.1.Steps to be undertaken to analyse and manipulate data are specified. 3.2.Source data limitations and other restricting factors are taken into account when selecting techniques for analysis. 3.3.Data is isolated and retrieved from its source. 3.4.Data is interrogated to ensure reliability. 3.5.Data is prepared for presentation media.



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analysing options
- using tools within software to manipulate data
- reading external data sets into data model
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- database structures
- scripting and commands
- line instructions and programming
- operating systems:
  - UNIX
  - DOS
  - Windows
  - NT
- range of tools, models, theories, applications and solutions
- data analysis and manipulation techniques.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<ul style="list-style-type: none"> <li>• suitable procedures are developed</li> <li>• new procedures are documented</li> <li>• appropriate models are used and/or created.</li> </ul>
<b>Context of and specific resources for assessment</b>	On the job or in a simulated work environment.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Customer may include:	<ul style="list-style-type: none"> <li>• internal</li> <li>• external.</li> </ul>
Factors may include:	<ul style="list-style-type: none"> <li>• time</li> <li>• command line operation</li> <li>• menu drivers options.</li> </ul>
Source data limitations may include:	<ul style="list-style-type: none"> <li>• currency</li> <li>• structure</li> <li>• accuracy</li> <li>• source of data.</li> </ul>

## Unit Sector(s)

Unit sector	Natural resource management
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCNSY101A Support nursery work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting nursery work and defines the standard required to: apply safe work practices; apply correct plant handling techniques; plant, maintain and pack plants; and prepare, use and clean tools and equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to those undertaking work in both production and retail nurseries.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare materials, tools and equipment for nursery work	<p>1.1. Required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2. Checks are conducted on all materials, tools and equipment, with insufficient or faulty items reported to the supervisor.</p> <p>1.3. Techniques used when loading and unloading materials demonstrate correct manual handling, and minimise damage to the load and the vehicle.</p> <p>1.4. Suitable personal protective equipment (PPE) is selected and checked prior to use.</p> <p>1.5. Nursery support is provided according to Occupational Health and Safety (OHS) requirements and workplace information.</p> <p>1.6. OHS hazards are identified and reported to the supervisor.</p>
2. Undertake nursery work as directed	<p>2.1. Instructions and directions provided by supervisor are followed, and clarification sought when necessary.</p> <p>2.2. Nursery work is undertaken in a safe and environmentally appropriate manner according to nursery guidelines.</p> <p>2.3. Interactions with other staff and customers are carried out in a positive and professional manner.</p> <p>2.4. Nursery policy, procedures and OHS requirements in relation to workplace hygiene practices, handling and disposal of materials are observed.</p> <p>2.5. Problems or difficulties in completing work to required standards or timelines are reported to supervisor.</p>
3. Store and stockpile	3.1. Plant debris and waste material produced during

ELEMENT	PERFORMANCE CRITERIA
materials	<p>nursery activities are stored according to supervisor's instructions.</p> <p>3.2.Plant debris and waste materials are prepared and processed in an appropriate and safe manner according to supervisor's instructions.</p> <p>3.3.Surplus materials are stockpiled for removal according to supervisor's instructions.</p> <p>3.4.A clean and safe work site is maintained while completing nursery activities.</p>
4. Clean up on completion of nursery work	<p>4.1.Plants and materials are stored according to supervisor's instructions and OHS requirements.</p> <p>4.2.Tools and equipment are cleaned, maintained and stored according to manufacturer specifications and supervisor's instructions.</p> <p>4.3.Work outcomes are reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safety directions
- prepare materials, tools and equipment for nursery work
- undertake nursery work as directed
- store and stockpile materials
- clean up on completion of nursery work
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- safe work practices
- nursery hygiene and quality control
- nursery plant maintenance activities

**REQUIRED SKILLS AND KNOWLEDGE**

- basic stock control procedures
- propagation techniques
- OHS and environmental legislative and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- apply safe work practices
- apply correct plant handling techniques
- plant, maintain and pack plants
- prepare, use and clean tools and equipment.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Support may include:

- support of others undertaking nursery activities.

**Unit Sector(s)**

<b>Unit sector</b>	Nursery
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCNSY201A Pot up plants

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the production procedure of staged containerisation of nursery plants after propagation in production nurseries and defines the standard required to: prepare tools, equipment and plants for potting up; prepare growing media for potting up plants; pot up plants to required specification pot size; type and carry out follow-up procedures to potting up.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to transplanting established plants with developed root systems sown from seed, from cuttings, layering, growing on tissue cultured plants, division or splitting, spores, cloning, and budding or grafting into larger appropriate sized containers of growing media. Potting up involves working within routine methods and procedures under supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for potting up operations	1.1. Workplace information is interpreted and clarified according to instructions. 1.2. Occupational Health and Safety (OHS) hazards are identified and reported to the supervisor. 1.3. Tools and equipment for potting up are selected and used according to documented guidelines. 1.4. Work area is cleaned and disinfected according to company hygiene practices. 1.5. Materials are collected and checked to ensure sufficient quantity and quality for potting up operations.
2. Prepare growing media	2.1. Suitable Personal Protective Equipment (PPE) is selected, used and maintained. 2.2. Media components are measured and mixed according to documented guidelines. 2.3. Growing media is tested to ensure the product complies with media specifications.
3. Pot up propagated plants	3.1. Plants are prepared for potting in accordance with enterprise guidelines. 3.2. Plants are graded during the potting process

ELEMENT	PERFORMANCE CRITERIA
	<p>according to quality specifications.</p> <p>3.3. Media level in pots is adjusted to produce a well-furnished plant according to documented guidelines.</p> <p>3.4. Placement and depth of plants comply with the planting method and plan.</p> <p>3.5. Potting operations are carried out according to written OHS requirements.</p>
4. Complete potting up operation	<p>4.1. Plants are watered in to eliminate air pockets and prevent dehydration.</p> <p>4.2. Cleaning procedures are performed and hygiene practices followed according to enterprise guidelines.</p> <p>4.3. Waste is collected and disposed of or recycled to minimise damage to the external environment.</p> <p>4.4. Records of potting up operations are maintained in the appropriate format.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare tools, equipment, media and plants
- handle plants with care
- grade plants for quality
- apply different types of potting media
- measure out media components accurately
- produce a uniform media level in the pot
- use and maintain tools
- disinfect selected work areas
- treat common problems of plants in a controlled environment
- participate in teams and contribute to team objectives
- interpret work procedures
- maintain required records
- minimise damage of waste products on the environment
- use literacy skills to follow sequenced written instructions and record information

**REQUIRED SKILLS AND KNOWLEDGE**

accurately and legibly

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- appropriate use of personal protective equipment
- properties of relevant potting media
- basic plant physiology
- enterprise plants and their characteristics
- hygiene and quality control
- common problems in a controlled environment
- methods of disposing of waste.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare tools, equipment and plants for potting up
- prepare growing media for potting up plants
- pot up plants to required specification
- carry out follow-up procedures to potting up.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Potting up plants may include:

transplanting of established plants with developed root systems sown from:

- seed
- from cuttings
- layering
- growing on tissue cultured plants
- division or splitting
- spores
- cloning, and budding or grafting into larger appropriate sized containers of growing media.

**Unit Sector(s)****Unit sector**

Nursery

**Co-requisite units**

Co-requisite units		

## Competency field

Competency field	
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## AHCNSY202A Tend nursery plants

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of tending containerised nursery plants and defines the standard required to: establish the requirements of plants; monitor irrigation and temperature control systems; maintain nursery hygiene; monitor plants; maintain nursery records; implement procedures for waste disposal and tool maintenance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of tending containerised nursery plants in production nurseries. It relates to working under routine supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required. Maintenance of nursery plants usually follows established enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Maintain the nursery environment	<p>1.1. Occupational Health and Safety (OHS) hazards in the nursery environment are identified, risks assessed and reported to the supervisor.</p> <p>1.2. Plant growth and health requirements are clarified with the supervisor.</p> <p>1.3. Irrigation system components are serviced for basic operational use and basic user serviceable parts are repaired or replaced.</p> <p>1.4. Performance of the irrigation system is checked to ensure optimum results.</p> <p>1.5. Temperature controls are monitored to ensure specified levels are maintained.</p> <p>1.6. Hygiene practices are followed to minimise risk of contamination.</p>
2. Maintain nursery plants	<p>2.1. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p> <p>2.2. Common problems in nursery plants are recognised, and rectified and/or reported to the supervisor.</p> <p>2.3. Tools and equipment are selected and used for plant maintenance.</p> <p>2.4. Treatments are applied to assist plant growth as directed by the supervisor.</p> <p>2.5. Water is applied in the quantity and method specified.</p>



ELEMENT	PERFORMANCE CRITERIA
	2.6. Nursery operations are undertaken according to OHS requirements. 2.7. Plant quality is maintained.
3. Complete nursery plant maintenance operation	3.1. Workplace information is recorded in the appropriate format. 3.2. Waste is collected and disposed of or recycled. 3.3. Tools and equipment are cleaned and stored.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- recognise common problems in nursery plants
- monitor temperature controls
- apply plant growth treatments as directed
- apply specified watering
- select and use tools and equipment
- check irrigation system performance
- service basic irrigation system components
- repair or replace user serviceable irrigation components
- maintain nursery hygiene
- participate in teams and contribute to team objectives
- read and interpret enterprise work procedures
- communicate effectively with team members and supervisor
- measure quantities and calculate application rates
- minimise environmental disturbance
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- daily water requirements of nursery plants
- botany and plant physiology
- environmental requirements of a range of containerised plants growing in a nursery setting
- applied understanding of the importance of hygiene and quality control when

**REQUIRED SKILLS AND KNOWLEDGE**

- tending nursery plants
- common problems that may occur with containerised plants in a controlled environment and their treatment
  - Nursery Industry Water Management Best Practice Guidelines 2005
  - principles and operations of a range of irrigation systems used in nurseries
  - methods of disposing of waste to minimise damage to the external environment.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- establish the requirements of plants
- monitor irrigation and temperature control systems
- maintain nursery hygiene
- monitor plants
- maintain nursery records
- implement procedures for waste disposal and tool maintenance.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Nursery environments may include:	<ul style="list-style-type: none"> <li>• glasshouses</li> <li>• shade houses</li> <li>• hardening-off areas.</li> </ul>
Plants may include:	<ul style="list-style-type: none"> <li>• plants common in production nurseries and commonly used and produced in the region.</li> </ul>
Plant physiological processes may include:	<ul style="list-style-type: none"> <li>• principles of transpiration</li> <li>• water intake</li> <li>• nutrient uptake</li> <li>• photosynthesis</li> <li>• respiration</li> <li>• translocation.</li> </ul>

## Unit Sector(s)

Unit sector	Nursery
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCNSY203A Undertake propagation activities

### Modification History

Release	TP Version	Comments
2	AHC10v5	Included missing information in Required Skills and Knowledge
1	AHC10	Initial release. Supersedes and is equivalent to RTC2026A

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of undertaking propagation activities and defines the standard required to: collect and maintain suitable plant material; apply a range of propagation techniques; maintain and monitor propagated plants; maintain plant hygiene.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of carrying out a range of propagation tasks, such as preparing plant stock, collecting propagation materials, pre-planting treatments and basic plant propagation techniques. This standard involves working within routine methods and procedures under supervision with intermittent checking. Responsibility for some roles and coordination within a team may be required.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for plant propagation	1.1. Workplace information is interpreted and clarified according to instructions. 1.2. Occupational Health and Safety (OHS) hazards in the work area are identified, rectified and/or reported. 1.3. Suitable Personal Protective Equipment (PPE) is selected, used, maintained and stored. 1.4. Tools and equipment appropriate to the task being undertaken are selected and prepared according to written guidelines. 1.5. Propagation material is collected using the appropriate method for the species. 1.6. Propagation material is maintained and stored to ensure maximum viability.
2. Propagate plants	2.1. Pre-treatment is applied and/or carried out appropriate to the propagation method and species. 2.2. Propagation techniques are carried out according to

ELEMENT	PERFORMANCE CRITERIA
	<p>the requirements of the species.</p> <p>2.3. Propagation material is handled in a way that minimises damage and maximises viability.</p> <p>2.4. Water and nutrients are applied to suit the media conditions, plant requirements and propagation techniques employed.</p> <p>2.5. Labels are applied according to enterprise guidelines.</p> <p>2.6. Plant health is monitored and remedial action is taken according to written guidelines.</p> <p>2.7. Propagation activities are carried out according to OHS requirements.</p>
3. Complete propagation activities	<p>3.1. Records are completed accurately and at the required time according to written guidelines.</p> <p>3.2. Tools and equipment are cleaned and stored according to manufacturer specifications.</p> <p>3.3. Waste is removed and hygiene practices are followed according to enterprise and OHS requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collect propagation material
- maintain environmental parameters and temperature controls
- apply pre-treatments
- carry out a variety of propagation techniques
- minimise damage and maximise viability
- apply water and nutrients
- read and interpret instructions
- participate in teams and contribute to team objectives
- communicate effectively with fellow team members
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- propagation methods required for a range of plant species
- enterprise hygiene requirements
- quality specifications/characteristics of a range of parent plants and propagation materials
- basic plant nutrition
- botany and physiology
- maintenance requirements of tools and equipment used for propagation
- OHS requirements of employees
- record keeping relevant to the work function
- enterprise requirements for handling and disposal of nursery wastes
- common problems that may occur while performing propagation activities in a controlled environment
- OHS legislative requirements and Codes of Practice
- OHS procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- collect suitable plant material
- successfully apply a range of propagation techniques
- maintain and monitor propagated plants
- maintain plant hygiene.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Propagation techniques may include:

- seed - (small seed sown in modules and pricked out or sown in seedbeds by hand)
- cuttings - (hardwood stem, semi-ripe stem, leaf, root)
- simple layering
- growing on tissue-cultured plants
- division or splitting
- spores.

Propagation techniques does not include:

- budding and grafting.

**Unit Sector(s)****Unit sector**

Nursery

**Co-requisite units**

Co-requisite units		



## Competency field

Competency field	
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## AHCNSY204A Maintain indoor plants

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining indoor plants and defines the work required to: preparing the tools, equipment and materials for indoor plant maintenance; identifying hazards involved in indoor plant maintenance; maintaining a growing environment; recognise common problems; use and maintain the watering systems; inspect plant quality and record workplace information.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes involved in maintaining indoor plants.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to maintain indoor plants	<p>1.1. Workplace information is interpreted and clarified with the supervisor.</p> <p>1.2. Tools, equipment and materials for maintenance activities are selected and prepared according to enterprise guidelines, and safe working practices are employed.</p> <p>1.3. Occupational Health and Safety (OHS) hazards relating to maintaining indoor plants and the growing environment are identified, risks assessed and reported to the supervisor.</p>
2. Maintain the growing environment	<p>2.1. Plants are accessed according to client requirements and supervisors instructions.</p> <p>2.2. Tools, equipment and materials are transported safely in accordance with access requirements, client and supervisors instructions.</p> <p>2.3. Watering system is maintained and / or adjusted where necessary according to enterprise guidelines.</p> <p>2.4. Light meter readings are taken to ensure specified parameters are maintained.</p> <p>2.5. Condition of media is checked according to supervisor's instructions.</p> <p>2.6. Containers and growing site are cleaned to ensure the aesthetic and hygiene standards of indoor plants are maintained.</p>
3. Maintain indoor plants	<p>3.1. Common problems in indoor plants are recognised, and rectified and/or reported to the supervisor.</p> <p>3.2. Treatments are selected and applied to optimise</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>plants health and appearance according to enterprise guidelines.</p> <p>3.3. Water is applied in the quantity and method specified by enterprise work procedures.</p> <p>3.4. Plants are replaced when no longer at optimum health and appearance.</p>
4. Complete indoor plant maintenance operation	<p>4.1. Rubbish, litter and decaying material are removed from plants, pots and surrounds and cleaning procedures are performed according to enterprise guidelines.</p> <p>4.2. Waste is collected and disposed of or recycled to minimise damage to the environment.</p> <p>4.3. Tools and equipment are cleaned and stored according to enterprise work procedures.</p> <p>4.4. Workplace information is recorded in the appropriate format.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- participate in teams and contribute to team objectives
- interpret enterprise work procedures
- communicate with clients, team members and supervisor
- take light meter readings
- measure quantities and calculate application rates
- operate, adjust and maintain the watering system
- inspect plant quality
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- identification and characteristics of common indoor plants and their culture
- botany and physiology of indoor plants
- growth requirements of indoor plants
- light and moisture tolerance/intolerance for common indoor plant species

**REQUIRED SKILLS AND KNOWLEDGE**

- acclimatisation techniques for indoor plants
- common problems that may occur with indoor plants and their treatment
- operations and maintenance of a range of irrigation/subirrigation systems used for watering indoor plants/displays
- methods of disposing of waste to minimise damage to the environment.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- preparing the tools, equipment and materials for indoor plant maintenance
- identifying hazards involved in indoor plant maintenance
- maintaining a growing environment
- recognise common problems
- use and maintain the watering systems
- inspect plant quality
- record workplace information.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Indoor plants may include:	<ul style="list-style-type: none"> <li>all plant species and cultivars used as indoor plants.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Nursery
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCNSY301A Maintain nursery plants

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the work undertaken to maintain nursery plants and defines the standard required to: calculate daily water needs; recognise stages of plant growth; monitor plant health; integrate range of plant maintenance activities; monitor the effects of plant interventions; prepare, mix and use chemicals as required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of monitoring and maintaining plants in a retail or production nursery.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor and maintain the nursery environment	<p>1.1.Environmental parameters are monitored against the needs of the plants and enterprise guidelines.</p> <p>1.2.Environmental parameters are altered, as required, to meet the needs of nursery plants and market requirements.</p> <p>1.3.Irrigation system components are serviced for basic operational use and basic user serviceable parts are repaired or replaced.</p>
2. Determine daily water requirements	<p>2.1.Water requirements are determined according to the needs of the plant and environmental parameters.</p> <p>2.2.Water is applied according to the needs of the plant group.</p> <p>2.3.Water requirements of the plant are monitored according to enterprise guidelines.</p>
3. Promote plant growth by intervention	<p>3.1.Potting media is tested in production areas to ensure quality specifications are met.</p> <p>3.2.Health of the plant is monitored according to enterprise guidelines.</p> <p>3.3.Plant interventions are undertaken according to marketing plans, appropriate stage of plant growth for the particular intervention, and Occupational Health and Safety (OHS) requirements.</p> <p>3.4.Waste is disposed of with full consideration of the environmental implications.</p> <p>3.5.Records are kept on all maintenance activities according to enterprise requirements.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- select, fit and use appropriate personal protective equipment
- calculate daily water needs
- recognise stages of plant growth
- monitor plant health
- integrate range of plant maintenance activities
- monitor the effects of plant interventions
- prepare, mix and use chemicals as required
- service basic irrigation system components
- repair or replace user serviceable irrigation components
- interpret and record required workplace information
- operate irrigation systems
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- effects of environmental parameters on plant growth
- methods of calculating daily water needs
- relationship between plant water needs and environmental parameters
- characteristics of various types of potting media
- factors affecting the growth of nursery plants
- optimum growing conditions for a range of plants in a nursery
- quality parameters for a range of nursery plants
- symptoms of unhealthy plants
- common problems that occur with nursery plants and their treatment
- botany and plant physiology
- effect of different pruning and intervention methods
- processes for modifying environmental parameters
- phenological stages of plant growth
- treatments required by plants at different phenological stages and environmental parameters
- principles and operations of a range of irrigation systems used in nurseries

**REQUIRED SKILLS AND KNOWLEDGE**

- OHS hazards and the associated risks when maintaining plants
- environmental impacts of applying plant interventions
- Nursery Industry Water Management Best Practice Guidelines 2005.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- calculate daily water needs
- recognise stages of plant growth
- monitor plant health
- integrate range of plant maintenance activities
- monitor the effects of plant interventions
- prepare, mix and use chemicals as required.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Plants may include:	<ul style="list-style-type: none"> <li>a wide range of plants common in production and retail nurseries and commonly used and produced in the region.</li> </ul>
Plant cultural practices may include:	<ul style="list-style-type: none"> <li>practices relevant to maintenance activities in diverse environments and a varying ability to control the environmental parameters.</li> </ul>
Plant physiological processes may include:	<ul style="list-style-type: none"> <li>principles of transpiration, water intake, nutrient uptake, photosynthesis, respiration and translocation.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Nursery
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCNSY302A Receive and dispatch nursery products

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of facilitating client orders for products and the receiving and dispatching of plants and other nursery products from a production or retail nursery and defines the standard required to: communicate with client and advise on product; select and evaluate individual product quality; fulfil orders for nursery products in quantity and meet client quality requirements; maintain stock inventory; advise on nursery product availability and record sales quantities of product; record financial details of transactions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of selection and collection of product for the purpose of dispatch, delivery or pickup by client and the process of receiving and processing of products from suppliers. Some discretion and judgement may be required in relation to the selection, presentation and preparation for transportation of particular nursery products. Receiving and dispatching involves the application of a diverse range of knowledge in horticulture, warehousing, storage and transportation techniques.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select product for an order	<p>1.1. Materials, equipment and Personal Protective Equipment (PPE) required for the job are selected and used.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified and reported and suitable risk controls implemented.</p> <p>1.3. Product is selected from stock batches in accordance with order forms or by client request.</p> <p>1.4. Clients onsite are assisted with selection or directed to particular product or display areas.</p> <p>1.5. Quality of product is evaluated visually to meet the standard order requirements for quality.</p> <p>1.6. Special order requirements are detailed on the order forms or requested verbally.</p> <p>1.7. Stockholding areas are blocked up for presentation.</p> <p>1.8. Volume of product remaining is observed and information is retained to inform other clients.</p>

ELEMENT	PERFORMANCE CRITERIA
2. Maintain the stock inventory	2.1.Orders are collated in the sales/dispatch area. 2.2.Orders are checked for enterprise quality of a sales product and for accuracy in quantity. 2.3.Records are kept of outgoing sales in the product inventory by manual or electronic means. 2.4.Adjustments are made in the inventory about the quantity of nursery stock available for sale.
3. Prepare for dispatch or delivery	3.1.Product is checked for correct labelling and incorrect labelling is replaced. 3.2.Product is packaged for delivery and presentation to the client. 3.3.Product is packed into containers for ease of handling. 3.4.Delivery of product is assisted by loading and stacking product according to the configuration of the transportation vehicle. 3.5.Product quality is checked at each stage in the delivery process. 3.6.Sales/dispatch areas and packing/packaging materials are maintained and tidied.
4. Receive products	4.1.Incoming product is received and checked for quality and correct quantities. 4.2.Product is transferred to stock holding areas with appropriate manual handling techniques. 4.3.Incoming documentation, receipts of delivery and invoices are transferred to administration.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with clients, suppliers and work team members
- interpret order forms
- select product for order requirements
- evaluate product quality

**REQUIRED SKILLS AND KNOWLEDGE**

- meet client service requirements
- maintain product records accurately, either manually or on a computer
- use a calculator
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- environmental controls necessary for transporting plants
- common sources of cross contamination from transport vehicles
- enterprise quarantine policies and relevant quarantine legislation
- enterprise stock control procedures
- best practice guidelines for nursery hygiene
- enterprise quality standards for the packing, packaging and labelling of products.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- communicate with client and advise on product
- select and evaluate individual product quality
- fulfil orders for nursery products in quantity and meet client quality requirements
- maintain stock inventory
- advise on nursery product availability
- record sales quantities of product and record financial details of transactions.

**Context of and specific resources for**

Competency requires the application of work practices

**EVIDENCE GUIDE****assessment**

under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Nursery products may include:

- the range of retail products and production nursery stock.

**Unit Sector(s)****Unit sector**

Nursery

**Co-requisite units****Co-requisite units**


**Competency field****Competency field**



## AHCNSY303A Install and maintain plant displays

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of the installation and maintenance work associated with plant displays and defines the standard required to: select suitable plants for a range of plant display purposes; undertake routine regular maintenance of plants in a display; identify symptoms of plant cultural problems; analyse cost benefit of replacing/reviving plants.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of installation and maintenance work associated with plant displays in a diverse range of situations, buildings and structures and a wide range of locations in urban and regional areas. Installing and maintaining plant displays applies to permanent, semi-permanent and temporary displays of plant life under a range of gardening, exhibition, visual merchandising, marketing and commercial leasing and hiring activities.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess requirements for plantscaping	<p>1.1. Access factors are assessed and recorded prior to installation.</p> <p>1.2. Environmental parameters are assessed and recorded prior to installation.</p> <p>1.3. Light sources in regard to both plant growth and client requirements are noted and light meter readings taken for interior installations and recorded.</p> <p>1.4. Site conditions and constraints are analysed for plant suitability and results are recorded.</p> <p>1.5. Plants are selected to meet the requirements of the site according to the results recorded.</p>
2. Install containerised and direct planted specimens	<p>2.1. Materials, equipment and machinery required for the job are identified and scheduled according to a given plan or specifications.</p> <p>2.2. Personnel required for the job are identified and scheduled.</p> <p>2.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls implemented.</p> <p>2.4. Suitable safety equipment and Personal Protective</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>Equipment (PPE) are selected, used and maintained.</p> <p>2.5.Plants are installed securely, are presented well, are accessible for routine maintenance and conform to the plan or specifications.</p> <p>2.6.Damaged or unnecessary material is pruned to enhance the presentation.</p> <p>2.7.Plants are watered and fertilised as required according to enterprise policy.</p> <p>2.8.The site is left in a clean and tidy state.</p>
3. Maintain plants	<p>3.1.The symptoms of under and over-watering are detected and actioned according to the maintenance agreement.</p> <p>3.2.The symptoms of low and high light intensity are detected and rectified.</p> <p>3.3.The symptoms of low and high fertiliser concentration are detected and the pH of the growing medium is measured where required and amended as required.</p> <p>3.4.Insects, pests and diseases associated with plants are detected and controlled as required.</p> <p>3.5.Appearance of plants is enhanced according to the maintenance agreement.</p> <p>3.6.The cost benefit of reviving or replacing plants is determined in line with site requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- select a range of plants used for displays
- interpret plans and specifications, and product labels
- calculate numbers of plants and materials
- detect and control pests and diseases
- identify symptoms of plant cultural problems
- calculate rates of chemicals
- determine spatial measurements of plantscape

**REQUIRED SKILLS AND KNOWLEDGE**

- analyse cost benefit
- interpret test results as required
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- characteristics and attributes of a range of plants used for plantscaping
- plant growth requirements
- light and moisture tolerance/intolerance for common plant species
- photosynthesis, respiration, nutrient uptake and growth rate for plants
- acclimatisation techniques for plants
- commonly occurring problems with plantscaping
- options for remedial action.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select suitable plants for a range of plant display purposes
- prepare a site for a plant display
- create a designed display
- undertake routine regular maintenance of plants in a display
- deconstruct or knock down a plant display.

**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Displays may include:

- displays for merchandising
- functions
- annual bedding displays
- herbaceous perennial displays
- indoor presentations.

Plant displays may include:

- containerised or direct planted installations.

**Unit Sector(s)**

**Unit sector**

Nursery

**Co-requisite units**

Co-requisite units		

## Competency field

Competency field	
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## AHCNSY304A Deliver and promote sales of plants

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of transporting and delivering plants to retail outlets and other nurseries and the associated task of maintaining promotional displays and defines the standard required to: prepare and load plant orders from a production site; transport plants and other products to and from a production nursery; deliver and unload nursery products according to order requirements; maintain nursery product displays at retail outlets where necessary; use sales techniques to promote a range of nursery products.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the transport and maintenance of plant samples and plant displays and other product from a production operation to retail outlet, other nursery or end user and the promotion and sale of the product. This type of work is likely to be under limited supervision from others, with checking only related to overall progress. The provision of product and marketing support requires the application of extensive horticultural knowledge and a broad range of horticultural skills.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to provide marketing support	<p>1.1.Product list, clients, delivery schedule and transport vehicle are identified according to enterprise work procedures.</p> <p>1.2.Tools, equipment and machinery are selected according to delivery requirements and enterprise work procedures.</p> <p>1.3.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer's specifications and enterprise work procedures.</p> <p>1.4.Plants are selected according to orders; sample specifications and delivery schedule, and are prepared and loaded into transport vehicle according to enterprise work procedures.</p> <p>1.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p> <p>1.6.Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p>



ELEMENT	PERFORMANCE CRITERIA
2. Deliver plants	2.1.Maintenance of stock is undertaken according to enterprise work procedures. 2.2.Current stock lists are updated and maintained according to enterprise work procedures. 2.3.Regular delivery service is maintained according to enterprise work procedures. 2.4.Clients are supplied, on request, with information about stock availability according to enterprise work procedures. 2.5.Delivery documentation is completed accurately according to enterprise work procedures.
3. Maintain off-site displays	3.1.Off-site product displays are checked regularly according to enterprise work procedures. 3.2.Maintenance of displays is undertaken according to enterprise work procedures and client requirements. 3.3.Marketing support is undertaken according to OHS requirements, and with due consideration of the environmental implications.
4. Promote sales	4.1.Retailers are informed of available promotional literature with particular stock lines. 4.2.Regular sales memos are dispatched according to enterprise work procedures. 4.3.Advanced lists for seasonal promotions are prepared according to enterprise work procedures. 4.4.Sales, promotional and marketing documentation are completed accurately according to enterprise work procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with clients, work team members and supervisors, interpret and apply delivery schedules and marketing plans, utilise proforma reporting and work procedure documents, and understand labels and symbols
- maintain mobile and remote displays and samples

## REQUIRED SKILLS AND KNOWLEDGE

- estimate treatment and product requirements, material sizes and quantities; interpret maps and directories, and calculate orders, sales figures, ratios, proportions and application rates
- co-ordinate own activities with plant production, marketing and sales teams to deliver and maintain plant orders, in a timely and cost effective manner and to clients specifications
- drive a motor vehicle
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- enterprise and industry labelling standards and methods
- enterprise standards and methods of packaging, and delivery of plant orders, samples and displays
- practical understanding of the range of plants available from the enterprise, their botanical, common and trade names, growth habits, and presentation requirements for display
- enterprise standards and methods for the preparation and dispatch of promotional literature and lists for seasonal promotions
- awareness of the environmental implications associated with the preparation, transport and maintenance of plant orders, samples and displays.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare and load plant orders from a production site
- transport plants and other products to and from a production nursery

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• deliver and unload nursery products according to order requirements</li> <li>• maintain nursery product displays at retail outlets where necessary</li> <li>• use sales techniques to promote a range of nursery products.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plants may include:	<ul style="list-style-type: none"> <li>• a wide range of plants common in production and retail nurseries and commonly used and produced in the region.</li> </ul>
Delivery may include:	<ul style="list-style-type: none"> <li>• the delivery of all commercial plant products transported to a range of clients.</li> </ul>
Promotions may include:	<ul style="list-style-type: none"> <li>• consumer sales and trade sales promotions.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Nursery
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCNSY305A Prepare specialised plants

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing specialised plants for sale and defines the standard required to: identify customer requirements and treatments to achieve the effect; prepare equipment and plants for treatment; carry out plant treatments; maintain the appearance and growth pattern of treated plants.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of production and preparation of specialised, unusual or rare plants in a production nursery or by other organisations, groups and individuals with a wide range of species and cultivars as the specialised plants or individual cultivars under production. This standard involves working under limited supervision from others, with checking only related to overall progress. The work requires the application of horticultural knowledge and a broad range of horticultural skills. Specialist plant preparation is usually done according to established enterprise guidelines where some discretion and judgement is required in the selection of equipment, work organisation, services, actions, and achieving outcomes within time constraints.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to treat specialised plants	<p>1.1. Customer requirements are analysed and clarified by market research or with a supervisor.</p> <p>1.2. Specialist plants requiring treatment are selected for appropriateness to the requirements.</p> <p>1.3. Treatments appropriate to the specialised plant are selected according to production and/marketing plan of an organisation, or the creative talent of the individual entrepreneur.</p> <p>1.4. The timing of the treatments is determined according to the seasonality of the plant species and market considerations.</p> <p>1.5. Occupational Health and Safety (OHS) hazards in carrying out specialist plant treatments are identified, risks assessed and controls implemented.</p>
2. Implement treatments	<p>2.1. Materials, tools and equipment required for the job are selected, prepared and used.</p> <p>2.2. Treatments are undertaken to meet the aesthetic</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>requirements of the plant.</p> <p>2.3. Treatments are carried out according to enterprise OHS requirements.</p>
3. Maintain aesthetic appearance of specialised plants	<p>3.1. The health and aesthetic appearance of the plant is monitored to ensure quality standards are met.</p> <p>3.2. Water is applied according plant requirements.</p> <p>3.3. Environmental parameters are modified to ensure optimum growth of plant.</p> <p>3.4. Remedial or preventative measures are applied to the plants to ensure they maintain their aesthetic appearance.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with work team members, supervisors, suppliers and clients
- interpret production/marketing plans and plant quality specifications
- organise and co-ordinate planned activities
- estimate treatment and plant requirements, sizes and quantities; and calculate ratios, proportions and application rates
- co-ordinate work group, materials, equipment and own activities to sequentially and effectively complete operations in a timely manner
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- characteristics of a range of potted plants commonly treated for special aesthetic purposes
- different treatments which are applied to specialised plants to get desired aesthetic appearance
- optimum timing of treatments
- aftercare requirements of treated plants
- nursery industry best practice guide.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify customer requirements and treatments to achieve the effect</li> <li>• prepare equipment and plants for treatment</li> <li>• carry out plant treatments</li> <li>• maintain the appearance and growth pattern of treated plants.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Specialised plants may include:	<ul style="list-style-type: none"> <li>• a range of specialised plants including:</li> <li>• weeping specimens</li> <li>• potted trees and shrubs</li> <li>• bulbs</li> <li>• bonsai</li> <li>• ferns</li> <li>• cacti</li> <li>• succulents</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• indoor foliage</li> <li>• espaliering</li> <li>• topiary</li> <li>• ready-made hedges.</li> </ul>
Specialist techniques may include:	<ul style="list-style-type: none"> <li>• formative and decorative pruning</li> <li>• staking</li> <li>• tying and training</li> <li>• working with other aids such as               <ul style="list-style-type: none"> <li>• baskets</li> <li>• frames</li> <li>• specialist tools</li> <li>• materials.</li> </ul> </li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Nursery
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCNSY306A Implement a propagation plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of plant propagation by both sexual and asexual methods and defines the standard required to: prepare tools and propagation materials for work; prepare workspaces for propagation activities; use a range of propagation methods to produce new crops; place or prepare for placing newly propagated material in appropriate growing environment; record propagation activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of implementing a propagation plan and involves working within routine methods and procedures under limited supervision, with checking only related to overall progress. Some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for propagation activities	<p>1.1. Workplace information is interpreted and tasks organised to achieve daily work routine within time constraints.</p> <p>1.2. Tools, equipment and machinery are selected according to propagation method and enterprise work procedures.</p> <p>1.3. Growing environment is prepared to suit species and propagation method.</p> <p>1.4. Hygiene practices are implemented according to enterprise guidelines.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p>
2. Select propagation material	<p>2.1. Parent plant is identified and selected according to health, vigour and desired characteristics.</p> <p>2.2. Propagation material is selected and collected according to the propagation method, and species.</p> <p>2.3. Conditioning and storage requirements are selected to ensure maximum viability of propagating material.</p>
3. Prepare propagating media	<p>3.1. Media components are selected according to manufacturer directions, enterprise guidelines, propagation method and plant needs.</p> <p>3.2. Propagation media is tested to ensure the product complies with media specifications.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. Media and components are handled according to OHS requirements. 3.4. Storage requirements for the unused propagation media are selected.
4. Propagate plants	4.1. Propagation material is prepared according to the propagation method and species. 4.2. Propagation techniques are performed according to plant species and documented guidelines. 4.3. Plants are handled in a way that minimises damage. 4.4. Aftercare is applied to suit the media conditions, plant requirements and propagation techniques employed.
5. Complete propagation operations	5.1. Ensure work site is cleaned according to hygiene requirements. 5.2. Waste is collected and disposed of or recycled to minimise damage to the external environment in accordance with enterprise guidelines. 5.3. Records are completed accurately and at the required time according to documented guidelines.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- select appropriate propagation material
- identify and assess hazards in the work area
- recognise and rectify problems and anomalies with parent plants, propagation material, propagation media, equipment and materials
- use propagation techniques for a range of plants
- use a diversity of propagation techniques
- prepare, mix and use chemicals as required
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening,

**REQUIRED SKILLS AND KNOWLEDGE**

clarifying information and consulting with supervisors as required

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- quality specifications for parent plants and propagation materials
- enterprise and industry hygiene standards required for propagation activities
- common problems that may occur while performing propagation activities in a controlled environment, and preventative/corrective action that may apply
- propagation techniques required for a range of plants
- aftercare requirements for a range of propagated plants
- testing methods applied to propagation media
- preferred types of propagation media for different species.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare tools and propagation materials for work
- prepare workspaces for propagation activities
- use a range of propagation methods to produce new crops
- place or prepare for placing newly propagated material in appropriate growing environment
- record propagation activities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources

**EVIDENCE GUIDE**

	for some worksites may differ due to the regional or enterprise circumstances.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Methods of propagation may include:

- sexual and asexual methods of propagation including tissue culture.

Propagation material may include:

- seeds
- cuttings
- spores
- rootstock
- scion
- rootlings
- buds
- separations/divisions
- tissue cultures
- rhizomes
- plantlets.

Propagating media may include:

- sand
- potting mix
- agar
- gravel
- scoria
- rock wool
- gro-wool
- sawdust
- pine bark
- perlite
- vermiculite
- water (hydroponics).

**Unit Sector(s)**

<b>Unit sector</b>	Nursery
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCNSY307A Operate fertigation equipment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating fertigation equipment to deliver fertilisers via the irrigation system and defines the standard required to: calculate and prepare fertigation materials; connect and calibrate equipment; operate, monitor and adjust delivery; shut down and clean equipment; dispose of waste in an environmentally responsible way.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials and equipment for operation	<p>1.1. Materials and services are confirmed as available and ready for operation.</p> <p>1.2. Materials are prepared to meet fertigation requirements.</p> <p>1.3. Injection or fertigation equipment is connected, as directed, and calibrated according to manufacturer's specifications.</p> <p>1.4. Fertiliser concentration is calculated and the solution thoroughly mixed according to enterprise, Occupational Health and Safety (OHS) and environmental requirements.</p> <p>1.5. Equipment is set to meet fertigation requirements.</p>
2. Operate the fertigation process	<p>2.1. Start up sequence is implemented according to operations manual and enterprise procedures.</p> <p>2.2. Fertigation process is operated and monitored to ensure delivery is maintained according to enterprise specifications and procedures.</p> <p>2.3. Fertigation equipment is monitored to ensure no adverse environmental impact is caused by faulty operation.</p> <p>2.4. Corrections to the process and equipment adjustments are implemented as necessary.</p>
3. Shut down fertigation equipment	<p>3.1. Injection equipment is flushed out according to enterprise standards prior to shut down.</p> <p>3.2. Equipment is cleaned according to enterprise procedures.</p> <p>3.3. Waste generated by both the fertigation process and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>cleaning procedures is managed according to environmental protection requirements and enterprise OHS procedures.</p> <p>3.4. Fertigation activities are reported and recorded according to regulatory requirements and enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- calculate and prepare fertigation materials
- connect, calibrate and operate the equipment, and monitor and adjust the delivery of fertilisers
- shut down, clean equipment and dispose of waste
- use personal protective equipment
- identify adverse environmental impacts of fertigation activities and appropriate remedial action
- implement enterprise, OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- fertigation injection equipment
- chemical handling procedures for fertiliser, chlorine, acid and cleaning agents
- cleaning procedures for fertigation equipment
- Material Safety Data Sheets (MSDSs)
- environmental impacts of delivering fertilisers via the irrigation system
- OHS issues

**REQUIRED SKILLS AND KNOWLEDGE**

- enterprise policies and procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- calculate and prepare fertigation materials
- connect and calibrate equipment
- operate, monitor and adjust delivery
- shut down and clean equipment
- dispose of waste in an environmentally responsible way.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Fertigation equipment may include:

- injection and fertigation equipment such as:
  - injection pumps
  - injection points

**RANGE STATEMENT**

	<ul style="list-style-type: none"><li>• chemical holding tanks.</li></ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Nursery
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCNSY401A Plan a growing-on program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning a growing-on program and defines the standard required to: determine requirements for growing-on program; schedule potting program; develop budgets and plans for a growing-on program; and monitor the implementation of the program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to production nursery managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify issues affecting the growing-on program	1.1. Production requirements are determined in consultation with management. 1.2. Factors that could limit the production of nursery plants are identified. 1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented. 1.4. The environmental implications in relation to a growing-on program are considered. 1.5. Sustainable practices are incorporated into the plan.
2. Develop the growing-on plan	2.1. Activities involved in the growing-on program are identified. 2.2. Labour, materials, tools and equipment needs are identified. 2.3. Environmental parameters are selected and altered to meet plant needs and production plans. 2.4. Growing media requirements are determined according to the needs of the plant and production plans. 2.5. Planting dimensions and layout are determined according to production plans. 2.6. Treatments required for the growing-on program are identified. 2.7. Hygiene requirements for the growing-on program are identified according to industry best practice.
3. Document the growing-on plan	3.1. The growing-on plan is documented, including all information identified in the development stage. 3.2. A budget supporting the plan is documented and approval sought by management. 3.3. A schedule of activities is organised according to production plans. 3.4. The growing-on plan and schedule of activities are communicated clearly to staff.

ELEMENT	PERFORMANCE CRITERIA
4. Oversee and monitor the growing-on program	4.1. The health of the plants is monitored to ensure they are at optimum growth. 4.2. Treatments are modified as required to maintain optimum growth. 4.3. Plants ready for dispatch are checked to ensure they meet customer specifications.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conduct literature and consultative research to obtain information about production requirements, growth conditions and marketing implications
- negotiate, budget and document plans
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- Worksafe Australia criteria for the labelling and handling of hazardous substances
- enterprise and industry hygiene standards required for growing-on activities
- environmental implications of the disposal of chemicals or chemical containers, and the drainage of high nutrient effluent
- optimal growing requirements of nursery plants
- enterprise and industry quality standards of nursery plant production
- common problems that may occur while performing growing-on activities in a controlled environment and preventative/corrective actions that may apply
- processes and techniques for preparing, costing and documenting plans for and scheduling growing-on activities

**REQUIRED SKILLS AND KNOWLEDGE**

- testing methods applied to propagation media
- preferred types of propagation media for different species
- chemical, cultural and biological pest, weed and disease control techniques
- application techniques for chemical and non-chemical intervention or treatments.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine requirements for growing-on program
- schedule potting program
- develop budgets and plans for a growing-on program
- monitor the implementation of the program.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Nursery plants may include:

- seedlings
- bulbs



**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• divisions</li> <li>• containerised plants</li> <li>• field-grown plants</li> <li>• flowering plants</li> <li>• foliage plants</li> <li>• grafted plants</li> <li>• tissue culture plants</li> <li>• stock plants.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Nursery
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCNSY402A Plan a propagation program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers planning a propagation program and defines the standard required to: determine propagation techniques and resources required; select propagation materials and media and determine optimal environmental conditions; determine plant hygiene requirements; review propagation plan by monitoring strike rate and health and quality of propagated plants; negotiate and document plans.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to plant propagators.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out preliminary planning activities for a plant propagation program	<p>1.1. Management and marketing requirements are confirmed and understood.</p> <p>1.2. Space requirements for propagation program are evaluated.</p> <p>1.3. Propagation techniques are determined according to species and sound horticultural practice.</p> <p>1.4. Environmental parameters that impact on propagation are determined.</p> <p>1.5. Budget for the propagation program is negotiated with management.</p> <p>1.6. Occupational Health and Safety (OHS) hazards associated with the propagation program are identified, risks assessed and controls implemented.</p>
2. Develop the propagation plan	<p>2.1. Labour, materials, equipment and machinery needs are identified.</p> <p>2.2. Propagation media requirements are determined according to the propagation method and needs of the plant.</p> <p>2.3. Strategies to modify environmental conditions are determined according to the type of plant and propagation method used.</p> <p>2.4. Selection criteria for the propagation material are determined according to the type of plant and propagation method.</p> <p>2.5. Hygiene requirements for propagation activities are determined.</p> <p>2.6. Propagation plan is documented and schedule of</p>

ELEMENT	PERFORMANCE CRITERIA
	activities are communicated clearly to staff.
3. Monitor success of propagation activities	3.1. Variances from plan and scheduled activities are identified and recorded. 3.2. Propagated plants are assessed for health, quality and viability according to enterprise quality standards. 3.3. Remedial procedures are planned to meet marketing objectives and business imperatives.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan a propagation program applies to the
- conduct literature and consultative research to obtain information about propagation requirements, growth conditions, and marketing implications
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- OHS hazards associated with undertaking propagation activities, and the controls necessary to remove or minimise risks associated with them
- practical understanding of the OHS and environmental issues associated with use and disposal of propagation media
- enterprise and industry hygiene standards required for propagation activities, including relevant quarantine regulations
- industry and enterprise quality specifications for parent plants and propagation materials
- common problems that may occur while performing propagation activities in a

**REQUIRED SKILLS AND KNOWLEDGE**

- controlled environment, and preventative/corrective action that may apply
- processes and techniques for preparing, costing and documenting plans for and scheduling propagation activities
  - identification, propagation and establishment techniques required for a range of plant varieties and cultivars
  - monitoring staff performance
  - Plant Breeders Rights (PBR) and related legislation
  - aftercare requirements for a range of propagated plant varieties and cultivars
  - testing methods applied to propagation media
  - preferred types of propagation media for different species
  - chemical, cultural and biological pest, weed and disease control techniques
  - application techniques for chemical and non-chemical intervention or treatments.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine propagation techniques and resources required
- select propagation materials and media and determine optimal environmental conditions
- determine plant hygiene requirements
- review propagation plan by monitoring strike rate and health and quality of propagated plants
- negotiate and document plans.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Propagation techniques may include:

- seed
- cuttings
- layering
- growing on tissue cultured plants
- division or splitting
- budding
- grafting
- spores
- cloning.

**Unit Sector(s)****Unit sector**

Nursery

**Co-requisite units****Co-requisite units**

## Competency field

Competency field	
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## AHCOHS101A Work safely

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers working safely and defines the standard required to: work safely; communicate effectively; contribute to a productive workplace and observe good environmental work practice.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the steps required by new entry workers in preparing for work in an agricultural, horticultural or land management work place.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Observe safe work practices	1.1. Protective clothing and equipment is used according to best practice when completing work tasks. 1.2. Safety of machines, tools and equipment is checked before use. 1.3. Correct manual handling techniques are used. 1.4. Hazards are reported to supervisor. 1.5. Supervisors are immediately informed verbally when there is an emergency. 1.6. Machines, tools and equipment are operated to manufacturer's specifications and in accordance with supervisor's instructions. 1.7. Safety procedures involved in handling of hazardous substances are interpreted and followed as required. 1.8. Safety procedures to protect people in the workplace are followed.
2. Communicate with others	2.1. Instructions and notices are interpreted correctly and observed. 2.2. Simple messages from clients and customers are taken and passed to supervisor. 2.3. Communication with others is conducted in a courteous manner and is appropriate to age, culture, linguistic background and position in the organisation.
3. Contribute to a productive working environment	3.1. Work practices contribute positively to quality, productivity and conditions, and promote co-operation and good relationships. 3.2. Industry expectations of conduct and presentation are determined and observed. 3.3. Information on working in the industry including employment terms and conditions is collected.

ELEMENT	PERFORMANCE CRITERIA
	3.4. Work is consistent with workplace standards relating to anti-discrimination and workplace harassment.
4. Follow good environmental practices	4.1. Work practices relating to potential environmental impacts are recognised and followed, and clarification is sought where necessary. 4.2. Environmental threats and potential hazards are recognised and reported to supervisor. 4.3. Contributions are made to improve environmental work practices.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- observe safe work practices
- communicate with others
- contribute to a productive working environment
- follow good environmental practices
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- hazards in the industry
- Occupational Health and Safety (OHS) legislative requirements and Codes of Practice including manual handling and use, maintenance, and storage of protective equipment and clothing
- communication procedures, systems and technology relevant to the industry
- industry expectations of conduct, presentation and work performance (including quality and productivity)
- appropriate behaviour relating to anti-discrimination and sexual harassment
- industry employment terms and conditions and career pathways

**REQUIRED SKILLS AND KNOWLEDGE**

- good environmental practices in the workplace
- environmental issues relevant to the industry.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- work safely
- communicate effectively
- contribute to a productive workplace
- observe good environmental work practice.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Working safely may include:

- all aspects and contexts associated with the agriculture, horticulture and conservation and land management industries.

### Unit Sector(s)

<b>Unit sector</b>	Work
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCOHS201A Participate in OHS processes

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of following enterprise Occupational Health and Safety (OHS) policies and procedures and defines the standard required to: recognise and report hazards in the workplace; follow workplace safety procedures and directions; adjust, use, clean and store personal protective equipment (PPE) according to safe work procedures and manufacturer directions; carry out basic safety checks on equipment before use; identify and handle hazardous substances according to workplace procedures; complete manual handling tasks using recommended techniques; and follow emergency procedures and warning signs.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to supervised workers. It requires employees to follow OHS policies and procedures and requires active participation in the workplace safety system, under clear reporting lines and procedures.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>	

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Follow workplace procedures for hazard identification and risk control	1.1.Hazards in the workplace are recognised and reported to designated personnel according to enterprise procedures. 1.2.Assessment of risk associated with identified hazards is made according to enterprise procedures. 1.3.Workplace procedures and work instructions for controlling risks are followed accurately. 1.4.Workplace procedures for dealing with accidents, fire and emergencies are followed whenever necessary within the scope of responsibilities and competencies. 1.5.Risks to fellow workers, other people and animals are recognised, and action taken to eliminate or reduce them. 1.6.Employee responsibilities prescribed in OHS legislation are recognised and carried out. 1.7.Safety training is undertaken as directed.
2. Observe safe practices during work operations	2.1.Work for which PPE is required is identified, used, maintained and stored according to enterprise procedures.

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2.Safety checks on all machinery and equipment are undertaken before operation according to enterprise procedures.</p> <p>2.3.Hazards associated with handling of hazardous substances are identified and reported, and risk assessed according to enterprise procedures and OHS requirements.</p> <p>2.4.Noise hazards are identified and notified, and risk assessed according to enterprise procedures and OHS requirements.</p> <p>2.5.Manual handling job risks are assessed prior to activity and work carried out according to currently recommended safe practices.</p> <p>2.6.Information on OHS is accessed as required.</p>
<p>3. Participate in arrangements for maintaining health and safety of all people in the workplace</p>	<p>3.1.Individuals have input into ongoing monitoring and reporting on all aspects of workplace safety.</p> <p>3.2.OHS issues are raised with designated personnel according to enterprise procedures and relevant OHS legislation.</p> <p>3.3.Contributions to participative arrangements in the workplace are made within organisational procedures and scope of responsibilities and competencies.</p> <p>3.4.Contributions are provided towards the development of effective solutions to control the level of risk associated with enterprise activities.</p>

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
<p>This section describes the skills and knowledge required for this unit.</p>
<p><b>Required skills</b></p>
<ul style="list-style-type: none"> <li>• follow workplace procedures for hazard identification and risk control</li> <li>• read safety warning signs</li> <li>• observe safety during work operations</li> <li>• participate in arrangements for maintaining health and safety of all people in the workplace</li> <li>• recognise caution or hazard signs and symbols</li> </ul>

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• interpret tasks or information from labels, manuals or written instructions</li> <li>• record information accurately or verbally report information</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• employee and employer responsibilities under the OHS Act</li> <li>• enterprise procedures relating to hazards, fires, emergencies, accidents and risk control</li> <li>• OHS signs and symbols relevant to area of work.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise and report hazards in the workplace</li> <li>• follow workplace safety procedures and directions</li> <li>• adjust, use, clean and store PPE according to safe work procedures and manufacturer directions</li> <li>• carry out basic safety checks on equipment before use</li> <li>• identify and handle hazardous substances according to workplace procedures</li> <li>• complete manual handling tasks using recommended technique</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• follow emergency procedures and warning signs.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
OHS participation may include:	<ul style="list-style-type: none"> <li>• identification and control of all hazards found in the workplace</li> <li>• application of OHS policies, procedures and legislation.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Occupational health and safety
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCOHS301A Contribute to OHS processes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of carrying out enterprise Occupational Health and Safety (OHS) policies and procedures and defines the standard required to: work in accordance with workplace procedures in hazard identification and risk control; carry out safe practices during work operations; participate in arrangements for maintaining the health and safety of all people in the workplace.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the active participation in the workplace safety system, under clear reporting lines and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Adapt OHS policies and procedures	<p>1.1. Information regarding the organisation OHS policies and procedures is made readily accessible to all employees.</p> <p>1.2. Employee responsibilities prescribed in OHS legislation, codes and national standards are identified and carried out.</p> <p>1.3. Employee responsibilities prescribed in enterprise OHS policies and procedures (including emergency procedures) are identified and carried out.</p>
2. Assist in workplace hazard identification and risk control	<p>2.1. Information regarding hazard identification and risk control is provided and explained regularly.</p> <p>2.2. Hazards in the workplace are recognised and reported to designated personnel according to enterprise procedures.</p> <p>2.3. Assessment of risk associated with identified hazards is made in accordance with enterprise procedures.</p> <p>2.4. Workplace procedures and work instructions for controlling risks are followed accurately.</p> <p>2.5. Risks to fellow workers, other people and animals are recognised and action is taken to eliminate or reduce them.</p> <p>2.6. Safety training is undertaken or provided as necessary.</p>
3. Observe safe practices during work operations	<p>3.1. Personal Protective Equipment (PPE) required for work is identified, used, maintained and stored according to enterprise procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Basic safety checks on all machinery and equipment are undertaken before operation according to enterprise procedures.</p> <p>3.3. Hazards associated with handling of hazardous substances are identified, risks assessed and risk controls implemented in accordance with enterprise procedures and OHS requirements.</p> <p>3.4. Noise hazards are identified and notified, risks assessed and risk controls implemented in accordance with enterprise procedures and OHS requirements.</p> <p>3.5. Manual handling risks are assessed prior to activity, and safe lifting practices are used.</p> <p>3.6. Information on OHS for specific work operations is accessed as required.</p>
<p>4. Participate in arrangements for maintaining health and safety of all people in the workplace</p>	<p>4.1. Individuals have input into ongoing monitoring and reporting on all aspects of workplace safety.</p> <p>4.2. OHS issues are raised with designated personnel in accordance with enterprise procedures and relevant OHS legislation.</p> <p>4.3. Contributions to participative arrangements in the workplace are made within organisational procedures and scope of responsibilities and competencies.</p> <p>4.4. Suggestions are made to assist the development of effective solutions to control the level of risk with enterprise activities.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- apply workplace procedures for hazard identification and risk control
- ability to direct others in identifying hazards, controlling risks, and following other OHS enterprise requirements
- ability to read safety warning signs
- participate in arrangements for maintaining the health and safety of all people in the workplace

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• accurately record incidents in the work area in accordance with OHS legal requirements</li> <li>• observe and direct others to follow safe working operations</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• employee and employer responsibilities under OHS legislation and relevant national and industry codes of practice</li> <li>• enterprise procedures relating to hazards, fires, emergencies, accidents, and risk control</li> <li>• OHS signs and symbols relevant to area of work</li> <li>• hazard identification and the risk assessment process</li> <li>• manual handling principles and procedures</li> <li>• safe systems of work.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• work in accordance with workplace procedures in hazard identification and risk control</li> <li>• carry out safe practices during work operations</li> <li>• participate in arrangements for maintaining the health and safety of all people in the workplace.</li> </ul>

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
OHS processes may include:	<ul style="list-style-type: none"> <li>all OHS processes identified in OHS legislation and regulations and industry Codes of Practice.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Occupational health and safety
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCOHS401A Maintain occupational health and safety (OHS) processes

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers maintaining OHS processes and defines the standard required to: facilitate meetings and document actions to consider OHS issues in the workplace; distribute information concerning OHS processes and requirements to staff; establish procedures to document the identification of hazards and assessment of risk covering the operations of the enterprise; provide staff with OHS training in risk assessment, and other areas nominated by risk controls; put emergency procedures in place and organise for safety drills; maintain health and safety records.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to nominated OHS representatives in a workplace.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Provide information about occupational health and safety	1.1.Relevant provisions of OHS legislation and Codes of Practice are accurately and clearly explained to the work group. 1.2.Information on enterprise OHS policies, procedures and programs is provided in a readily accessible manner, and is accurately and clearly explained to the work group. 1.3.Information about identified hazards and the outcomes of risk assessment and control procedures is regularly provided, and is accurately and clearly explained to the work group.
2. Facilitate the participation of workers in OHS observance and decision-making	2.1.Enterprise procedures for consultation over OHS issues are implemented and monitored to ensure that all members of the work group have the opportunity to contribute. 2.2.Procedures whereby workers report OHS hazards, risks are assessed and action taken to control risks, are clearly described to the work group. 2.3.Issues raised through consultation are dealt with and resolved promptly, or referred to the appropriate personnel for resolution in accordance with workplace procedures for issue resolution. 2.4.The outcomes of consultation over OHS issues are promptly communicated to the work group.

ELEMENT	PERFORMANCE CRITERIA
<p>3. Implement procedures for identifying hazards and assessing and controlling risks</p>	<p>3.1.Existing and potential hazards which are identified are reported so that adequate risk assessment and effective control measures are implemented.</p> <p>3.2.Work procedures to control OHS risks are implemented by the work group and regular monitoring occurs to ensure ongoing adherence and effectiveness of risk control.</p> <p>3.3.Inadequacies in existing risk control measures are identified in accordance with the hierarchy of control, and reported to designated personnel/management.</p> <p>3.4.Inadequacies in allocation of resources to ensure safe work practice are identified and reported to management.</p> <p>3.5.Existing risk control measures are monitored and results reported regularly in accordance with workplace procedures.</p>
<p>4. Implement workplace procedures for dealing with emergencies and hazardous events</p>	<p>4.1.Workplace procedures for dealing with OHS emergencies are implemented where necessary to ensure that prompt and effective control action is taken.</p> <p>4.2.OHS emergencies are reported in accordance with established enterprise procedures.</p> <p>4.3.Control measures to prevent recurrence and minimise risk of emergencies and hazardous events are implemented based on the hierarchy of control, or alternatively, referred to designated personnel for implementation.</p>
<p>5. Implement and monitor enterprise procedures for providing OHS training</p>	<p>5.1.OHS induction and training needs are identified accurately, specifying the gaps between OHS competencies required and those held by the work group.</p> <p>5.2.Arrangements are made for meeting identified OHS training needs in both on and off-the-job training programs in consultation with relevant parties.</p>
<p>6. Implement and monitor enterprise procedures for maintaining occupational health and safety records</p>	<p>6.1.OHS records for work area are accurately and legibly completed in accordance with workplace requirements for OHS records, and legal requirements for the maintenance of records of occupational hazards, risk control, injury and disease events.</p> <p>6.2.Aggregate information from OHS records is used to identify hazards and monitor risk control procedures</p>

ELEMENT	PERFORMANCE CRITERIA
	within work area according to enterprise procedures and within scope of responsibilities.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- facilitate the participation of workers in OHS observance and decision-making
- identify OHS hazards and conduct the risk assessment process
- respond to emergencies and OHS issues in an appropriate and timely manner
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- hazards in the workplace
- relevant OHS legislation and Codes of Practice
- risk control measures
- the hierarchy of OHS risk control and its implementation for hazards in land-based industries
- communication and engagement strategies with workers
- suitable communication techniques
- relevant enterprise management systems and procedures
- accident/incident investigation
- participative work practices.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• facilitate meetings and document actions to consider OHS issues in the workplace</li> <li>• distribute information concerning OHS processes and requirements to staff</li> <li>• establish procedures to document the identification of hazards and assessment of risk covering the operations of the enterprise</li> <li>• provide staff with OHS training in risk assessment, and other areas nominated by risk controls</li> <li>• put emergency procedures in place and organise for safety drills</li> <li>• maintain health and safety records.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
OHS processes may include:	<ul style="list-style-type: none"> <li>• all OHS processes identified in OHS legislation and regulations and industry Codes of Practice.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Occupational health and safety
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCOHS501A Manage Occupational Health and Safety (OHS) processes

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing OHS processes and defines the standard required to: develop OHS policies and procedures which demonstrate enterprise commitment to OHS; establish arrangements to ensure the involvement of all employees in the management of OHS; supervise procedures for identifying hazards; conduct risk assessments to cover all phases of the organisations operations involving all relevant staff; develop risk controls and ensure all relevant staff are aware of them; establish and maintain procedures for dealing with hazardous events and emergencies; established and maintain an OHS safety induction and training program; establish and maintain a system for OHS records; review the enterprise OHS system based on an analysis of OHS records, related policies, procedures and programs and make changes in response to review.
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## Application of the Unit

<b>Application of the unit</b>	This unit requires the ability to develop management systems and procedures, and to manage the implementation process. The process is usually conducted within policy guidelines and procedures where discretion and judgement are required.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop OHS policies and procedures	<p>1.1. An OHS business plan and program is developed for the enterprise in consultation with designated personnel and/or management.</p> <p>1.2. OHS responsibilities and duties are clearly defined, allocated and included in job descriptions and duty statements for all relevant positions.</p> <p>1.3. Financial and human resources for implementation of OHS policies and procedures are identified, sought and/or provided as required.</p> <p>1.4. Information on the OHS system and procedures for the area of responsibility is provided and explained in a form which is readily understood by employees.</p>
2. Establish and maintain processes to ensure the participation of all employees in the	<p>2.1. Consultation processes are established and maintained with employees and their representatives in accordance with relevant legislation and according to enterprise guidelines.</p> <p>2.2. Issues raised through participation and consultation</p>



ELEMENT	PERFORMANCE CRITERIA
application of OHS	<p>are dealt with and resolved promptly and effectively in accordance with enterprise procedures for issue resolution.</p> <p>2.3.Information about the outcomes of participation and consultation is provided in a manner readily accessible to employees.</p>
3. Establish and maintain procedures for identifying hazards	<p>3.1.Existing and potential hazards within the area of responsibility are identified and confirmed in accordance with legislation, Codes of Practice, and trends identified from the OHS records system.</p> <p>3.2.A procedure for ongoing identification of hazards is developed and integrated within systems of work and procedures.</p> <p>3.3.Activities are appropriately monitored to ensure that this procedure is adopted effectively throughout areas of managerial responsibility.</p> <p>3.4.Hazard identification is addressed at the planning, design and evaluation stages of any change in the workplace to ensure that new hazards are not created.</p>
4. Establish and maintain procedures for assessing risks	<p>4.1.Risks associated with identified hazards are assessed in accordance with safe work practices, with information derived from workplace OHS records and industry wide information, and with relevant OHS legislation and Codes of Practice.</p> <p>4.2.A procedure for ongoing assessment of risks is developed and integrated within systems of work and procedures.</p> <p>4.3.Activities are monitored to ensure that risk assessment procedures are adopted effectively throughout the area of managerial responsibility.</p> <p>4.4.Risk assessment is addressed at the planning, design and evaluation stages of any change in the workplace to ensure that the risk from hazards is not increased.</p> <p>4.5.Accident and dangerous occurrences are investigated and recorded according to enterprise and OHS procedures.</p>
5. Interim risk control measures are implemented until a better or permanent control measure is developed	<p>5.1.Measures to control assessed risks are developed and implemented in accordance with the hierarchy of control, relevant OHS legislation, Codes of Practice, and trends identified from the OHS records system.</p> <p>5.2.When measures which control a risk at its source are not immediately practicable, interim solutions are implemented until a permanent control measure is</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>developed.</p> <p>5.3. A process of ongoing hazard identification and risk assessment, and review of effectiveness of control programs is developed and integrated into enterprise management arrangements.</p> <p>5.4. Activities are monitored to ensure that the risk control procedure is adopted effectively throughout the area of managerial responsibility.</p> <p>5.5. Risk control is addressed at the planning, design and evaluation stages of any change in the workplace to ensure that adequate risk control measures are included.</p> <p>5.6. Systems are designed to reduce risk and administrative arrangements to ensure safe OHS work practices are put in place where elimination of a hazard is not possible.</p> <p>5.7. Effective OHS risk management measures are set in place during any modification of the buildings and structures, machinery and work activities.</p> <p>5.8. Inadequacies in existing risk control measures are identified and resources enabling implementation of new measures are sought and/or provided according to appropriate workplace procedures.</p>
<p>6. Plan and manage enterprise procedures for dealing with hazardous events</p>	<p>6.1. Potential emergencies posing risk to health and safety of workers and the public are correctly identified.</p> <p>6.2. Plans and procedures which control the risks associated with hazardous events and meet any legislative requirements as a minimum, are developed in consultation with appropriate emergency services.</p> <p>6.3. Appropriate information and training is provided to employees to enable implementation of correct emergency procedures.</p> <p>6.4. Adequate numbers of workers are trained in First Aid to ensure that first aid is applied to preserve life and minimise injury.</p>
<p>7. Establish and maintain an OHS safety induction and training program</p>	<p>7.1. An OHS induction program is developed to meet the occupational health and safety needs of new employees.</p> <p>7.2. An OHS training program is developed as part of supervisors and employee's general training.</p>
<p>8. Establish and</p>	<p>8.1. A system for keeping OHS records is established and</p>

ELEMENT	PERFORMANCE CRITERIA
maintain a system for OHS records	monitored to allow identification of patterns of occupational injury and disease in the enterprise. 8.2. Records are regularly updated and used to evaluate the effectiveness of the enterprise OHS program.
9. Evaluate the enterprise OHS system and related policies, procedures and programs	9.1. The effectiveness of the OHS system and related policies, procedures and programs is assessed according to enterprise aims with respect to OHS. 9.2. Improvements to the OHS system are developed and implemented to ensure more effective achievement of enterprise aims. 9.3. Compliance with OHS legislation and Codes of Practice is assessed to ensure that legal OHS standards are maintained as a minimum.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop OHS policies and procedures which demonstrate enterprise commitment to OHS
- establish and maintain arrangements to ensure the involvement of all employees in the management of OHS
- establish and maintain procedures for identifying hazards
- establish and maintain procedures for assessing risks
- establish and maintain procedures for controlling risks
- establish and maintain enterprise procedures for dealing with hazardous events
- establish and maintain an OHS safety induction and training program
- establish and maintain a system for OHS records
- evaluate the enterprise OHS system and related policies, procedures and programs
- analyse recorded data to determine where the OHS program can better meet enterprise and employee needs
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>clarification, negotiating solutions and responding to a range of views</p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• data and documentation for industry injury statistics</li> <li>• significant hazards and areas of risk in the workplace</li> <li>• all relevant OHS legislation and Codes of Practice consistent with the hierarchy of OHS risk control and its implementation for hazards in land-based industries</li> <li>• risk control measures</li> <li>• hierarchy of risk controls</li> <li>• relevant management systems and procedures</li> <li>• public safety issues.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop OHS policies and procedures which demonstrate enterprise commitment to OHS</li> <li>• establish arrangements to ensure the involvement of all employees in the management of OHS</li> <li>• supervise procedures for identifying hazards</li> <li>• conduct risk assessments to cover all phases of the organisations operations involving all relevant staff</li> <li>• develop risk controls and ensure all relevant staff are aware of them</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• establish and maintain procedures for dealing with hazardous events and emergencies</li> <li>• established and maintain an OHS safety induction and training program</li> <li>• establish and maintain a system for OHS records including records to be kept and persons responsible</li> <li>• review the enterprise OHS system based on an analysis of OHS records, related policies, procedures and programs and make changes in response to review.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The enterprise OHS program includes:	<ul style="list-style-type: none"> <li>• the full range of hazards that workers are exposed to (or are likely to be exposed to) in the workplace.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Occupational health and safety
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCORG101A Support organic production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers both livestock and plant based organic production and defines the standard required to: apply principles of organic agriculture to daily work routines; follow supervisor instructions; follow Occupational Health and Safety (OHS) procedures and where appropriate; food safety procedures and report any variations from required standards or procedures to supervisor.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking the organic production of animals and crops.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for organic production work	<p>1.1. Required materials, tools and equipment are identified according to supervisor instructions.</p> <p>1.2. Checks for serviceability are conducted on all materials, tools and equipment and insufficient or faulty items are reported to supervisor.</p> <p>1.3. Techniques used when loading and unloading materials demonstrate correct manual handling techniques and minimise damage to self, load and vehicle.</p> <p>1.4. Suitable personal protective clothing and equipment are selected and checked prior to use.</p> <p>1.5. OHS hazards are identified and reported to supervisor.</p>
2. Undertake organic production work as directed	<p>2.1. Instructions and directions provided by supervisor are followed and clarification is sought when necessary.</p> <p>2.2. Work is undertaken in an environmentally appropriate manner and according to workplace information, principles of organic agriculture, OHS requirements and enterprise guidelines.</p> <p>2.3. Site quarantine, biosecurity protocols and farm and personal hygiene requirements are followed as required by enterprise guidelines.</p> <p>2.4. Where appropriate to enterprise's activities, food safety requirements are met.</p> <p>2.5. Interactions with other staff and customers are carried out in a positive and professional manner.</p> <p>2.6. Enterprise policies and procedures in relation to</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>workplace practices, and handling and disposal of materials are observed.</p> <p>2.7. Problems or difficulties in completing work to required standards or timelines are reported to supervisor.</p> <p>2.8. Clean and safe work site is maintained while working.</p>
3. Handle materials and equipment	<p>3.1. Waste material produced during work is stored in a designated area according to supervisor instructions.</p> <p>3.2. Materials, tools and equipment are handled and transported according to supervisor instructions and enterprise guidelines.</p>
4. Clean up on completion of work	<p>4.1. Materials are returned to store or disposed of according to supervisor instructions.</p> <p>4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer specifications and supervisor instructions.</p> <p>4.3. Work outcomes are reported to supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- following safe work procedures
- cleaning up on completion of work
- handling materials and equipment
- observing interactions between parts of the farm system
- preparing materials, tools and equipment for work
- undertaking work as directed
- where appropriate to enterprise's activities, working safely with and around livestock
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural,

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
social and religious backgrounds.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• principles of organic production</li> <li>• organic procedures and recording requirements</li> <li>• safe work practices relevant to the tasks being undertaken, including safe use of tools and equipment</li> <li>• where appropriate to enterprise's activities, food safety requirements</li> <li>• OHS and environmental protection legislation and enterprise procedures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• apply principles of organic agriculture to daily work routines</li> <li>• follow supervisor instructions</li> <li>• follow OHS procedures and where appropriate, food safety procedures</li> <li>• report any variations from required standards or procedures to supervisor.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Work may include:	<ul style="list-style-type: none"> <li>support to others undertaking the organic production of animals and crops.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Organic production
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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# AHCORG401A Manage biodynamic production

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing a farming system according to the principles and using the practices of biodynamic agriculture, and defines the standard required to: understand and apply biodynamic principles; make and apply biodynamic preparations and compost; enhance soil and plant health; integrate and manage animals in a biodynamic enterprise; plan for biodynamic production.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to farmers who manage according to the principles of biodynamic agriculture. Work is likely to be done independently and according to the requirements of the National Standard for Organic and Biodynamic Produce.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare a plan for a biodynamic farming enterprise	<p>1.1. Work is undertaken in an environmentally appropriate manner and according to Occupational Health and Safety (OHS) requirements and enterprise guidelines.</p> <p>1.2. Requirements for biodynamic certification are identified.</p> <p>1.3. Personal, ecological and financial goals for a biodynamic enterprise are incorporated into an enterprise plan.</p> <p>1.4. Marketing plan for biodynamic produce is developed which maintains product quality and integrity.</p> <p>1.5. Research findings for biodynamic agriculture are trialled within enterprise and incorporated into plans where appropriate.</p>
2. Make and apply biodynamic field spray preparations	<p>2.1. Horn Manure (500), Horn Silica (501) and Horn Clay preparations are made and stored correctly.</p> <p>2.2. Preparations are stirred by creating vortex and chaos.</p> <p>2.3. Equipment for application of biodynamic preparations is selected.</p> <p>2.4. Equipment is calibrated and adjusted for suitable application rate.</p> <p>2.5. Preparations are applied according to biodynamic principles.</p>
3. Use biodynamic compost preparations, composts and liquid	<p>3.1. Biodynamic compost preparations are used and stored according to biodynamic principles.</p> <p>3.2. Materials and mineral inputs for compost are identified from farm production plan.</p>

ELEMENT	PERFORMANCE CRITERIA
brews	3.3.Compost heap is built. 3.4.Biodynamic preparations are applied to compost according to biodynamic principles. 3.5.Aeration, moisture and temperature of compost heap are monitored. 3.6.Compost is applied to enhance natural cycles.
4. Apply biodynamic principles and techniques to enhance soil and plant health	4.1.Planting, harvest and pruning times are planned with regard to moon rhythms and planetary patterns. 4.2.Soil and plant health is optimised using biodynamic preparations, cover crops, crop rotation, mulching and composting and through application of farm-based fertility products. 4.3.Weeds and insect pests in enterprise are identified. 4.4.Options for managing weeds and insects are evaluated that consider natural predators, life cycles, cultural practices, soil health and the plant community. 4.5.Plan for managing pests and weeds is developed and implemented.
5. Manage animals within a biodynamic production system	5.1.Soil and plant health are optimised to provide a nutrient-dense and balanced diet. 5.2.Grazing and feeding strategies are developed and incorporated into the biodynamic system. 5.3.Homeopathic remedies and allowable treatments are incorporated into animal health strategies.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analysing soil test results and applying them to a biodynamic farm
- calibrating sprays and calculating application rates
- developing a biodynamic management plan (from start-up to full implementation)
- developing biodynamic spray programs for various types of agriculture and horticulture systems
- making and using biodynamic compost, manure concentrate, seaweed tea, various

## REQUIRED SKILLS AND KNOWLEDGE

- liquid brews and foliar sprays
- making and using biodynamic preparations
- stirring and spraying systems
- stirring water and other liquids by creating vortexes and chaos
- using planetary rhythms for seed sowing and cultivation
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- animal health
- biodynamic preparations and their role in soil food web and atmosphere
- biodiversity, shelter belts, birds and native bush on biodynamic farm
- calcium-clay-silica polarities
- crop and animal rotation systems
- cultivation methods
- etheric and astral forces and how they relate to biodynamics
- experiments and testing methods such as chromatography and sensitive crystallisation
- green manuring
- management of insects and birds
- paradigms of various farming systems: biodynamics, organics and permaculture, and holistic management
- peppering for animals and insects
- planting calendar
- purpose of various herbs and organs used for making biodynamic preparations
- relationship between soil, plant, animal and human health
- research in biodynamics
- rhythms and cycles of planets and moon
- role of the biodynamic preparations 500-508
- role of bacteria and fungi
- role of humus
- soil: food web information, how it is made, its structure and feeding cycle
- water retention

**REQUIRED SKILLS AND KNOWLEDGE**

- weed management
- principles, practices and inputs allowable under the National Standard for Organic and Biodynamic Produce.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- understand and apply biodynamic principles
- make and apply biodynamic preparations and compost
- enhance soil and plant health
- integrate and manage animals in a biodynamic enterprise
- plan for biodynamic production.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.



**RANGE STATEMENT**

Organic may include:	<ul style="list-style-type: none"> <li>the application of practices that emphasise the use of renewable resources</li> <li>conservation of energy, soil and water</li> <li>recognition of livestock welfare needs</li> <li>environmental maintenance and enhancement, while producing optimum quantities of produce without the use of artificial fertiliser or synthetic chemicals.</li> </ul>
Biodynamic may include:	<ul style="list-style-type: none"> <li>agricultural systems that introduce specific additional requirements to an organic system based on the application of preparations indicated by Rudolf Steiner and subsequent developments for management derived from practical application, experience and research based on these preparations.</li> </ul>
Production may include:	<ul style="list-style-type: none"> <li>any primary production involved in producing an agricultural or aquaculture product.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Organic production
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCORG402A Manage organic livestock production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of integrating livestock production into an organic production system and defines the standard required to: monitor and maintain animals in an organic production system; provide a suitable diet and living environment for animals based on the National Organic Standards for Organic Livestock Production; integrate animals into an organic production system; manage grazing of animals and allowable inputs to enhance soil health and fertility.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farmers who manage according to the principles of biodynamic agriculture. Work is likely to be done independently and according to the requirements of the National Standard for Organic and Biodynamic Produce.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Manage animal health and welfare	<p>1.1.All work is undertaken in an environmentally appropriate manner and according to the principles of organic agriculture, occupational health and safety requirements and enterprise guidelines.</p> <p>1.2.Natural behaviours of animals and requirements of animal welfare codes of practice are considered in planning for organic livestock production.</p> <p>1.3.Genetic resistance to parasites is incorporated into breeding strategy.</p> <p>1.4.Livestock is monitored constantly for health and welfare and records are kept according to enterprise requirements.</p> <p>1.5.Animal health preventative strategies are developed, communicated to others working on farm and implemented.</p> <p>1.6.Use of prohibited/restricted substances for organic livestock is documented and treated animals are identified and quarantined.</p> <p>1.7.Animal transport is conducted humanely and in compliance with organic certification requirements.</p> <p>1.8.Livestock records required for organic certification are maintained.</p>
2. Develop and implement feed	<p>2.1.Planning for winter feed and drought preparedness is undertaken.</p>

ELEMENT	PERFORMANCE CRITERIA
production and storage requirements	<p>2.2. Haymaking and/or cropping are incorporated into annual program for animal feed and on-farm sustainability.</p> <p>2.3. Long term storage for hay and feed is implemented and quality and quantity are monitored.</p>
3. Develop and implement grazing strategies to achieve biodiversity, recycling and sustainability	<p>3.1. Soil and plant health are optimised to provide a nutrient-dense and balanced diet for livestock.</p> <p>3.2. Pastures are assessed for diversity, health, vigour and ground cover.</p> <p>3.3. Infrastructure required for implementing rotational grazing strategies is identified and incorporated into property improvement program.</p> <p>3.4. Rotational grazing strategies are developed and implemented.</p> <p>3.5. Impact of grazing strategies on nutrient recycling and pasture diversity, persistence and vigour is evaluated.</p> <p>3.6. Strategies for controlling weeds in pastures are implemented.</p>
4. Research and source allowable inputs for organic livestock production	<p>4.1. Level of nutrients exported from farm is estimated.</p> <p>4.2. Soil-testing program, including observation of pasture species present, is implemented in order to monitor and maintain optimal pasture species and soil health.</p> <p>4.3. Soil nutrient levels are replenished through recycling, optimising nutrient availability in soil, and sourcing allowable inputs where necessary.</p> <p>4.4. Organic fertilisers and soil conditioners are applied to ensure a mineral-balanced and healthy soil.</p> <p>4.5. Certification protocols for sourcing essential fodder off-farm are followed.</p> <p>4.6. Fodder is sourced and fed to stock, minimising risk of weed spread and maintaining adequate records.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

**REQUIRED SKILLS AND KNOWLEDGE****Required skills**

- animal handling and husbandry techniques
- assessing pastures
- monitoring feed intake
- feed budgeting
- parasite and disease monitoring
- developing grazing strategies
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- certification requirements
- animal parasites and diseases
- animal welfare code of practice
- grazing management, including pasture identification and assessment, feed budgeting and grazing strategies
- management options for animal health based on an understanding of pest life cycles, genetic selection and acquired immunity
- permitted, restricted and prohibited inputs and activities as described in the National Organic Standards for Organic Livestock Production
- principles of organic agriculture
- relationship between soil, plant and animal health
- Occupational Health and Safety (OHS) and animal welfare legislation and codes of practice.
- record keeping
- principles, practices and inputs allowable under the National Standard for Organic and Biodynamic Produce.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• monitor and maintain animals in an organic production system</li> <li>• provide a suitable diet and living environment for animals based on the National Organic Standards for Organic Livestock Production</li> <li>• integrate animals into an organic production system</li> <li>• manage grazing of animals and allowable inputs to enhance soil health and fertility.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Organic may include:	<ul style="list-style-type: none"> <li>• the application of practices that emphasise the use of renewable resources</li> <li>• conservation of energy, soil and water</li> <li>• recognition of livestock welfare needs</li> <li>• environmental maintenance and enhancement, while producing optimum quantities of produce without the use of artificial fertiliser or synthetic chemicals.</li> </ul>

**RANGE STATEMENT**

Livestock may include:	<ul style="list-style-type: none"> <li>domestic or domesticated aquatic and terrestrial animals including insects.</li> </ul>
Production may include:	<ul style="list-style-type: none"> <li>any primary production involved in producing an agricultural or aquaculture product.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Organic production
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCORG403A Manage organic soil improvement

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the management of organic soil improvement and defines the standard required to: understand and apply principles of organic agriculture; understand and apply knowledge of interrelationships between soil fertility, animals, plants, pests and diseases; devise and implement a soil improvement plan to correct imbalances and maintain soil fertility; apply the results of soil tests for a range of indicators of soil fertility; and work with natural processes and allowable inputs to improve and maintain soil fertility.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managers on farms that are managed according to the principles of organic agriculture. Work is likely to be done independently and according to the requirements of the National Standard for Organic and Biodynamic Produce.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Monitor indicators of soil fertility	<p>1.1. Work is undertaken in an environmentally appropriate manner and according to workplace information, principles of organic agriculture, Occupational Health and Safety (OHS) requirements and enterprise guidelines.</p> <p>1.2. Soil testing is conducted at reference sites according to enterprise procedures and organic industry standards.</p> <p>1.3. Soil acidity or alkalinity (pH), mineral balances and organic matter levels are assessed and recorded.</p> <p>1.4. Soil texture, structure, salinity and sodicity are assessed and recorded.</p> <p>1.5. Soil biological activity is assessed and recorded</p> <p>1.6. Soil condition is assessed for drainage, compaction, aeration and water infiltration in relation to requirements for desired plant growth for selected species.</p> <p>1.7. Results are analysed to identify trends in soil health and fertility and areas for improvement.</p>
2. Assess soil-related factors for selected plants	<p>2.1. Nutritional requirements of selected plant species are identified.</p> <p>2.2. Soil analyses to be conducted and suitable testing facilities are selected.</p> <p>2.3. Plant tissue sample collection is conducted according</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>to enterprise procedures and requirements of testing facility.</p> <p>2.4. Results of tissue testing are combined with observations of plant vigour and productivity to determine management and input requirements of the farming system.</p>
<p>3. Select and implement allowable techniques and inputs to optimise soil fertility</p>	<p>3.1. Range of allowable inputs is identified according to requirements of the National Standard for Organic and Biodynamic Produce.</p> <p>3.2. Cultural practices to enhance nutrient cycling are identified and implemented.</p> <p>3.3. Appropriate inputs are calculated, based on soil/plant analyses, crop removal and plant/animal observations.</p> <p>3.4. Cover crop and pasture systems are selected and managed.</p> <p>3.5. Mulching and composting systems are developed, applied and monitored.</p> <p>3.6. Rotations to optimise soil fertility are designed and implemented.</p> <p>3.7. Cultural practices to enhance soil fertility are selected and implemented.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- applying organic soil improvements, such as compost
- assessing biodiversity and plant health through observation of plant community
- observing animal health and relating it to plant and soil nutrient status
- operating equipment safely
- sampling soil and plant tissues
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as

## REQUIRED SKILLS AND KNOWLEDGE

specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- availability, use and definition of organic fertilisers
- structural properties of soils
- factors contributing to soil acidity, sodicity and salinity
- factors promoting soil and plant water-holding capacity
- importance of soil biological activity
- major nutrient elements and their role in plant growth
- methods and inputs that can be used to correct imbalances and maintain soil fertility
- principles of organic agriculture
- processes and practices that impact on soil structure, biological activity, water-holding capacity and weed patterns
- processes of aggregate and colloid formation
- range of soil analyses available and principles of each
- relationship between soil structure, water holding capacity and nutrient availability
- role of organic matter, humus and micro-organisms
- role of livestock in enhancing soil fertility
- role of macro and micro-elements in soil and plants
- role of weeds
- significance of levels and balance of soil fertility indicators
- soil food chains and food webs
- soil textural types and determinants
- when and how to take soil samples to test for indicators of soil fertility
- principles, practices and inputs allowable under the National Standard for Organic and Biodynamic Produce.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• understand and apply principles of organic agriculture</li> <li>• understand and apply knowledge of interrelationships between soil fertility, animals, plants, pests and diseases</li> <li>• devise and implement a soil improvement plan to correct imbalances and maintain soil fertility</li> <li>• analyse soil test results for a range of indicators of soil fertility</li> <li>• work with natural processes and allowable inputs to improve and maintain soil fertility.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Organic may include:	<ul style="list-style-type: none"> <li>• the application of practices that emphasise the use of renewable resources</li> <li>• conservation of energy, soil and water</li> <li>• recognition of livestock welfare needs</li> <li>• environmental maintenance and enhancement, while producing optimum quantities of produce without the use of artificial fertiliser or synthetic chemicals.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Organic production
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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# AHCORG404A Arrange selling through community based marketing

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Unit Descriptor

This Unit of Competency defines the standard required to: identify types of community based markets; develop and maintain a community based connection with customers; and comply with the requirements of the selected community marketing scheme.

## Application of the Unit

This Unit applies to production managers and workplace supervisors in an organic farming enterprise that are responsible for identifying selling options, developing a relationship with community groups, complying with community based marketing scheme requirements, organising appropriate transport and keeping sale records.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Nil.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and evaluate selling options	1.1 Identify the various types of <i>community based selling schemes</i> . 1.2 Identify <i>characteristics of the farm business produce</i> . 1.3 Identify and document the potential customer base. 1.4 Evaluate and document selling options.
2. Comply with the requirements of the selected community marketing scheme.	2.1 Identify and comply with <i>market requirements</i> . 2.2 Comply with legislative requirements in each step of the supply chain. 2.3 Keep records to verify compliance with the community marketing scheme.
3. Develop and maintain a relationship with customers	3.1 Investigate <i>characteristics of the community customers</i> . 3.2 Identify potential links between the community and the farm system. 3.3 Develop the connections between individuals and the farm production system. 3.4 Develop a 'farm story' and communicate the uniqueness of the enterprise to the community. 3.5 Monitor community satisfaction levels through customer feedback and address valid concerns.
4. Organise transport	4.1 Identify transport requirements and engage carriers as required. 4.2 Arrange transport timing and delivery of product with carrier, processing and or selling facility and, where appropriate, agent. 4.3 Comply with any special requirements to ensure appropriate transport. 4.4 Comply with all relevant legislative requirements.
5. Keep records	5.1 Complete pre and post sale documentation. 5.2 Record transactions. 5.3 Document customer feedback and identify and record potential improvements.



## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

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#### Ability to:

- focus on the customer
- work collaboratively with others
- adapt appropriately to cultural differences in the community market place, including modes of behaviour and interactions with others
- work with attention to detail and thoroughness
- use rural produce marketing and presentation skills
- interpret, analyse and extract information from a range sources such as professional literature, legal documents, discussions and workshops
- communicate detailed and complex information in written and oral form with people both inside and outside the organisation
- converse and liaise with industry contacts, relevant stakeholders, staff and family regarding marketing through a community based scheme
- identify and build strategic industry relationships and establish and use network and support groups
- measure, calculate and estimate material quantities
- assess and adopt profitable innovations
- calculate financial returns
- use appropriate technology, including software
- implement contingency plans for unplanned events such as problems arising during the supply and management of community marketing activities

### Required knowledge includes:

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#### Knowledge of:

- applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes in selling produce through community based markets
- relevant legislation and regulations relating to OHS
- organic certification systems and standards
- organisation policies and procedures related to supply chain management, purchasing, and contracting and tendering
- characteristics and composition of farm business marketing plans
- characteristics of community marketing schemes and the steps within a farm produce supply chain
- product knowledge related to goods and services required by the organisation
- ways to build trust and collaboration as opposed to competition
- business terms and conditions for purchasing, tendering and contracting

- ethical behaviour
- established communication channels and protocols
- procedures for operating electronic communications equipment
- procedures for recording and reporting workplace information and completing relevant documentation.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this Unit must be able to provide evidence that they can arrange the necessary processes to sell rural produce through community based markets</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and holistically satisfy all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify farm produce selling options</li> <li>• identify and comply with requirements of a community marketing scheme and its characteristics</li> <li>• establish relationships with community stakeholders and customers</li> <li>• monitor and record community satisfaction levels and customer feedback and address concerns</li> <li>• communicate the ‘farm story’ and the uniqueness of the enterprise to the community</li> <li>• arrange timely transport and delivery of produce and address any special transport requirements</li> <li>• comply with transport legislative requirements</li> <li>• accurately record pre and post sale documentation and transactions</li> <li>• identify and record potential improvements.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other Units.</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge.</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills.</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge.</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li> <li>• Assessment may be in conjunction with assessment of other Units of Competency.</li> <li>• The assessment environment should not disadvantage the candidate.</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English.</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment.</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role.</li> </ul>
Guidance information for assessment	<p>To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Community based selling schemes</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• boxed schemes</li> <li>• farmers markets</li> <li>• roadside stall</li> <li>• community supported agriculture</li> <li>• subscription selling</li> <li>• direct selling.</li> </ul>
<p><b><i>Characteristics of the farm business produce</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• organic</li> <li>• local</li> <li>• RSPCA cert</li> <li>• sustainable production elements</li> <li>• environmental outcomes</li> <li>• approaches to Environmental protection,</li> <li>• animal welfare standards</li> <li>• minimise food miles</li> <li>• social engagement</li> <li>• production system eg biodynamic.</li> </ul>
<p><b><i>Market requirements</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• produce specifications</li> <li>• specific market area</li> <li>• supply volumes</li> <li>• portion sizes</li> <li>• weight</li> <li>• packaging and labelling</li> <li>• timing</li> <li>• quality parameters</li> <li>• certification scheme.</li> </ul>
<p><b><i>Characteristics of the community customers</i></b> may be influenced by:</p>	<ul style="list-style-type: none"> <li>• past experiences</li> <li>• perceptions of the produce</li> <li>• fresh</li> <li>• better tasting</li> <li>• chemical and hormone free</li> <li>• non genetically modified</li> <li>• sustainability beliefs</li> <li>• religious beliefs</li> <li>• customs</li> </ul>

	<ul style="list-style-type: none"><li>• habit</li><li>• social beliefs</li><li>• environmental views</li><li>• animal welfare</li><li>• vegetarian.</li></ul>
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## Unit Sector(s)

Organic Production

# AHCORG405A Implement sustainable practices in the organic farm based business

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Unit Descriptor

This Unit defines the standard required to; monitor the sustainability of the organic farm business; implement and monitor sustainability improvement programs; and monitor the impact of daily management decisions on sustainability goals and engage others in sustainability practices.

## Application of the Unit

The Unit involves managing the establishment and implementation of sustainable work practices in organic farming enterprises of all sizes and in a variety of work settings.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Nil.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Access the farm businesses guidelines and principles for social, financial and environmental sustainability</p>	<p>1.1 Identify environmental regulations, organic farming requirements and the organic farm plan which apply to the farming enterprise.</p> <p>1.2 Source and interpret environmental and sustainable organic farming information and current best practice guidelines and principles.</p> <p>1.3 Identify the impact of best practice guidelines and principles on day to day farm operations and management.</p> <p>1.4 Identify <i>key sustainability practices</i> for an organic farming enterprise.</p> <p>1.5 Access business guidelines and farm practices which comply with sustainable organic farming guidelines and principles.</p>
<p>2. Implement established farm business guidelines and principles</p>	<p>2.1 Implement strategies to effectively integrate sustainability principles and practices into the organic farm system.</p> <p>2.2 Identify continuous improvement opportunities and document identified changes to businesses guidelines and principles.</p> <p>2.3 Implement agreed improvements to the farm businesses guidelines and principles.</p>
<p>3. Monitor farm business sustainability initiatives for effectiveness and compliance</p>	<p>3.1 Monitor and evaluate the effectiveness and compliance of sustainability practices in terms of environmental, social and financial goals.</p> <p>3.2 Evaluate and report changing trends and techniques relevant to sustainable organic farming for continuous improvement.</p>
<p>4. Engage farm business stakeholders in sustainability practices</p>	<p>4.1 Communicate sustainability strategies to <i>stakeholders and relevant staff</i>.</p> <p>4.2 Monitor stakeholder compliance with organic sustainability strategies along the entire supply chain.</p> <p>4.3 Identify and document identified continuous improvement initiatives.</p> <p>4.4 Encourage and assist stakeholders to implement improvements to the system.</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- maintain and use record keeping systems to keep records required in the organic farming workplace
- identify opportunities to improve work processes
- use monitoring and evaluating skills to report on sustainability initiatives
- use literacy skills to read and interpret policy and legislation documents
- use oral communication skills to engage farm business stakeholders in sustainability practices, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal techniques to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- use numeracy skills to estimate, calculate and record routine and complex workplace measures and data
- use problem-solving skills to identify and react appropriately to routine environmental issues.

### Required knowledge includes:

#### Knowledge of:

- best practice guidelines
- principles and processes relevant to sustainable organic farming
- compliance requirements for all relevant environmental/sustainability legislation, regulations and codes of practice including resource hazards/risks associated with work area, job specifications and procedures
- sustainability issues including environmental and social issues that relate to an organic farm
- external benchmarks used within an organic farming enterprise, including approaches to improving techniques used and expected outcomes.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	A person who demonstrates competency in this Unit must be able to provide evidence that they can
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	implement sustainable practices in an organic farm based business.
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify businesses guidelines and principles for social, financial and environmental sustainability</li> <li>• identify and interpret environmental regulations, sustainable organic farming requirements, farm plan and current best practice guidelines and principles</li> <li>• implement strategies to integrate sustainability principles and practices into the farm system and identify continuous improvement opportunities</li> <li>• monitor farm business sustainability initiatives for effectiveness and compliance</li> <li>• adopt and document continuous improvement initiatives</li> <li>• encourage staff and farm business stakeholders to embrace sustainability practices.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other Units.</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge.</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills.</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge.</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.</li> </ul>

	<ul style="list-style-type: none"> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li> <li>• Assessment may be in conjunction with assessment of other Units of Competency.</li> <li>• The assessment environment should not disadvantage the candidate.</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English.</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment.</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role.</li> </ul>
<p>Guidance information for assessment</p>	<p>To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Key sustainability practices</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• purchase of inputs</li> <li>• enterprise selection</li> <li>• production practices</li> <li>• land management strategies</li> <li>• supply and marketing chain selection.</li> </ul>
<p><b><i>Stakeholders and relevant staff</i></b> may include:</p>	<p>individuals and groups both inside and outside the organisation who have direct or indirect interest in the organisation's conduct, actions, products and services, including:</p> <ul style="list-style-type: none"> <li>• customers</li> </ul>

	<ul style="list-style-type: none"><li>• employees at all levels of the organisation</li><li>• government</li><li>• investors</li><li>• local community</li><li>• other organisations</li><li>• suppliers</li><li>• personnel within the organisation</li><li>• technical specialists outside the organisation.</li></ul>
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## **Unit Sector(s)**

Organic Production

# AHCORG406A Overseer compliance with an organic certification scheme

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Unit Descriptor

This Unit covers the skills and knowledge required to oversee continued compliance with an organic certification scheme and defines the standard required to: keep production records; keep records that support the organic certification scheme; comply with quality assurance requirements; comply with the specific organic certification scheme; and comply with the food safety requirements of the supply chain.

## Application of the Unit

This Unit applies to production managers and workplace supervisors in an organic farming enterprise that are responsible for ensuring compliance within the scope of the selected organic certification scheme.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Nil.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify compliance requirements of the selected organic standard relating to the farm system	1.1 Access the selected <i>organic certification scheme</i> relevant to the operation and management of the organic farming enterprise. 1.2 Identify and interpret key clauses and requirements of the organic standard that relate to the existing farm system. 1.3 Identify and document compliance of the farm system with the requirements of the selected organic certification scheme. 1.4 Identify and document <i>key farm operations</i> that are impacted by the organic standards.
2. Keep records to comply with organic certification requirements	2.1 Identify the <i>records</i> and detail required for compliance with the organic certification scheme. 2.2 Complete and maintain clear and accurate records to an approved industry standard. 2.3 Communicate recording requirements to appropriate stakeholders and key personnel. 2.4 Monitor the record keeping process and maintain records to the National Organic Standard.
3. Support compliance with organic standards by staff in the farm business	3.1 Identify all steps within the production system that require compliance with the selected organic standards. 3.2 Support <i>staff and key personnel</i> to implement and foster a compliant organic supply chain culture. 3.3 Keep accurate records at all key supply chain steps to verify and maintain compliance.
4. Meet annual audit requirements of the selected organic certification scheme	4.1 Comply with the specific certification requirements. 4.2 Prepare the farm and organic records and documents for audit. 4.3 Conduct an internal organic audit of the farm system and complete associated records and documents. 4.4 Take corrective actions to comply with the specific certification requirements. 4.5 Participate in an annual organic audit. 4.6 Comply with and close any corrective actions requested.
5. Comply with food safety requirements	5.1 Identify <i>food safety requirements</i> that must be satisfied by the farm system to comply with industry standards.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	5.2 Communicate food safety requirements to all staff.
	5.3 Keep records to demonstrate compliance with food safety requirements to industry standard.
	5.4 Correct any non-conformance issues identified by internal audit or industry compliance audit.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- identify critical steps and in the production of organic products
- identify issues that may cause non-compliance with the organic certification scheme
- provide induction and in-service staff training
- implement organic standards and manage contingencies
- plan and organise audit activities
- identify food safety hazards
- keep records and prepare reports to meet compliance and/or client requirements
- respond to corrective action requests
- maintain production and compliance records
- use literacy skills to interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal techniques to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.
- use numeracy skills to estimate, calculate and record routine and complex workplace measures and data
- use problem-solving skills to identify and react appropriately to environmental implications, OHS hazards and threats to compliance with the organic certification scheme.

**Required knowledge includes:****Knowledge of:**

- organic standards and specifications
- applicable food safety and licensing requirements
- farm supply chain market requirements for product
- organic quality specifications for product
- enterprise and industry quality assurance systems
- strategies for control of hazards to organic compliance.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	A person who demonstrates competency in this Unit must be able to provide evidence that they can oversee compliance with an organic certification scheme.
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify and document compliance requirements of the selected organic standard relating to the farm system</li> <li>• identify and document key farm operations impacted by the organic standards</li> <li>• support key personnel and staff to implement and foster a compliant organic supply chain culture</li> <li>• keep accurate records at all key supply chain steps to verify and maintain organic compliance</li> <li>• conduct an internal organic audit of the farm system and accurately complete associated records and documents</li> <li>• participate in an annual organic audit and successfully close any identified corrective actions</li> <li>• identify food safety requirements and ensure compliance of the farm system with industry standards</li> <li>• ensure all farm records and production data is</li> </ul>

	kept, monitored and maintained in compliance with National Organic Standard requirements.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other Units.</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge.</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills.</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge.</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li> <li>• Assessment may be in conjunction with assessment of other Units of Competency.</li> <li>• The assessment environment should not disadvantage the candidate.</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English.</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment.</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where



	possible, over a number of assessment activities.
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## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Organic certification scheme</i></b> may include:</p>	<p>A range of certification programs used by the different organic certifying bodies and where appropriate the different requirements for export to specific countries.</p> <ul style="list-style-type: none"> <li>• AUS-QUAL Limited (AUSQUAL)</li> <li>• Australian Certified Organic (ACO)</li> <li>• Byo-Dynamic Research Institute</li> <li>• National Association of Sustainable Agriculture Australia (NASAA)</li> <li>• Organic Food Chain (OFC)</li> <li>• Safe Food Production Queensland</li> <li>• Tasmanian Organic Dynamic Producers</li> <li>• ACO Small Producer Scheme</li> <li>• Biological Farmers of Australia</li> <li>• Organic and biodynamic products</li> <li>• Australian and Biodynamic food</li> <li>• National Organic Program (NOP)</li> <li>• Japan Agricultural Standard (JAS).</li> </ul>
<p><b><i>Key farm operations</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• use of production inputs</li> <li>• contractor equipment and machinery</li> <li>• transport equipment and facilities</li> <li>• processing</li> <li>• packaging and labelling</li> <li>• livestock husbandry</li> <li>• environmental management.</li> </ul>
<p><b><i>Records</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• input and output registers</li> <li>• production records</li> <li>• isolation log</li> <li>• organic management plan</li> <li>• client statements</li> <li>• sales and purchases records.</li> </ul>

<i>Staff and key personnel</i> may include:	<ul style="list-style-type: none"><li>• members of farm family</li><li>• farm staff</li><li>• supply and marketing chain personnel.</li></ul>
<i>Food safety requirements</i> may include:	<ul style="list-style-type: none"><li>• national and state legislation</li><li>• local council requirements</li><li>• AS ISO 22000</li><li>• Food Safety Standards (Australia)</li><li>• industry schemes including Livestock Production Assurance</li><li>• Freshcare</li><li>• Spotless food safety standard</li><li>• Salad Good Agricultural Practices (Salad GAP).</li></ul>

## Unit Sector(s)

Organic Production

## AHCORG501A Develop an organic management plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing an organic management plan and defines the standards required to: identify and develop required components of an Organic Management Plan (OMP) for a property; understand and use interrelationships between soil, plant and animal health and farming system's resilience when developing plan; identify options for prevention and control of risks; apply appropriate regional catchment targets and; document the plan in compliance with certification requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those producers who develop an OMP to convert an agricultural or horticultural farm to an organic, biological and ecological system. It requires the capability to set objectives to meet organic certification requirements of the National Standard for Organic and Biodynamic Produce.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Locate and access assistance in developing the OMP	<p>1.1.Sources of support and advice including agricultural extension officers and training programs are located and accessed.</p> <p>1.2.Industry publications and internet sources are assessed for their value in informing decision making.</p> <p>1.3.Contributions of work colleagues and others are sought and considered during planning process.</p>
2. Design the organic farming system to be described in the OMP	<p>2.1.Map of property to be covered by OMP is developed or obtained.</p> <p>2.2.Time scale to be addressed in plan is determined.</p> <p>2.3.Information on soil fertility and management, and weed, pest, disease and animal health status and their interrelationships is collected to serve as benchmarks for development of management options in plan.</p> <p>2.4.Regional catchment targets for land, water and biodiversity are obtained and those applicable to property and sub-catchment are identified.</p> <p>2.5.Components of OMP that need to be developed are identified.</p> <p>2.6.Suitable format for planning documents is developed.</p>
3. Develop soil fertility plan	<p>3.1.A soil fertility assessment of farm production areas is undertaken or commissioned.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Soil types and topography are mapped on farm plan.</p> <p>3.3. Soil fertility plan is developed and documented that amends soil chemistry, soil structure and soil biology, based on assessment results, overall budget and intended cropping regime.</p> <p>3.4. Appropriate inputs are identified according to the National Standard for Organic and Biodynamic Produce.</p> <p>3.5. Plan is documented according to established format.</p>
4. Develop soil management sub-plan	<p>4.1. Suitability of land for production is determined based on soil type, slope, aspect and previous use.</p> <p>4.2. Soil management plan to enhance soil structure and prevent compaction and water logging is developed.</p> <p>4.3. Appropriate inputs are identified according to the National Standard for Organic and Biodynamic Produce.</p> <p>4.4. Sub-plan is documented according to established format.</p>
5. Develop weed management sub-plan	<p>5.1. Problematic weed species are identified and weeds are observed as an indicator of soil health.</p> <p>5.2. Life cycles of weeds species are identified to inform management options.</p> <p>5.3. Appropriate inputs are identified according to the National Standard for Organic and Biodynamic Produce.</p> <p>5.4. Options for managing weeds are developed.</p> <p>5.5. Sub-plan is documented according to established format.</p>
6. Develop and design an integrated pest and disease management sub-plan	<p>6.1. Evidence of pest and disease burden in farming system is collected and documented.</p> <p>6.2. Pests and diseases and their life cycles are observed and monitored.</p> <p>6.3. Evidence of pest and disease burden is evaluated in order to develop strategy for management.</p> <p>6.4. Pests and diseases are evaluated as indicators of farming system health.</p> <p>6.5. Options for addressing pest and disease issues, including improving soil health, are identified.</p> <p>6.6. Appropriate inputs are identified according to the National Standard for Organic and Biodynamic Produce.</p>

ELEMENT	PERFORMANCE CRITERIA
	6.7.Sub-plan is documented according to established format.
7. Develop animal health sub-plan	7.1.Regional and farm-based animal health issues are identified. 7.2.Options for preventative actions aimed at establishing and maintaining optimal animal health are identified. 7.3.Options for treating animal health issues are identified. 7.4.Sub-plan is documented according to established format.
8. Integrate and finalise the organic management plan	8.1.Sub-plans for soil fertility and management, and weed, pest, disease and animal health are integrated. 8.2.Record-keeping system is developed and implemented to track various components of OMP as they are put into practice and reviewed. 8.3.OMP is reviewed and updated annually.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- carry out property planning
- undertake soil assessment
- interpret the landscape
- observe cycles, patterns, change and systems dynamics
- use lateral thinking and a systems approach to develop solutions to problems
- apply ecological principles to agricultural production
- complete production planning
- access industry information
- monitor the farming system
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

**REQUIRED SKILLS AND KNOWLEDGE**

- clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
  - use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- principles of organic agriculture, especially fundamental role of soil health
- principles of sustainable production
- requirements and components of an OMP
- systems approach to agriculture and horticulture
- organic and biodynamic certification requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify and develop required components of an OMP for a property
- understand and use interrelationships between soil, plant and animal health and farming system's resilience when developing plan
- identify options for prevention and treatment of risks
- apply appropriate regional catchment targets
- document the plan in compliance with certification requirements.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

	enterprise circumstances.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Organic management plans may include:

- the conversion of an agricultural or horticultural farm to an organic, biological and ecological system.

**Unit Sector(s)**

<b>Unit sector</b>	Organic production
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCORG502A Prepare the enterprise for organic certification

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the preparation of the enterprise for organic certification and defines the standard required to: identify requirements for organic certification and apply them to one's enterprise; identify critical points in supply chain at which the organic integrity of one's product may be compromised; implement and monitor effective risk management for those parts of supply chain under one's control; identify practices and strategies to minimise the risk of contamination and non conformance with organic standards; develop an operational plan for conversion to organic production.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farmers who are preparing a production enterprise for compliance with the Australian Quarantine and Inspection Service (AQIS), accredited certification bodies and the National Standard for Organic and Biodynamic Produce.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Investigate and access information sources and support for conversion to organic production	<p>1.1. Contact is established with other organic producers and marketers of organic products.</p> <p>1.2. Other sources of support and advice, including agricultural extension officers and training programs, are identified and accessed.</p> <p>1.3. Literature, industry publications and internet sources of information to support decision-making are assessed for usefulness and reliability.</p> <p>1.4. Certification process requirements are obtained from certification bodies.</p> <p>1.5. Roles and responsibilities of inspector, certifier and accreditation bodies, including role of AQIS, are investigated.</p>
2. Conduct a risk assessment of the site	<p>2.1. Previous land use and chemicals applied on the site are identified and documented.</p> <p>2.2. Risk assessment for potential on-farm contaminants is undertaken and documented.</p> <p>2.3. Potential contamination risk from off-farm land use and agricultural practices is assessed.</p> <p>2.4. Risk management procedures to minimise potential</p>

ELEMENT	PERFORMANCE CRITERIA
	contamination from internal and external sources are incorporated into a certification preparation plan.
3. Develop and implement hazard analysis critical control point (HACCP) based procedures	<p>3.1. Production processes and activities, and those sections of supply chain under one's control, are identified and documented according to enterprise procedures, certification bodies' requirements and the National Standard for Organic and Biodynamic Produce.</p> <p>3.2. Quality, organic and statutory product standards to be met are identified, documented and compared to actual standards achieved by product and enterprise.</p> <p>3.3. Corrective actions or improvements to processes and activities are identified and documented.</p> <p>3.4. Procedures and processes for monitoring and annual review are developed and implemented.</p>
4. Manage customer feedback	<p>4.1. Procedures are developed and implemented to obtain, analyse and respond to customer feedback on quality and integrity of organic product.</p> <p>4.2. Product recall procedures are developed, communicated to relevant parties and monitored.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conducting and documenting a risk assessment
- preparing an Organic Management Plan (OMP)
- reading and interpreting the National Standard for Organic and Biodynamic Produce
- researching and evaluating information
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

## REQUIRED SKILLS AND KNOWLEDGE

- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- certification process
- chain of custody
- HACCP principles and risk management
- health and food safety issues
- labelling requirements for domestic and export markets
- market for organic produce, including the organic movement and organic industry
- National Standard for Organic and Biodynamic Produce
- principles of organic agriculture
- procedures and responsibilities in the case of product recall
- procedures for conducting and documenting a risk assessment
- regulatory requirements and their domestic and international contexts
- requirements of an OMP, including record keeping
- role of quality management systems in organic industry
- working knowledge of the regulated organic industry, including the role of AQIS, certification bodies and inspectors.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify requirements for organic certification and apply them to one's enterprise
- identify critical points in supply chain at which the

<b>EVIDENCE GUIDE</b>	
	<p>organic integrity of one's product may be compromised</p> <ul style="list-style-type: none"> <li>• implement and monitor effective risk management for those parts of supply chain under one's control</li> <li>• identify practices and strategies to minimise the risk of contamination and non conformance with organic standards</li> <li>• develop an operational plan for conversion to organic production.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to prepare an enterprise for organic certification.</p> <p>The candidate must also have access to the following resources:</p> <p>National Standard for Organic and Biodynamic Produce documented requirements of appropriate organic certification body.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Enterprises may include:	<ul style="list-style-type: none"> <li>• dairies</li> <li>• cropping</li> <li>• production horticulture</li> <li>• transport</li> <li>• poultry</li> <li>• livestock</li> <li>• post-harvest handling</li> <li>• storage</li> <li>• packaging</li> <li>• labelling and selling to wholesalers, retailers or direct to consumers.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Organic production
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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# AHCORG503A Design and document an organic farm landscape

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Unit Descriptor

This Unit of Competency covers the design and development of an organic farm landscape plan and defines the standard required to: audit the natural resource base of the property; determine the key sustainability principles that apply; and use a range of design tools to design an organic farm landscape allowing for climate and resource uncertainty.

## Application of the Unit

This Unit applies to farm managers or owners whose job includes designing and developing organic farming landscapes.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Nil.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Source legislative requirements which impact on the management of an organic farm	<p>1.1 Identify and access applicable legislative documents and codes of practice relevant to the design and planning of an organic farming enterprise.</p> <p>1.2 Investigate work practices and procedures which follow <i>industry standards</i>.</p> <p>1.3 Identify and interpret <i>key clauses and requirements</i> which apply to organic production and marketing.</p> <p>1.4 Identify relevant work practices and procedures which comply with regulatory requirements and codes of practice.</p>
2. Audit the natural resources and infrastructure of the property	<p>2.1 Identify and record property physical and biological characteristics and <i>landscape features</i>.</p> <p>2.2 Develop a farm soil map.</p> <p>2.3 Determine <i>land capability</i>.</p> <p>2.4 Conduct a risk analysis of the farm and adjoining land-use to determine compliance with organic standards, legislative and environmental requirements.</p>
3. Develop an organic landscape plan	<p>3.1 Identify key design parameters to meet financial, social and sustainability goals.</p> <p>3.2 Develop and document <i>key farm rules</i>.</p> <p>3.3 Investigate short term and long term uncertainties for the farm system.</p> <p>3.4 Investigate design options which impact on these long term changes.</p> <p>3.5 Identify and use appropriate <i>design tools</i>.</p> <p>3.6 Develop a concept framework.</p>
4. Document the organic landscape plan	<p>4.1 Review the draft plan against the financial, social and sustainability goals.</p> <p>4.2 Document the plan.</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- conduct sector analysis



- conduct soil mapping within a farm context
- conduct risk analysis for adjoining land-use
- identify natural and sensitive areas
- apply land-shape design methodology
- use permaculture design methodology
- map physical and biological features of the landscape
- develop design rules
- apply research skills
- use literacy skills to interpret, analyse and extract information from a range of sources such as professional literature, legal documents, discussions and workshops and to locate, read, interpret and convey information in written, diagrammatic and/or verbal form
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal techniques to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- use numeracy skills to estimate, calculate and record routine and complex workplace measures and data
- use problem-solving skills to identify and react appropriately to environmental implications and in the application of different planning processes.

### Required knowledge includes:

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#### Knowledge of:

- applicable legislative documents and codes of practice relevant to farm landscape planning
- landscape types
- habitat/plant communities on farm
- relationship between land shape and soil type
- soil types
- different categories of cultural sites
- organic certification requirements
- landscape hydrology
- landscapes for agro-ecosystems
- native habitat requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the

performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	A person who demonstrates competency in this Unit must be able to provide evidence that they can design and document an organic farm landscape.
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• source and interpret legislative requirements industry standards and codes of practice</li> <li>• identify compliant work practices and procedures</li> <li>• conduct an audit of the natural resources and infrastructure of the property</li> <li>• identify physical and biological characteristics and landscape features of the property</li> <li>• develop farm soil map and determine land capability</li> <li>• develop an organic landscape plan using appropriate development tools</li> <li>• revise a draft plan and document the final organic landscape plan.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other Units.</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge.</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills.</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge.</li> <li>• Assessment may be applied under project-related</li> </ul>

	<p>conditions (real or simulated) and require evidence of process.</p> <ul style="list-style-type: none"> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li> <li>• Assessment may be in conjunction with assessment of other Units of Competency.</li> <li>• The assessment environment should not disadvantage the candidate.</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English.</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment.</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role.</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Industry standards</i></b> may include:	<ul style="list-style-type: none"> <li>• national organic standards</li> <li>• industry requirements</li> <li>• organisation requirements</li> <li>• required environmental protection</li> <li>• animal welfare.</li> </ul>
<b><i>Key clauses and requirements</i></b> may refer to:	<ul style="list-style-type: none"> <li>• farm infrastructure</li> <li>• cultural sites</li> <li>• habitat zones</li> <li>• plant communities</li> </ul>

	<ul style="list-style-type: none"> <li>• endangered species</li> <li>• natural resources</li> <li>• natural and sensitive areas requiring protection and/or enhancement</li> <li>• buffer zone requirements</li> <li>• soil types</li> <li>• aspect</li> <li>• slope</li> <li>• micro climates.</li> </ul>
<i>Landscape features</i> may include:	<ul style="list-style-type: none"> <li>• existing infrastructure</li> <li>• cultural sites</li> <li>• habitat zones</li> <li>• plant communities</li> <li>• endangered species</li> <li>• natural resources <ul style="list-style-type: none"> <li>• creeks, rivers, swamp, water soak</li> <li>• rock outcrops</li> <li>• stands of timber</li> <li>• caves</li> <li>• salt/mud flats</li> </ul> </li> <li>• natural and sensitive areas requiring protection and/or enhancement</li> <li>• buffer zone requirements</li> <li>• soil types</li> <li>• aspect</li> <li>• slope</li> <li>• micro climates.</li> </ul>
<i>Land capability</i> may include:	<ul style="list-style-type: none"> <li>• industry standard capability system</li> <li>• customised system to meet individual business requirements.</li> </ul>
<i>Key farm rules</i> are:	<ul style="list-style-type: none"> <li>• rules that will guide the development of the farm design to meet the requirements of the overall farm vision.</li> </ul>
<i>Design tools</i> may include:	<ul style="list-style-type: none"> <li>• sector analysis</li> <li>• land shape design</li> <li>• permaculture design tools</li> <li>• keyline design</li> <li>• landscapes for agro-ecosystems</li> <li>• landscapes for habitat</li> <li>• patterns to detail</li> <li>• zoning.</li> </ul>

## **Unit Sector(s)**

Organic Production

# AHCORG504A Develop and manage a community based marketing supply chain

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Unit Descriptor

This Unit of Competency defines the standard required to: evaluate the suitability of different community marketing options for farm products; determine the supply chain processes to participate in the selected community marketing schemes; develop a range of marketing alternatives; and develop and document a community marketing plan for farm produce and promote produce within community based marketing schemes.

## Application of the Unit

This Unit applies to rural enterprise managers who develop and manage marketing strategies and systems within a community based marketing scheme to meet desired production and business outcomes.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Nil.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Evaluate the suitability of different community marketing options for farm products	1.1 Research and document non traditional selling options. 1.2 Identify different <i>community marketing models</i> applicable to the farm system. 1.3 Identify key input <i>supply chain steps</i> and stakeholders and relevant <i>certification requirements</i> . 1.4 Evaluate different options.
2. Determine the marketing chain processes to participate in the selected community marketing schemes	2.1 Research and identify applicable <i>legislative, environmental, and certification requirements</i> relevant to <i>managing a community based marketing chain</i> . 2.2 Document specifications for the various components of the marketing chain management system in line with organisational and legislative requirements. 2.3 Document traceability requirements of the marketing chain.
3. Determine appropriate community marketing strategies for farm products	3.1 Identify communities that have a potential relationship with the farm system. 3.2 Document the <i>characteristics and values of the identified communities</i> . 3.3 Match community characteristics and values to farm system. 3.4 Establish and document <i>market specifications</i> to meet community expectations. 3.5 Identify and document appropriate community marketing strategies. 3.6 Identify and assess risks in strategy.
4. Establish product marketing chain requirements to meet marketing options	4.1 Map required <i>steps in marketing chains</i> to supply identified market. 4.2 Establish <i>farm business requirements</i> for each step in marketing chain. 4.3 Establish <i>compliance requirements</i> at each step in marketing chain. 4.4 Develop <i>record keeping requirements</i> for each step in marketing chain.
5. Develop and document a community based marketing plan	5.1 Document required processes for the chosen enterprises and production systems. 5.2 Identify and document marketing targets.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	5.3 Identify the key factors that differentiate product.
	5.4 Develop and document a promotion plan.
	5.5 Collate customer feedback and use to improve market outcomes.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- provide strong customer focus
- work collaboratively with others
- adapt appropriately to cultural differences in the community market place, including modes of behaviour and interactions with others
- work with attention to detail and thoroughness
- interpret, analyse and extract information from a range sources such as professional literature, legal documents, discussions and workshops
- communicate detailed and complex information in written and oral form with people both inside and outside the organisation
- converse and liaise with industry contacts, relevant stakeholders, staff and family regarding marketing through a community based scheme
- identify and build strategic industry relationships and establish and use network and support groups
- react appropriately to environmental implications and OHS hazards
- measure, calculate and estimate material quantities
- assess and adopt profitable innovations
- calculate financial returns
- use appropriate technology, including software
- implement contingency plans for unplanned events such as problems arising during the supply and management of community marketing activities
- assess and adopt profitable innovations
- prepare enterprise budgets and calculate financial returns.

### Required knowledge includes:

#### Knowledge of:

- applicable federal, state or territory legislation, regulations, standards, codes of practice



and established safe practices relevant to the full range of processes in selling produce through community based markets

- relevant legislation and regulations relating to OHS
- organic certification systems and standards
- rural produce marketing and presentation
- organisation policies and procedures related to supply chain management, purchasing, and contracting and tendering
- characteristics and composition of farm business marketing plans
- characteristics of community marketing schemes and the steps within a farm produce supply chain
- product knowledge related to goods and services required by the organisation
- ways to build trust and collaboration as opposed to competition
- business terms and conditions for purchasing, tendering and contracting
- ethical behaviour
- established communication channels and protocols
- procedures for operating electronic communications equipment
- procedures for recording and reporting workplace information and completing relevant documentation.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this Unit must be able to provide evidence that they can develop and manage a community based marketing supply chain.

Critical aspects for assessment and evidence required to demonstrate competency in this Unit

The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- research and evaluate the suitability of different community marketing options for farm products
- research and identify applicable legislative, environmental, and certification requirements relevant to managing a community based marketing chain
- document specifications for the various components of the marketing chain management

	<p>system in line with organisational and legislative requirements</p> <ul style="list-style-type: none"> <li>• establish and document market specifications meet community expectations</li> <li>• establish product marketing chain to meet marketing options</li> <li>• establish farm business requirements for each step in the marketing chain</li> <li>• establish compliance requirements at each step in the marketing chain</li> <li>• conduct record keeping requirements for each step in the marketing chain</li> <li>• develop and document a community based marketing plan</li> <li>• develop and document a promotion plan</li> <li>• collate customer feedback and use to improve market outcomes.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other Units.</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge.</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills.</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge.</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li> <li>• Assessment may be in conjunction with assessment of other Units of Competency.</li> </ul>

	<ul style="list-style-type: none"> <li>• The assessment environment should not disadvantage the candidate.</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English.</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment.</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role.</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Community marketing models</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• boxed schemes</li> <li>• farmers markets</li> <li>• roadside stall</li> <li>• community supported agriculture</li> <li>• subscription selling</li> <li>• direct selling.</li> </ul>
<p><b><i>Supply chain steps</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• input sources and procurement</li> <li>• animal welfare considerations</li> <li>• allowable inputs</li> <li>• transport</li> <li>• production processes</li> <li>• harvesting</li> <li>• post-harvest treatment.</li> </ul>
<p><b><i>Managing a community based marketing chain</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• suitability of produce</li> <li>• timing</li> <li>• size of market</li> </ul>

	<ul style="list-style-type: none"> <li>• resource requirements to service market.</li> </ul>
<p><i>Characteristics and values of the identified communities</i> may include:</p>	<ul style="list-style-type: none"> <li>• food miles</li> <li>• animal welfare</li> <li>• environmental parameters</li> <li>• local</li> <li>• organic/biodynamic</li> <li>• packaging style</li> <li>• communication.</li> </ul>
<p><i>Market specifications</i> may include:</p>	<ul style="list-style-type: none"> <li>• produce specifications</li> <li>• specific market area</li> <li>• supply volumes</li> <li>• portion sizes</li> <li>• weight</li> <li>• packaging and labelling</li> <li>• timing</li> <li>• quality parameters</li> <li>• certification scheme.</li> </ul>
<p><i>Steps in marketing chains</i> may include:</p>	<ul style="list-style-type: none"> <li>• processing</li> <li>• inspection</li> <li>• packaging</li> <li>• labelling</li> <li>• transport</li> <li>• storage</li> <li>• delivery.</li> </ul>
<p><i>Farm business requirements</i> may include:</p>	<ul style="list-style-type: none"> <li>• labour</li> <li>• equipment</li> <li>• promotional material.</li> </ul>
<p><i>Compliance requirements</i> may include:</p>	<ul style="list-style-type: none"> <li>• organic certification</li> <li>• food safety.</li> </ul>
<p><i>Record keeping requirements</i> may include:</p>	<ul style="list-style-type: none"> <li>• food safety</li> <li>• organic records</li> <li>• sales records</li> <li>• purchasing records</li> <li>• financial records</li> <li>• farm records.</li> </ul>

## Unit Sector(s)

Organic Production



# AHCORG505A Develop and monitor a sustainable production plan

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Unit Descriptor

This Unit of Competency defines the standard required to: identify personal and enterprise goals; identify and document physical, biological, social and financial resources under management; research and evaluate available sustainable production systems; and develop a sustainable production plan and monitor the plan.

## Application of the Unit

Developing and monitoring a sustainable production plan is likely to be undertaken alone with input from stakeholders in the business. Responsibility for the planning and management of the work of others may be involved.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Nil.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify personal and enterprise goals	1.1 Identify and record personal goals. 1.2 Identify and document physical, biological, social and financial resources under management. 1.3 Identify and analyse the values, expectations and personal goals of customers, stakeholders and employees. 1.4 Identify and document sustainability goals using current and historical industry data and organisational records.
2. Research and evaluate available sustainable production systems	2.1 Identify and document potential enterprises and evaluate against identified goals and resources. 2.2 Research and evaluate applicable sustainable <b>production systems</b> information from a range of sources for identified enterprises. 2.3 Identify and document a selected production system that meets sustainability and enterprise management goals. 2.4 Compare the selected system with those systems and production processes that currently exist on the farm. 2.5 Test the selected system against enterprise goals and sustainability principles and record the findings.
3. Develop a sustainable production plan	3.1 Document required modifications to existing farm system processes and infrastructure for the chosen enterprises and production systems. 3.2 Identify and document <b>production targets</b> . 3.3 Identify inputs required to achieve the production targets. 3.4 Establish risk management strategies. 3.5 Identify record keeping requirements. 3.6 Develop and document a sustainable production plan for the selected enterprises and production systems.
4. Monitor/evaluate effectiveness of the sustainable production systems	4.1 Establish farm system monitoring procedures and performance indicators. 4.2 Monitor performance indicators and against production and <b>sustainability targets</b> . 4.3 Evaluate production and sustainability data against the sustainable production plan goals. 4.4 Modify the enterprise mix and/or production system where differences between the sustainable production plan and

ELEMENT	PERFORMANCE CRITERIA
	actual results are identified.
	4.5 Identify, monitor and assess environmental impacts and OHS hazards relating to the production processes throughout the production cycle.
5. Record and manage information and data	5.1 Create and maintain records and documents in line with the production plan, the OHS requirements, and machinery and equipment management programs. 5.2 Maintain recordkeeping systems and data to enterprise and industry standards. 5.3 Recommendations for future sustainable production plans are prepared. 5.4 Document revised plans.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- document personal and business goals
- identify values and expectations of stakeholders
- research available production systems
- set enterprise sustainability objectives and evaluate the researched production systems against the objectives
- develop production and sustainability plans
- monitor actual production and sustainability outcomes against the documented plan
- use literacy skills to interpret, analyse and extract information from a range sources such as professional literature, legal documents, discussions and workshops and to prepare written plans and procedures for implementation by others
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- use numeracy skills to estimate, calculate and record complex workplace measures and to prepare enterprise budgets and calculate financial returns.



## Required knowledge includes:

### Knowledge of:

- applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes in developing and monitoring a sustainable production plan
- relevant legislation and regulations relating to OHS, contractor engagement, animal health and welfare, chemical use and application, vehicle and plant use and soil and water degradation issues
- environmental protection requirements and codes of practice, including the safe disposal of products and waste material, available to the organisation
- organisational policies and procedures, standards and site requirements for risk management and hazard identification
- sustainable land use principles and practices applicable in the region
- farm planning processes.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	A person who demonstrates competency in this Unit must be able to provide evidence that they can develop and monitor a sustainable production plan.
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify personal and enterprise goals</li> <li>• identify and document physical, biological, social and financial resources under management</li> <li>• research and evaluate sustainable production systems and select and document a production system that meets sustainability and enterprise management goals</li> <li>• develop a sustainable production plan</li> <li>• monitor and evaluate effectiveness of the sustainable production system</li> <li>• modify the enterprise mix and/or production system where differences between the sustainable</li> </ul>

	<p>production plan and actual results are identified</p> <ul style="list-style-type: none"> <li>record and manage farm system information and data.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other Units.</li> <li>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge.</li> <li>Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills.</li> <li>Assessment methods must confirm the ability to access, interpret and apply the required knowledge.</li> <li>Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.</li> <li>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li> <li>Assessment may be in conjunction with assessment of other Units of Competency.</li> <li>The assessment environment should not disadvantage the candidate.</li> <li>Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English.</li> <li>Where the participant has a disability, reasonable adjustment may be applied during assessment.</li> <li>Language and literacy demands of the assessment task should not be higher than those of the work role.</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of

	circumstances, cases and responsibilities, and where possible, over a number of assessment activities.
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## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Production systems</i></b> may include:</p>	<p>The full range of livestock, production horticulture and cropping systems including, but not limited to:</p> <ul style="list-style-type: none"> <li>• extensive livestock production</li> <li>• intensive livestock systems</li> <li>• broadacre cropping using traditional, reduced cultivation, minimum till, no till, pasture cropping and no kill cropping methods</li> <li>• production horticulture fruit and vegetable systems</li> <li>• organic farming techniques</li> <li>• biodynamic</li> <li>• permaculture</li> <li>• agro-ecology.</li> </ul>
<p><b><i>Production targets</i></b> may be measured against:</p>	<ul style="list-style-type: none"> <li>• sustainability targets</li> <li>• production inputs</li> <li>• labour inputs</li> <li>• resource use.</li> </ul>
<p><b><i>Sustainability targets</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• resource use</li> <li>• biodiversity outcomes</li> <li>• waste and pollution production</li> <li>• water quality outcomes</li> <li>• social engagement.</li> </ul>

## Unit Sector(s)

Organic Production

# AHCORG506A Manage an agro-ecology production system

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Unit Descriptor

This Unit of Competency defines the standard required to implement agro-ecology principles in managing the soil ecosystem, pests and diseases, the overall health of the farm ecosystem and farm production.

## Application of the Unit

Managing an agro-ecology production system is likely to be undertaken alone with input from advisors or other stakeholders in the business.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Nil.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the farm agro ecosystem functions at a systems level	1.1 Identify and map <i>energy flows</i> through a farm agro ecosystem. 1.2 Identify and map <i>nutrient cycles</i> through different parts of a farm ecosystem. 1.3 Identify <i>disturbance points</i> in the farm ecosystem succession. 1.4 Develop a model of the farm ecosystem. 1.5 Identify areas of complexity and simplicity within the farm ecosystem. 1.6 Identify <i>interactions between elements</i> of farm ecosystem. 1.7 Assess <i>health of existing farm ecosystems</i> .
2. Develop plans to enhance farm agro ecosystem	2.1 Identify areas within the agro ecosystem that require enhancement. 2.2 Identify <i>methods that encourage niche development</i> , increase complexity in the farm agro ecosystem and improve interactions between different components of farm agro ecosystem. 2.3 Document the implementation plan.
3. Manage farm agro ecosystems	3.1 Identify and monitor <i>appropriate parts</i> of the ecosystem. 3.2 Set up monitoring system. 3.3 Comply with requirements for monitoring determined by organic standards and legislative. 3.4 Review measured ecosystem and farm production performance with expected performance and adjust plan in response to differences.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- identify ecosystem elements and map energy water and nutrient flows through ecosystems
- perform ecosystem monitoring
- plan using ecosystem process knowledge
- apply ecosystem processes to farm production system

- use literacy skills to interpret, analyse and extract information from a range sources such as professional literature, legal documents, discussions and workshops and to converse and liaise with industry contacts, colleagues and family regarding the ecosystem function
- use interpersonal techniques to identify, build and use network and support groups
- use numeracy skills to estimate and monitor ecosystem processes
- use problem-solving skills to enhance farm agro ecosystem.

### Required knowledge includes:

#### Knowledge of:

- advantages of ecological agriculture
- ecosystem processes, energy flows, nutrient cycles, biological succession, predator/prey relationships, ecological niche
- relationships between ecosystems and agricultural production
- application of ecosystem processes to a production system.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	A person who demonstrates competency in this Unit must be able to provide evidence that they can manage an Agro-ecology production system
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify the farm agro ecosystem functions at a systems level</li> <li>• assess the health of existing farm ecosystems</li> <li>• develop plans to enhance farm agro ecosystem</li> <li>• manage and monitor the development of a farm ecosystem</li> <li>• review ecosystem and farm production performance.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other Units.</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge.</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills.</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge.</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li> <li>• Assessment may be in conjunction with assessment of other Units of Competency.</li> <li>• The assessment environment should not disadvantage the candidate.</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English.</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment.</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role.</li> </ul>
Guidance information for assessment	<p>To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Energy flows</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• primary production of the system</li> <li>• imported energy</li> <li>• energy moving to and from production parts of the farm agro system</li> <li>• movement to entropy.</li> </ul>
<p><b><i>Nutrient cycles</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• existing nutrients</li> <li>• imported nutrients</li> <li>• movement to and from production parts of the farm agro ecosystem.</li> </ul>
<p><b><i>Disturbance points</i></b></p>	<p>These are points in the ecosystem succession where the ecosystem processes are disturbed and move the system back to the start of the succession. These points may include:</p> <ul style="list-style-type: none"> <li>• cultivation</li> <li>• heavy or crash grazing</li> <li>• herbicides</li> <li>• fire</li> <li>• slashing</li> <li>• invasion.</li> </ul>
<p><b><i>Interactions between elements</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• predator – prey relationships</li> <li>• movement of energy, nutrients water between elements</li> <li>• symbiotic relationships</li> <li>• neutral relationships</li> <li>• one way relationships.</li> </ul>
<p><b><i>Health of existing farm ecosystems</i></b> could be measured by:</p>	<ul style="list-style-type: none"> <li>• biodiversity</li> <li>• identifying indicators</li> <li>• niche development.</li> </ul>
<p><b><i>Methods that encourage niche development</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• increasing diversity of abiotic elements within a system</li> <li>• increasing biodiversity</li> <li>• increasing energy and nutrient flow through system</li> <li>• poly-cultures</li> </ul>



	<ul style="list-style-type: none"><li>• multiple animal/plant relationships</li><li>• succession as a management tool.</li></ul>
<i>Appropriate parts</i> of the ecosystem may include:	<ul style="list-style-type: none"><li>• biological diversity</li><li>• plant succession</li><li>• water cycle processes</li><li>• nutrient cycles</li><li>• energy capture and use</li><li>• soil health.</li></ul>

## Unit Sector(s)

Organic Production

# AHCPCM201A Recognise plants

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of recognising plants that are commonly encountered in horticulture or land management situations and defines the standard required to: inspect and research enterprise plants; observe and record the habits; characteristics and significant features of plants; use available processes to recognise plants; update a plant reference collection.
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## Application of the Unit

<b>Application of the unit</b>	This unit involves collecting and documenting plant information and updating a plant reference collection.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for plant recognition	1.1. Range of plants requiring recognition is identified. 1.2. Resources and equipment for use in recognition activity are prepared. 1.3. Available processes for plant recognition are identified, selected and prepared for use.
2. Recognise specified plants	2.1. Visual inspection and research processes of enterprise plants are undertaken. 2.2. Specified plants are recognised according to their identifiable characteristics and named. 2.3. Brief descriptions of plant habits, characteristics and significant features are recorded. 2.4. Advice is sought when necessary and where appropriate in the recognition activity.
3. Update the reference collection	3.1. Information about plants is documented and added to the reference collection. 3.2. Reference collection is updated as new plants are recognised.

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- recognise the range of plants specific to the enterprise
- describe the plant attributes and main purpose within the enterprise
- describe the specific handling requirements and growth requirements
- identify available processes of literature searches, internet browsing, personal consultation with experts, specimen collections, field guides, workplace notes, and use of simple keys to aid recognition
- update reference collection
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- plant morphology and physiology
- range of plant identification techniques
- plant nomenclature
- enterprise procedures for obtaining and supplying advice and information about plants
- enterprise expectations about the range and number of plants to be recognised.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include

<b>EVIDENCE GUIDE</b>	
	achievement of the following: <ul style="list-style-type: none"> <li>• inspect and research enterprise plants</li> <li>• observe and record the habits, characteristics and significant features of plants</li> <li>• use available processes to recognise plants</li> <li>• update a plant reference collection.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plants may include:	<ul style="list-style-type: none"> <li>• those native or introduced species (including weeds) commonly encountered in horticulture or land management situations.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Plants
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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# AHCPCM202A Collect, prepare and preserve plant specimens

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of collecting, preparing and preserving plant specimens and defines the standard required to: select the most suitable plant specimens for collection; collect and identify each plant specimen; press the plant specimens collected; identify plant specimens and store collection information; store and catalogue specimens correctly.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of collecting, preparing and preserving plant specimens for recording or identification purposes.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collect specimen	<p>1.1. Sample collected is the largest practical to fit on herbarium sheet.</p> <p>1.2. Sample includes features required for positive identification, e.g., flowers and fruit, leaves and roots.</p> <p>1.3. Particular features are collected following enterprise procedures or guidelines.</p> <p>1.4. Observations regarding locality, habit of plant, etc., are recorded following enterprise procedure.</p> <p>1.5. Individual specimens are clearly identified in a manner that allows them to be linked to observations.</p>
2. Press plants	<p>2.1. Samples are protected from wilting until pressing following enterprise procedures.</p> <p>2.2. Specimens are arranged on sheets following enterprise guidelines for pressing.</p> <p>2.3. Specimens are pressed correctly following established guidelines.</p> <p>2.4. Archival specimens are attached to suitable material with observations attached following established material.</p> <p>2.5. Specimens to be submitted for identification are packed following established procedures, including all data from collection observations as required by herbarium.</p>
3. Record data	<p>3.1. All data relating to specimens is recorded and catalogued correctly following enterprise procedures.</p>



## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
This section describes the skills and knowledge required for this unit.	
<b>Required skills</b>	
<ul style="list-style-type: none"> <li>• collect specimen</li> <li>• press plant</li> <li>• record and catalogue data</li> <li>• use literacy skills to follow sequenced written instructions and record information accurately and legibly</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• recognition of plants to be collected</li> <li>• legislative limitations on the collection of flora (including threatened species).</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select the most suitable plant specimens for collection</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• collect and identify each plant specimen</li> <li>• press the plant specimens collected</li> <li>• identify plant specimens and store collection information</li> <li>• store and catalogue specimens correctly.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plant specimens may include:	all forms of plant life including: <ul style="list-style-type: none"> <li>• trees</li> <li>• shrubs</li> <li>• ground covers</li> <li>• herbs</li> <li>• epiphytes</li> <li>• saprophytes.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Plants
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCPCM301A Implement a plant nutrition program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a plant nutrition program in the horticultural or agricultural industry and defines the standard required to: recognise a range of common causes of nutrient deficiency; prepare fertilizers and other products for application to plants; apply fertilizers and other products; clean up and maintain tools and equipment; record work activities according to enterprise guidelines.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of monitoring and controlling the nutritional requirements of and applications to plants in the horticulture industries across a range of situations and environments including amenity and natural resource areas. This standard involves working under limited supervision from others, with checking only related to overall progress. Work is undertaken within a program, routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions, and the achievement of outcomes within time and budgetary constraints.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for implementation of the plant nutrition program	<p>1.1.Goals, target site, soils and plant species and varieties are identified.</p> <p>1.2.Materials for soil and plant treatments are identified and the storage site or supplier details located.</p> <p>1.3.Services are located using site plans and in consultation with the supervisor.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented.</p> <p>1.5.Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p>
2. Monitor soil pH	<p>2.1.Soil pH in the implementation site is monitored in relation to plant nutrition.</p> <p>2.2.Products useful in changing soil pH are identified, compared, selected and sourced.</p> <p>2.3.Product application methods are assessed according to product type and type of growing media.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Determine nutritional problems in plants	<p>3.1. Common nutrient deficiency and toxicity problems in plants are identified using visual inspection.</p> <p>3.2. The supervisor and/or horticulturist are consulted, as required, to determine causes of nutritional or toxicity problems.</p> <p>3.3. Soil ameliorants to improve soil fertility are identified, compared, selected and sourced.</p>
4. Prepare to use fertilisers	<p>4.1. The fertiliser to be used is selected according to plant species and type of growing media.</p> <p>4.2. Fertiliser application methods are assessed according to fertiliser type, soils, enterprise work procedures, and in due consideration of the environmental implications.</p> <p>4.3. Fertilisers are applied according to the plant growing cycle and the enterprise fertiliser calendar.</p>
5. Prepare application equipment	<p>5.1. Tools, equipment and machinery are selected according to enterprise work procedures.</p> <p>5.2. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and documented work procedures.</p> <p>5.3. Tools, equipment and machinery are calibrated and adjusted according to manufacturer's guidelines.</p>
6. Apply specific products at appropriate rates	<p>6.1. Specific products are selected based on their analysis to meet plant needs according to enterprise work procedures.</p> <p>6.2. Product application rates are calculated to optimise plant benefit and minimise environmental impact according to manufacturer's specifications and enterprise work procedures.</p> <p>6.3. Specific products are applied at the correct rate, timing and method according to the product type and analysis, manufacturers specifications, enterprise work procedures, and in due consideration of the environmental implications.</p> <p>6.4. Product applications are recorded according to enterprise work procedures.</p> <p>6.5. Target plant response to the plant nutrition program, as well as any non-target effects such as environmental impact or pest responses are monitored, documented and reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with work team members, supervisors, contractors and suppliers
- interpret manufacturers and plant nutrition program specifications
- utilise proforma reporting, analysis and work procedure documents
- understand labels and symbols
- estimate treatment and product requirements, material sizes and quantities
- interpret specifications, and calculate areas, ratios, proportions and application rates
- conduct a site hazard identification and risk control assessment
- coordinate own activities with the requirements and schedules of the work group and contractors
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- botany and plant physiology
- the relationship between soil characteristics and the availability of nutrients
- nutrient cycling and its practical relevance to the specific plants and soils
- methods of nutrient uptake by plants
- nutrients required by plants grown within the enterprise and
- the affects of nutrient deficiency and toxicity on individual plant species and varieties
- soil ameliorants commonly required to treat the soil problems experienced by the enterprise
- the main simple and compound fertiliser products available to the enterprise including analysis, solubility, salt index, application rates and costs
- the environmental implications for the external environment of soil ameliorant and fertiliser use.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• conduct a site hazard identification and risk control assessment</li> <li>• recognise a range of common causes of nutrient deficiency</li> <li>• prepare fertilizers and other products for application to plants</li> <li>• apply fertilizers and other products</li> <li>• clean up and maintain tools and equipment</li> <li>• record work activities according to enterprise guidelines.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plants may include:	<ul style="list-style-type: none"> <li>• all plant species and cultivars.</li> </ul>
Fertilisers may include:	<ul style="list-style-type: none"> <li>• products and materials to meet the nutritional requirements of plants, to modify soil pH and soil ameliorants to improve soil fertility.</li> </ul>
Fertiliser application methods may	<ul style="list-style-type: none"> <li>• banding</li> <li>• broadcasting</li> </ul>



<b>RANGE STATEMENT</b>	
include:	<ul style="list-style-type: none"> <li>• ripping</li> <li>• spraying and fertigation applied directly to the soil or to the plant via foliar sprays.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Plants
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPCM302A Provide information on plants and their culture

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of providing information to clients and others about plants and their cultural requirements and defines the standard required to: confirm client brief and request for information; consider the growing environment (soil, climate and aspect, pests and diseases, and weed competition); develop product knowledge through in-house and online sources; incorporate client aims and preferences into developing options for plantings; determine the optimal solution for the client needs; provide recommendations on plants, plantings and/or plant treatments, with supporting information to the client.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the wide range of horticultural and client service skills used in interacting with clients to meet their needs and recommend a solution to a plant or plant cultural issue. This standard involves working within routines, methods and procedures where some discretion and judgement is required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify the issue	<p>1.1. Contact is initiated with the client when appropriate.</p> <p>1.2. The client is assisted in explaining the issue by the use of attentive listening and questioning techniques.</p> <p>1.3. The nature of the issue is clarified by gathering all relevant information from the client.</p> <p>1.4. The issue is defined as closely as possible according to the amount of information gathered.</p> <p>1.5. The client is advised that expert advice may be required to assist them further with their issue.</p>
2. Decide on preferred solution	<p>2.1. Options and/or strategies are identified and developed using available in-house and online reference material, product information, own experiences and sharing collective workplace knowledge.</p> <p>2.2. Options and/or strategies are examined and evaluated according to sound problem-solving techniques.</p> <p>2.3. The optimal solution is determined based on</p>

ELEMENT	PERFORMANCE CRITERIA
	reasoned argument, appropriate evidence and sound cultural principles.
3. Provide the preferred solution	3.1.The recommended solution, method of application and probable outcomes are clearly explained to the client. 3.2.The original source of the plant and its cultural requirements is referred to where necessary. 3.3.Client requests for clarification or expansion are responded to by the use of attentive listening and questioning techniques.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret information sheets, labels, horticultural literature, specifications and design symbols
- utilise proforma reporting and work procedure documents
- estimate treatment and product requirements, material sizes and quantities
- interpret site designs, ground plans and specifications
- calculate ratios, proportions and application rates
- coordinate own work activities to gain knowledge about plants, products and treatments
- investigate client requests for information, identify and evaluate options, decide on a solution, and deliver recommendation and information to the client
- select appropriate plants for the client from a wide range of available plants
- provide customer service to satisfy the clients need for information
- develop product knowledge through research and access to in-house and online information
- inform the client of any recommended solution using verbal explanations, available audio-visual or multimedia materials, literature, and demonstrations of the solution offered by a plant, product or treatment
- communicate with clients, work team members, supervisors, suppliers, contractors and consultants
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- broad range of plant species and their cultural requirements
- awareness of legal issues, Occupational Health and Safety (OHS) issues and requirements, and environmental implications, regulations and cultural sensitivities of clients
- problem-solving techniques
- plant identification techniques, plant selection, plant physiology, habit and growth characteristics of the plants
- soil characteristics particularly in relation to the local region
- pest and disease symptoms, basic physiology and life cycle of pests and diseases, vulnerable plant growth stages, treatment thresholds, treatment products, effective application procedures and environmental implications
- weed species, growth stages, treatment thresholds, treatment products, effective application procedures and environmental implications
- local plant suppliers, consultants, services, products and contractors
- awareness of duty of care in provision of advice and recommendations to retail, commercial and private clients.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- confirm client brief and request for information
- consider the growing environment (soil, climate and aspect, pests and diseases, and weed competition)
- incorporate client aims and preferences into developing options for plantings
- provide recommendations on plantings and/or plant

<b>EVIDENCE GUIDE</b>	
	treatments, with supporting information, to the client.
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Information may include:	<ul style="list-style-type: none"> <li>• information on weeds, pest and disease control measures</li> <li>• selection and use of plant materials</li> <li>• basic garden design and maintenance</li> <li>• soils, irrigation, plant nutrition, products and services</li> <li>• local geographical variables</li> <li>• habitat and conservation use</li> <li>• bush restoration</li> <li>• other plant cultural information.</li> </ul>
Plants may include:	<ul style="list-style-type: none"> <li>• all plant species and cultivars.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Plants
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPCM303A Identify plant specimens

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of identifying an unknown plant specimen and defines the standard required to: capture relevant morphological features of a plant, record qualitative and quantitative data; use comparative techniques to define progress towards identification; use indications of health, environmental influences and location to assist identification; construct a plant database; document a report of the identification process; name unknown plant specimens.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of inspection and description of the features and attributes of a plant for the purpose of plant identification and providing information to a client or organisation in specialist roles within in each of the industry sectors and applies in addition to the existing standards referencing plant identification in a general application across the industry sectors.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Observe the plant specimen	1.1.Immediate recognition of overall features is used to remember the plant name and inform client. 1.2.Information retrieved from memory is recorded for common and botanical names. 1.3.Data is recorded in a format allowing further process of observation of features. 1.4.Specimens yet to be identified fully continue through the process of identification.
2. Inspect plant morphological features	2.1.Visual inspection of the form and structures of the specimen is described in botanical terms. 2.2.Qualitative and quantitative data are recorded in a format listing the main observable features. 2.3.Photographs of the main features are taken and stored in a database for future reference. 2.4.All relevant available senses are used to assist in the observation procedure. 2.5.Useful identifying attributes of the leaf, flower, vegetative growth, fruiting body, stem, bark and habit are recorded. 2.6.Identity of specimen is recorded where known at this

ELEMENT	PERFORMANCE CRITERIA
	<p>point.</p> <p>2.7. Unknown specimen is analysed for plant group or family characteristics from available sources of knowledge and information gained is recorded.</p>
3. Determine status of health	<p>3.1. Plant specimen is inspected for health and general condition.</p> <p>3.2. Observations are used to identify any diseases, pests or deficiencies indicative of plant groups.</p> <p>3.3. Discussion and research are used to determine the current location, environmental influences and distribution of the specimen where known.</p> <p>3.4. Relevant data are recorded and evaluated and identification recorded where possible and the client or organisation informed of the result.</p>
4. Identify the specimen	<p>4.1. Database is constructed of plants and their characteristics using digital methods, collection of physical specimens and associated data or illustrations of specimens and key features.</p> <p>4.2. Research, reference material, field guides and taxonomic keys are used to define a closer identification by comparison of generic characteristics and all results of the process are recorded.</p> <p>4.3. Photographs or illustrations or physical specimens are inspected and compared to similar specimens in the reference material and database.</p> <p>4.4. Unknown specimens are analysed for specific characteristics and identified to species and cultivar level where possible and named.</p>
5. Report on the process results	<p>5.1. Compile the information data observed for the plants morphological features throughout the process.</p> <p>5.2. Label all the information data recorded and highlight key identifying features observed in the process.</p> <p>5.3. Document a report of the identification process and list the compiled data.</p> <p>5.4. The client or organisation is informed of the results of the identification process.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- recognition of plants common to the region
- use digital cameras
- use comparative techniques
- use a database
- determine the health of plants
- research multiple sources of reference material
- compile a database of plant specimens and characteristics
- use taxonomic keys
- identify and label key features of plant morphology
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- botany, plant morphology, physiology and taxonomy
- methods of data capture
- use and configuration of a database
- plant identification techniques
- problem-solving techniques
- soil characteristics particularly in relation to the local region
- symptoms of plant pests and diseases
- basic physiology and life cycle of pests and diseases.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise an unknown plant</li> <li>• capture relevant morphological features of a plant</li> <li>• record qualitative and quantitative data</li> <li>• use comparative techniques to define progress towards identification</li> <li>• use indications of health, environmental influences and location to assist identification</li> <li>• construct a plant database</li> <li>• document a report of the identification process</li> <li>• name unknown plant specimens.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plants may include:	<ul style="list-style-type: none"> <li>• all plant species and cultivars.</li> </ul>
Plant morphology features include:	<ul style="list-style-type: none"> <li>• plant habit</li> <li>• duration</li> <li>• vegetative growth</li> <li>• floral parts</li> <li>• epidermis and periderm texture</li> <li>• specialisations</li> <li>• pollination and fertilization</li> <li>• fruit types</li> <li>• fruiting bodies</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"><li>• seeds and seedless reproduction.</li></ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Plants
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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# AHCPCM401A Recommend plants and cultural practices

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved with recommending plants and cultural practices and defines the standard required to: document client preferences and site particulars; select plants in line with client preferences and suitability for the site; report recommendations to client detailing the types of plants chosen and their requirements.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes recommending plants and cultural practices.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify client preferences and requirements	<p>1.1. Contact is initiated with the client when appropriate and according to enterprise customer service policy</p> <p>1.2. The purpose of the planting and cultural and environmental factors of the intended planting site are clarified and defined by gathering all relevant information from the client according to enterprise customer service policy.</p> <p>1.3. Botanical and common names are used to describe plants according to client preferences and requirements</p> <p>1.4. The client is informed of the enterprises policy on the provision of advice and customer service under law.</p>
2. Select plants to suit specific situations	<p>2.1. Plants and their growth and performance characteristics that suit the specific situation are identified according to research and experiential awareness and enterprise guidelines</p> <p>2.2. Available plants are compared, assessed and evaluated according to sound problem-solving techniques and enterprise guidelines</p> <p>2.3. The best choice is determined, based on reasoned argument, appropriate evidence, sound principles, and enterprise customer service policy and industry standards.</p>
3. Advise on plants for specific situation	<p>3.1. Performance characteristics and particular planting, cultural and maintenance requirements are clearly explained to the client according to enterprise customer service policy.</p> <p>3.2. The original supplier of the plant is referred to where</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>necessary.</p> <p>3.3. Client requests for clarification or expansion are responded to by the use of attentive listening and questioning techniques according to enterprise customer service policy.</p> <p>3.4. Purchase options and availability of recommended plants are outlined according to enterprise customer service policy and industry standards.</p> <p>3.5. Recommendations are recorded and reports are made to the manager according to enterprise customer service policy.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conduct literature and industry research, collate and analyse findings on plant species and cultivars, their characteristics and requirements
- comply with legislative requirements
- explain to the client Occupational Health and Safety (OHS) requirements or basic safety precautions relevant to the establishment and on-going maintenance of plants
- comply with OHS requirements of the workplace
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- principles and practices for the establishment and maintenance of plants



<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<p>recommended by the enterprise</p> <ul style="list-style-type: none"> <li>• nomenclature to plant family, genus, species and cultivar for the range of plants recommended by the enterprise</li> <li>• botanical features of plant species and/or cultivars relevant to the industry region</li> <li>• practical understanding of the physiology of the range of plants supplied and recommended by the enterprise and their comparative growth and performance characteristics in response to different cultural and environmental factors</li> <li>• soil characteristics, particularly in relation to the geographical and climatic region from which clients generally originate</li> <li>• responsibilities and liabilities in respect to the provision of recommendations and customer service under the Trade Practice laws</li> <li>• enterprise customer service policy and procedures</li> <li>• problem-solving techniques</li> <li>• innovation and recent practices in plant selection, use and performance relevant to the region</li> <li>• customer service and communication skills.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• document client preferences and site particulars</li> <li>• select plants in line with client preferences and suitability for the site</li> <li>• report recommendations to client detailing the types of plants chosen and their requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or</p>

<b>EVIDENCE GUIDE</b>	
	enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plants may include:	<ul style="list-style-type: none"> <li>• all plant species and cultivars.</li> </ul>
Cultural factors may include:	<ul style="list-style-type: none"> <li>• the growth stage at which the plant is purchased</li> <li>• growth media and plant monitoring</li> <li>• weed</li> <li>• pest and disease control</li> <li>• irrigation and scheduling</li> <li>• drainage</li> <li>• application of nutrients</li> <li>• growth media management</li> <li>• canopy management.</li> </ul>
Plant cultural practices may include:	<ul style="list-style-type: none"> <li>• practices relevant to maintenance activities in diverse environments and a varying ability to control the environmental parameters.</li> </ul>
Research may include:	<ul style="list-style-type: none"> <li>• data from primary and secondary sources including:                             <ul style="list-style-type: none"> <li>• field work and trials</li> <li>• research materials</li> <li>• published books</li> <li>• academic reports</li> <li>• industry reports</li> <li>• colleagues</li> <li>• computer software</li> <li>• internet</li> <li>• newspapers</li> <li>• photographic data</li> <li>• journals</li> <li>• industry publications</li> <li>• industry specialists and experts.</li> </ul> </li> </ul>

### Unit Sector(s)

Unit sector	Plants
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCPCM402A Develop a soil health and plant nutrition program

### Modification History

June 2012: Updated Unit mapping information.

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a soil health and plant nutrition program and defines the standard required to: access and analyse information on regional and site factors; assess the physical, chemical and biological characteristics of soils; assess the physical, chemical and biological requirements of plants; select suitable management practices, soil amendments, additives and fertilisers; document implementation plans including monitoring of soil and plant growth.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes the application of knowledge including soil health and fertility, plant biology and plant nutrition requirements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine relevant regional data and site characteristics	1.1.Goals and target site for assessment and development of program are defined. 1.2.Relevant climate data, environmental context information and site data are accessed and reviewed. 1.3.Appropriate soil, plant and water tests are determined according to plant species, climatic conditions, prevailing growth media, industry best practice and enterprise guidelines. 1.4.Soil, plant and water testing program is developed that defines sampling, field testing, off-site analysis activities, task responsibilities, involvement of contractors, scheduling and desired information outcomes. 1.5.Testing tasks are implemented and monitored, liaison procedures with outside testing agencies are supervised, and remedial action is undertaken where necessary. 1.6.Data and readings are compiled and presented in a form that can be easily understood. 1.7.Seasonal variations and requirements are determined from published data on species, historical records, own experience, industry best practice and enterprise guidelines. 1.8.Characteristics, condition and nutritional status of soils and plant species are determined by analysing collected data and comparing to accepted standards.
2. Define the requirements for	2.1.Different nutritional requirements of the plant during growing cycle and a range of conditions are

ELEMENT	PERFORMANCE CRITERIA
plant nutrition	<p>identified according to published data on species, historical records, own experience and enterprise guidelines.</p> <p>2.2. Program is developed to achieve appropriate soil conditions and nutrient availability for plant growth.</p> <p>2.3. Soil amendments, management practices and fertiliser requirements are determined.</p> <p>2.4. Resources, tools, equipment and machinery required for program are identified and costed, and availability is confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.5. Cost-effective approach to soil management, soil amendment, and provision of plant nutrients is determined.</p> <p>2.6. Occupational Health and Safety (OHS) hazards associated with program are identified, risks are assessed and controls are developed and documented.</p> <p>2.7. Environmental implications of program are identified and documented in plant nutrition program.</p>
3. Document the soil health and plant nutrition program and specifications	<p>3.1. Detailed plan, objectives, specifications and associated costs are established based on program requirements.</p> <p>3.2. Detailed on-site procedures and schedules required for program are developed and documented.</p>
4. Monitor plant growth and evaluate the program	<p>4.1. Program implementation and results are monitored by testing soil, plants and/or produce.</p> <p>4.2. Program is reviewed and refined to ensure it is responsive to changing conditions.</p> <p>4.3. Non-compliance with documented objectives and specifications is identified and remedial actions are implemented to alleviate or overcome identified shortcomings in program.</p> <p>4.4. Remedial action to improve plant nutrition is taken and documented.</p> <p>4.5. Agreed changes are incorporated into a detailed plan.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- consultants and customers
- complying with legislative requirements and codes of practice
- conducting literature and consultative research, and collating and analysing findings on plant nutritional requirements, nutrients available from soils and other growth media, and environmental implications of program
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- characteristics of soil and other growth media types, uses and additives to enhance available nutrition for specific plants
- main simple and compound fertiliser products available to enterprise, including analysis, solubility, salt index, application rates and costs
- methods of nutrient uptake by plants and favourable conditions for effective uptake to occur
- nutrients and water required by plants grown within enterprise and affects of nutrient deficiency and toxicity on individual plant species and varieties, including visual symptoms
- plant physiology
- OHS hazards associated with implementing a plant nutrition program and controls necessary to remove or minimise associated risks
- organic matter, pest and disease, and nutrient interactions in soil and nutrient cycling
- practical relevance of the concepts to specific plants and soils used in the enterprise
- practical understanding of environmental issues associated with selecting nutritional materials, implementing a plant nutrition program, needing to comply with legislation and ensuring minimal impact on environment
- processes and techniques for preparing, costing and documenting a plant nutrition program

**REQUIRED SKILLS AND KNOWLEDGE**

- relationship between soil and growth media characteristics and availability of nutrients, including macro and micro elements, to plants
- site evaluation techniques, including methods of sampling and analysing soils and other growth media
- soil amendments commonly required to treat soil problems experienced by enterprise.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- access and analyse information on regional and site factors
- assess the physical, chemical and biological characteristics of soils
- assess the physical, chemical and biological requirements of plants
- select suitable management practices, soil amendments, additives and fertilisers
- document implementation plans including monitoring of soil and plant growth.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Soils may include:	<ul style="list-style-type: none"> <li>all types of soils and growing media.</li> </ul>
Nutrients may include:	<ul style="list-style-type: none"> <li>all products and materials to meet the nutritional requirements of plants</li> <li>to modify soil pH</li> <li>soil ameliorants to improve soil fertility.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Plants
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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# AHCPCM501A Diagnose plant health problems

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of diagnosing plant health problems and defines the standard required to: identify plant species and describe their growing requirements and characteristics; assess the suitability of the growing environment and the level of beneficial organisms; diagnose and record plant disorders and diseases; formulate a weed, pest or disease control program using the principles of Integrated Pest Management (IPM); implement modifications to plant growing conditions; document a treatment program report.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of diagnosing plant health problems and is likely to be undertaken without supervision.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Monitor factors that influence plant health	<p>1.1.The plant species is identified to the lowest taxonomic level, and its region of origin stated.</p> <p>1.2.The seasonal growth stages of the plant are determined.</p> <p>1.3.Day to day cultural practices used on each horticultural species are recorded.</p> <p>1.4.Characteristics of the growing environment that affect the growth of a specific plant species are determined.</p> <p>1.5.Climatic data and environmental growing conditions are recorded.</p> <p>1.6.The presence (or numbers) of beneficial organisms is recorded according to enterprise guidelines.</p>
2. Diagnose plant health problems	<p>2.1.Environmental and cultural factors that predispose plants to attack by pests and diseases are identified.</p> <p>2.2.The symptoms and signs of plant health problems are identified using accepted nomenclature.</p> <p>2.3.The severity and extent of the problem in a plant species are assessed.</p> <p>2.4.Observations are compared with published data, historical records, own experience, and enterprise guidelines.</p> <p>2.5.The possible causes of the plant health problem are determined.</p> <p>2.6.Consult with specialist services in severe, complex</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>or rapid onset cases.</p> <p>2.7.Plant or soil specimens are sampled and dispatched for specialist diagnosis or laboratory testing where required.</p> <p>2.8.Plant disorders and problems are recorded and documented in a report.</p>
3. Remedy plant health problems	<p>3.1.A weed, pest and disease control program is formulated according to the enterprise IPM strategy and production plan.</p> <p>3.2.Resources, tools, equipment and machinery required for work activities are identified, costs/benefits analysed, and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>3.3.Occupational Health and Safety (OHS) hazards associated with work activities are identified, risks assessed and controls implemented.</p> <p>3.4.A range of modifications to growing conditions that could be considered in a specific situation are identified.</p> <p>3.5.Modifications to growing conditions for a specific plant species are selected and implemented, having regard to cost of damage, marketing requirements and sustainable horticultural practices.</p>
4. Evaluate treatment program	<p>4.1.Plants are monitored during treatment.</p> <p>4.2.Appropriate data is recorded according to enterprise guidelines.</p> <p>4.3.Observations are compared to expected results.</p> <p>4.4.Modifications to the treatment program are recommended to client/management.</p> <p>4.5.Treatment program report is documented and presented to client/management.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

## REQUIRED SKILLS AND KNOWLEDGE

- differentiate between pest and disease and nutrient associated symptoms in specific plant species
- research information about plant health problems, their diagnosis and remedial treatments available
- identify signs and symptoms of plant health problems
- determine possible causes of the problem
- assess the severity, extent and speed of onset of the problem
- implement treatment programs to remedy the diagnosed health problems
- comply with legislative requirements
- identify hazards, assess risk and implement controls
- comply with OHS requirements of the workplace
- communicate orally with staff, supervisors, contractors, suppliers and consultants
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## Required knowledge

- plant anatomy, morphology, physiology, histology, pathology, taxonomy and nomenclature
- taxonomic descriptions, horticultural function, cultural and growth requirements, and target growth and performance characteristics of specific horticultural plants for the achievement of enterprise production and business plans
- plant nutrition issues associated with the growth media used, and horticultural region for specific plant species
- weeds, pests and disease detection methods, taxonomic identification, life cycle stages and characteristic symptoms for the specific horticultural plants of the enterprise
- chemical, cultural and biological control methods included in the IPM strategy of the enterprise
- chemical use, toxicity and compatibility with target plants, growth media, and environmental characteristics of the horticultural region
- sustainable horticultural practices relevant to the enterprise and/or horticultural region
- evaluation procedures, including cost/benefit analysis, for plant and growth media treatments in relation to plant health, enterprise budget and performance targets
- enterprise and industry record keeping and reporting policies and requirements

**REQUIRED SKILLS AND KNOWLEDGE**

- OHS hazards associated with activities to promote plant health and the controls necessary to remove or minimise risks associated with them.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify plant species and describe their growing requirements and characteristics
- assess the suitability of the growing environment and the level of beneficial organisms
- diagnose and record plant disorders and diseases
- formulate a weed, pest or disease control program using the principles of Integrated Pest Management
- implement modifications to plant growing conditions
- document a treatment program report.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Plants may include:	<ul style="list-style-type: none"> <li>all plant species and cultivars.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Plants
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPCM502A Collect and classify plants

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of collecting and identifying plants using taxonomic keys and the preserving of plant specimens and defines the standard required to: collect plant specimens; note the location, characteristics and occurrence of specimens at the point of collection; clean, preserve, mount and label plant specimens; use a plant key to identify plants against the botanical description of the species; label preserved specimens.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the collection, classification and preservation of plants as a herbarium collection and requires the ability to work independently to prepare for plant collecting, collect plant specimens, preserve specimens and identify plant specimens.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for plant collecting	<p>1.1.Purpose and objectives for collecting range of plants is confirmed.</p> <p>1.2.Area, location and/or habitat for collecting are defined.</p> <p>1.3.Resources to assist in plant location and identification are determined and prepared.</p> <p>1.4.Equipment required for collecting and preserving specimens is determined and prepared.</p> <p>1.5.Licences and/or permission to collect specimens are sought from landowner or managing agency.</p> <p>1.6.Range of likely operating conditions, hazards and difficult/sensitive environments are assessed for impact on collecting and preserving specimens.</p> <p>1.7.Occupational Health and Safety (OHS) hazards associated with plant collecting are identified.</p>
2. Collect plant specimens	<p>2.1.Collecting ethics are observed when selecting specimens for picking.</p> <p>2.2.Relevant information about the specimen, its characteristics and occurrence is entered into a field note book and location coordinates are noted.</p> <p>2.3.Specimen collected provides adequate material for identification and preserving.</p> <p>2.4.Specimens are correctly tagged and stored for later identification.</p> <p>2.5.Appropriate OHS legislative requirements and work</p>

ELEMENT	PERFORMANCE CRITERIA
	practices are followed.
3. Preserve specimens	3.1.Preservation of specimen is undertaken while still fresh. 3.2.Specimen is cleaned and prepared for preserving according to enterprise guidelines. 3.3.Preserving of specimen carried out using either pressing or drying techniques. 3.4.Dried specimen is mounted and labelled with accurate information from notebook.
4. Identify plant specimen	4.1.Resources are identified and accessed to assist in identification. 4.2.The basic characteristics of a plant are identified and documented. 4.3.Relevant plant key is used to identify plant. 4.4.Plant identity is confirmed against botanical description of species. 4.5.Plant identity is documented on label according to enterprise guidelines.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare for plant collecting
- collect plant specimens
- preserve specimens
- identify plant specimens
- follow safe work practices
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of

**REQUIRED SKILLS AND KNOWLEDGE**

cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- herbarium collection techniques and ethics
- plant anatomy, physiology, morphology, taxonomy and nomenclature
- physical and biological habitat types (including vegetation associations and communities where appropriate)
- OHS legislative requirements and Codes of Practice
- hazard identification and risk assessment and control.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- collect plant specimens
- note the location, characteristics and occurrence of specimens at the point of collection
- clean, preserve, mount and label plant specimens
- use a plant key to identify plants against the botanical description of the species
- label preserved specimens.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Information to be recorded for each specimen may include:

- information that identifies the particular specimen
- information that describes the plant
- information that outlines the location of the plant specimen
- information that describes the ecological characteristics of the area.

## Unit Sector(s)

<b>Unit sector</b>	Plants
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCPCM503A Specify plants for landscapes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers specifying plants for landscapes and defines the standard required to inspect and identify an extensive range of plants; determine the suitability of a plant for a purpose; evaluate and document the selection of plants; specification of replacement plantings; monitor and record quality control of selections; document a report of the identification, evaluation and specification process.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the selection and specification of landscape plants in a range of industries to provide information and advice to a client or organisation in specialist roles within horticulture and applies in addition to the existing standards referencing plant selection in a general application across the industry sectors. This standard applies in wide application to urban and regional areas and in local government and legal contexts in the specification of plants in residential, commercial public open spaces and amenity areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop a client brief	1.1.Client is consulted and a brief developed and agreed.
2. Determine the suitability of a plant for a purpose.	2.1.Site inspection is undertaken according to the client brief and legislative and regulatory requirements. 2.2.Planting area dimensions are estimated for the plant species or cultivar. 2.3.Species and cultivar selection is appropriate to the available dimensions of the aspect and the site. 2.4.Soil volume is proportioned to the size of plant in consideration. 2.5.Environmental conditions are considered and applied to the functional characteristics of the plant. 2.6.The existing soil is appraised for suitability as a growth medium appropriate to the plant species or cultivar. 2.7.Functional life expectancy of site and plantings is determined. 2.8.The selection of the plant is evaluated and the

ELEMENT	PERFORMANCE CRITERIA
	rationale for plant selection is documented.
3. Select plants	<p>3.1.Plants are selected as per the client brief and their suitability for the intended purpose.</p> <p>3.2.Plant function is determined for the precise location within the plan.</p> <p>3.3.Recommendations are made for soil improvements in accordance with the plant species selected.</p> <p>3.4.Species and cultivars are matched appropriately to the determined selection criteria for species specific characteristics.</p> <p>3.5.Plant species or cultivars for replacement or new plantings are recommended.</p> <p>3.6.Plant selections, selection criteria and notes on quality expectations are documented as specifications.</p>
4. Specify plants	<p>4.1.Criteria determined for size of stock selection are incorporated to the specifications.</p> <p>4.2.Selection criteria for mature plants are evaluated against capability and availability of transplanted plants.</p> <p>4.3.Final selections are assessed against the specified soil, site location and client brief and confirmed.</p> <p>4.4.Selected plants are monitored for quality and quantities according to the specifications.</p> <p>4.5.Materials, soils and growing media are monitored for quality according to the specifications.</p> <p>4.6.Records of quality checks on delivered plants and product are documented.</p>
5. Correlate and present a report	<p>5.1.A report of the process is documented and the correlated records are incorporated.</p> <p>5.2.The client or organisation is presented with the report.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- identify and select an extensive range of plants common to the region
- select and appraise a wide range of soils and growing media
- conduct site inspections and site assessments
- evaluate plant selections
- use comparative techniques
- research multiple sources of reference material and taxonomic keys
- compile a database of plant specimens and characteristics
- monitor quality
- apply quality controls
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- plant identification techniques
- ethnobotany, plant morphology, physiology, taxonomy and nomenclature
- soil characteristics particularly in relation to the local region
- soils appraisal techniques
- methods of data capture
- surface hydrology
- problem-solving techniques
- methods of quality control
- symptoms of plant pests and diseases
- basic physiology and life cycle of pests and diseases
- AS4419-2003 and AS4454-2003
- specific legislation and regulations for horticulture and development
- relevant Occupational Health and Safety (OHS) legislation and regulations.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• inspect and identify an extensive range of plants</li> <li>• determine the suitability of a plant for a purpose</li> <li>• evaluate and document the selection of plants</li> <li>• specification of replacement plant plantings</li> <li>• monitor and record quality control of selections</li> <li>• document a report of the identification, evaluation and specification process.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Access to a digital camera and an easy to use database is recommended for the delivery of this standard. Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
Plants may include:	<ul style="list-style-type: none"> <li>• the range of all plant species and cultivars.</li> </ul>
Sources of knowledge may include:	<ul style="list-style-type: none"> <li>• reference books</li> <li>• photo collections</li> <li>• field guides</li> <li>• networking</li> <li>• internet</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• identified specimens</li> <li>• software programs</li> <li>• collaboration</li> <li>• electronic storage</li> <li>• taxonomic keys</li> <li>• drawings</li> <li>• herbarium collections</li> <li>• colleagues</li> <li>• botanical gardens</li> <li>• other readily available sources.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Plants
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHPCCM504A Design and maintain a specialised landscape

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers designing and maintaining a specialised landscape and defines the standard required to identify plant species and cultivars using botanical nomenclature; recognise and select plants appropriate to the design criterion; identify and design with plants appropriate for the use in controlled environments; implement biological, organic and inorganic plant and plant pest management techniques; Identify and apply appropriate irrigation techniques and manage irrigation applications; identify disorders and recommend soils and plant nutrition requirements; Identify weeds and recommend appropriate weed management; provide garden design solutions; compile the recommendations and document a design plan or report.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the identifying the various plant families and a wide range of plants for different situations; making accurate observations of details; recognising the implications of environmental and climatic range; and assessing plants prior to planting. It requires knowledge of botanical geography; ethno botany; plant culture in Green Buildings; Conservatories and Glass Houses; lawns and lawn care; stakes and guying and irrigation and current process in new irrigation techniques.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Design with plants as a main focus of the design project	<p>1.1. Identify plant families and genera, species and cultivars, by making accurate observations of fine details and applying logical and systematic methods of working.</p> <p>1.2. Identify a wide range of plants for different design criterion and requirements, which include the use of aesthetic, ornamental, productive and economic plant groups.</p> <p>1.3. Recognise and select plants appropriate to the design criterion.</p> <p>1.4. Identify and design with plants appropriate for the use in Green Buildings (eg. Rooftops) Conservatories, Glass houses and Atriums.</p>
2. Place plants in a designed space	<p>2.1. Determine the implications of climate and environment on plant selection and design.</p> <p>2.2. Recognise and choose plants that are adaptive to micro and meso climates in domestic, and small to</p>

ELEMENT	PERFORMANCE CRITERIA
	moderate scale public space. 2.3. Assess plants prior to planting and identify their nature e.g. annual, perennial and arboreal. 2.4. Report on the cultural techniques required to establish and maintain plants in specialised environments.
3. Identify disorders and recommend soils and plant nutrition requirements	3.1. Identify soil types and condition and make recommendations for appropriate soil management techniques. 3.2. Identify organic and inorganic fertilisers and make appropriate recommendations. 3.3. Identify common plant disorders and make appropriate recommendations. 3.4. Instruct in the use and production of compost.
4. Establish and maintain plants in a designed landscape environment	4.1. Implement a range of propagation techniques. 4.2. Perform planting techniques. 4.3. Recognise appropriate situations for the use of, and make recommendations, regarding staking and guying. 4.4. Identify and apply appropriate irrigation techniques and manage irrigation applications. 4.5. Perform a range of appropriate pruning and shaping techniques ensuring optimum plant performance and make recommendations. 4.6. Identify weeds and recommend appropriate weed management. 4.7. Implement biological, organic and inorganic plant and plant pest management techniques. 4.8. Compile the recommendations and document a design plan or report.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

## REQUIRED SKILLS AND KNOWLEDGE

- identify plant species and cultivars using botanical nomenclature
- identify and select plants appropriate to the design criterion
- identify and design with plants appropriate for the use in controlled environments
- implement biological, organic and inorganic plant and plant pest management techniques
- Identify and apply appropriate irrigation techniques and manage irrigation applications
- identify and recommend soils and plant nutrition requirements
- Identify weeds and recommend appropriate weed management
- provide garden design solutions
- compile the recommendations and document a design plan or report
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## Required knowledge

- botany - plant structures and physiology
- botanical geography (plant families, geographic distribution and links)
- ethno botany (sustainability and the stories of plants)
- plant taxonomy and nomenclature
- aesthetic, ornamental, productive and economic plant groups
- plant families and detailed knowledge of species and cultivars used in garden design, horticulture industry and other ornamental, productive and economic plant industries
- the use and development of plants through history
- types, properties and characteristics of a wide range of soils and growing media
- horticultural media, information and knowledge based resources
- turf culture
- principles and processes of plant culture.
- allied horticultural, environmental and conservation industries and movements
- irrigation and current progress in new irrigation techniques
- AS4419-2003 and AS4454-2003.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify plant species and cultivars using botanical nomenclature</li> <li>• recognise and select plants appropriate to the design criterion</li> <li>• identify and design with plants appropriate for the use in controlled environments</li> <li>• implement biological, organic and inorganic plant and plant pest management techniques</li> <li>• Identify and apply appropriate irrigation techniques and manage irrigation applications</li> <li>• identify disorders and recommend soils and plant nutrition requirements</li> <li>• Identify weeds and recommend appropriate weed management</li> <li>• provide garden design solutions</li> <li>• compile the recommendations and document a design plan or report.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>
<p>The range statement relates to the unit of competency as a whole.</p>

<b>RANGE STATEMENT</b>	
Clients may include:	<ul style="list-style-type: none"> <li>• clients as private individuals</li> <li>• students</li> <li>• small and medium businesses</li> <li>• organisations</li> <li>• public bodies</li> <li>• community groups.</li> </ul>
Physical elements and features may include:	<ul style="list-style-type: none"> <li>• proposed or existing structures</li> <li>• buildings</li> <li>• roads and paths</li> <li>• watercourses</li> <li>• irrigation and/or drainage systems</li> <li>• existing plants</li> <li>• topographic features</li> <li>• views and outlooks</li> <li>• climate and weather conditions</li> <li>• soils characteristics</li> <li>• access to site and existing site use details.</li> </ul>
Functional analysis may include:	<ul style="list-style-type: none"> <li>• analysis of existing or proposed use of site</li> <li>• pedestrian movement</li> <li>• microclimatic notes</li> <li>• client requirements.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Plants
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**Co-requisite units**

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCPCM505A Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release. Supersedes and is equivalent to RTE5527A

### Unit Descriptor

This unit covers the responsibilities of agricultural advisers in conducting an environment and food safety risk assessment on established or developing plant nutrition and soil fertility programs and, where appropriate, developing a nutrient management plan. The risk assessment involves analysing and prioritising environmental risks associated with the program. This risk assessment is combined with the identification of options to manage risk and establish processes for the ongoing monitoring and improvement of plant nutrition and soil fertility programs.

### Application of the Unit

This unit of competency applies to agricultural advisers who are providing services to land managers. Conducting the assessment is likely to be undertaken without supervision but includes practical input from the land owner or manager.

### Licensing/Regulatory Information

Not applicable

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the                      Performance criteria describe the performance needed to

essential outcomes of a unit of competency.

demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain currency of environment and food safety information relating to fertilisers and soil ameliorants	<p>1.1 Community, government and agricultural industry concerns and legislative requirements in relation to <b><i>fertiliser and soil ameliorant environmental stewardship</i></b> and initiatives to address them are identified and documented by actively and regularly researching industry and other information sources</p> <p>1.2 Local information relating to nutrient management, particularly in a catchment or regional context, is identified and documented by active communication with local organisations</p> <p>1.3 National and local information and standards relating to food safety associated with fertiliser and soil ameliorant use are identified and documented by actively and regularly researching industry and other information sources</p> <p>1.4 Information and standards relating to transport, handling, storage and application of fertilisers and soil ameliorants are identified and documented by actively and regularly researching industry and other information sources</p>
2. Evaluate environmental risks and develop a nutrient management plan	<p>2.1 <b><i>Environmentally significant features</i></b> of fertiliser, soil ameliorants, soil, landscape and climate that are likely to influence environmental risks associated with plant nutrition and soil fertility program are identified and documented</p> <p>2.2 <b><i>Agronomic and operational activities</i></b> associated with fertiliser and/or soil ameliorant program, and associated <b><i>environmental risk categories</i></b>, are identified and documented</p> <p>2.3 <b><i>Environmental risks and impacts</i></b> associated with agronomic and operational activities are <b><i>evaluated and prioritised</i></b></p> <p>2.4 <b><i>Management options</i></b> to appropriately address environmental risks are identified and evaluated</p> <p>2.5 Appropriate management options to address any identified environmental risks are discussed and agreed with customer</p> <p>2.6 <b><i>Nutrient management tools</i></b> are used in conjunction with land owner/manager to monitor effectiveness of</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	management decisions over time
	2.7 Opportunities to <i>improve efficiency and effectiveness</i> of plant nutrition and soil fertility program, including use of fertilisers and soil ameliorants, are identified and operational and agronomic recommendations are modified accordingly
3. Identify and communicate relevant best practice in transport, handling and storage for environmental stewardship to land owner/manager	3.1 Key environmental product stewardship issues in <i>transport, handling and storage</i> of fertilisers and soil ameliorants that are relevant to plant nutrition and soil fertility program (as contained in codes of practice, legislation and enterprise work procedures) are identified and communicated to land owner/manager

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

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#### Ability to:

- calculate areas, ratios, proportions and application rates
- assign probability and severity of identified risks
- communicate with work team members, supervisors, contractors and suppliers
- estimate treatment and product requirements, material sizes and quantities
- interpret manufacturer and plant nutrition program specifications
- interpret specifications
- store and retrieve information and reports
- understand labels and symbols
- use paper-based or computer software interpretation system to integrate information and results from multiple sources and produce recommendation reports that are easily implemented
- use pro forma reporting, analysis and work procedure documents

### Required knowledge includes:

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#### Knowledge of:

- soil and water sampling techniques to adapt activities and instructions to a range of environmental contexts

- environmental implications for environment of soil amendment and fertiliser use, that may include nutrient mining, run-off, nutrient loading of soil and water, toxicity, noise and dust
- food safety issues relating to the use of fertilisers and soil ameliorants
- law of the minimum and importance of nutrient interactions
- methods and pathways of nutrient uptake by plants and loss from soil
- nutrient cycling and its practical relevance to specific plants and soils encountered in local area, including role of soil biology
- nutrients required by plants grown within enterprise and effects of nutrient deficiency and toxicity on individual plant species and varieties
- relationship between soil characteristics and the availability of nutrients, including macro and micro elements, to plants
- single nutrient and complete fertiliser products encountered in local area, including physical attributes, nutrient analysis, solubility, salt index, application rates and costs, and appropriate application techniques and equipment
- soil amendments commonly used to treat local soil problems
- techniques for interpreting laboratory results and making fertiliser and amendment recommendations
- techniques to assess effects of fertiliser and amendment recommendations on soil, plants and water

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence require to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify environmental parameters at risk</li> <li>• assess magnitude of risk and establish likelihood</li> <li>• assess potential impact on environmental parameters and assign severity rating</li> <li>• develop soil fertility report and fertiliser recommendation with consideration of environmental stewardship principles</li> <li>• communicate recommendation with customer, including methods of assessing outcomes of</li> </ul>

	<p>recommendation</p> <ul style="list-style-type: none"> <li>• develop a nutrient management plan</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other units</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</li> <li>• Assessment may be in conjunction with assessment of other units of competency</li> <li>• The assessment environment should not disadvantage the candidate</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where

	possible, over a number of assessment activities.
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## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Fertiliser and soil ameliorant environmental stewardship</i></b> involves:	<ul style="list-style-type: none"> <li>• commitment to actions in line with their effect on the overall environmental outcome as distinct from just the effects of individual components</li> <li>• duty of care for the environmental effects of fertiliser and soil ameliorants that goes beyond a person’s direct area of responsibility</li> </ul>
<b><i>A nutrient management plan</i></b> consists of:	<ul style="list-style-type: none"> <li>• consideration of environmental risks and their priority (likelihood/consequence)</li> <li>• management options to address risks</li> <li>• process for ongoing monitoring and management of plant nutrition and soil fertility program</li> <li>• strategies to maintain soil fertility and product quantity and quality</li> <li>• understanding of nutrient requirements of region, farm or paddock</li> </ul>
<b><i>Environmentally significant features</i></b> may include:	<ul style="list-style-type: none"> <li>• biological properties of soil and applied organic products such as:             <ul style="list-style-type: none"> <li>• beneficial macro and micro-organisms</li> <li>• disease potential</li> </ul> </li> <li>• chemical properties of soil such as:             <ul style="list-style-type: none"> <li>• acid/alkaline (pH) balance</li> <li>• carbonate content</li> <li>• cations</li> <li>• nutrient content such as nitrogen</li> <li>• organic matter</li> <li>• phosphorus</li> <li>• potassium</li> <li>• salinity</li> <li>• sulphur</li> </ul> </li> </ul>

	<ul style="list-style-type: none"><li>• trace elements</li><li>• physical properties of soil such as:<ul style="list-style-type: none"><li>• colour</li><li>• depth of root zone and plant available water</li><li>• soil stability</li><li>• structure</li><li>• texture</li><li>• water-holding capacity</li></ul></li><li>• climatic features such as:<ul style="list-style-type: none"><li>• annual diurnal temperature patterns</li><li>• annual precipitation</li><li>• prevailing winds</li><li>• rainfall intensity</li><li>• seasonal and annual rainfall pattern</li><li>• wind strength</li></ul></li><li>• fertilisers that are inorganic or organic solids</li><li>• fertilisers that are fluids applied directly to soil or to plant via foliar sprays such as:<ul style="list-style-type: none"><li>• liquefied gases</li><li>• solutions</li><li>• suspensions</li><li>• location of major water bodies and underground water sources</li><li>• native vegetation in vicinity of proposed plant nutrition or soil fertility program</li><li>• nitrogen input from leguminous green manure crops or leguminous pastures</li></ul></li><li>• properties of fertilisers and soil ameliorants that are environmentally significant such as:<ul style="list-style-type: none"><li>• chemical composition</li><li>• impurity concentration</li><li>• nutrient content</li><li>• particle size</li><li>• particle size distribution</li><li>• solubility</li><li>• slope and aspect</li></ul></li><li>• soil ameliorants such as gypsum</li><li>• liming products including:<ul style="list-style-type: none"><li>• dolomite</li><li>• mixtures of lime and magnesium oxide</li><li>• any by-product used to change soil acid/alkaline</li></ul></li></ul>
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	<p>(pH) balance or soil calcium level</p> <ul style="list-style-type: none"> <li>• biosolids, animal manures and compost</li> <li>• surface water drainage patterns</li> </ul>
<p><b><i>Agronomic and operational activities</i></b> associated with environmental risks may include:</p>	<ul style="list-style-type: none"> <li>• agronomic activities such as: <ul style="list-style-type: none"> <li>• crop/pasture production at levels that deplete soil nutrients or adversely affect soil health</li> <li>• form of nutrient</li> <li>• growth of legume species</li> <li>• nutrient placement</li> <li>• rate of nutrient applied</li> <li>• timing of nutrient application</li> </ul> </li> <li>• operational activities such as: <ul style="list-style-type: none"> <li>• clean-up of spills</li> <li>• application and disposal of animal manures</li> </ul> </li> <li>• fertiliser application activities including: <ul style="list-style-type: none"> <li>• application as solid or fluid products</li> <li>• application in irrigation water</li> <li>• broadcast or band application</li> <li>• direct injection of anhydrous ammonia</li> </ul> </li> <li>• siting of permanent and temporary fertiliser/ amendment storage</li> <li>• storage and handling on farm</li> </ul>
<p><b><i>Environmental risk categories</i></b> include:</p>	<ul style="list-style-type: none"> <li>• blow (airborne losses)</li> <li>• leach (nutrient leaching or change in chemical composition through the soil profile)</li> <li>• load (nutrient loading in soil, water, air or food)</li> <li>• mine (mining soil nutrient by non-maintenance rate strategies)</li> <li>• run-off (nutrient transport in surface water)</li> </ul>
<p>An adviser may <b><i>evaluate and prioritise environmental risks and impacts</i></b> based on:</p>	<ul style="list-style-type: none"> <li>• environmental consequence</li> <li>• likelihood of occurrence</li> </ul>
<p><b><i>Management options</i></b> appropriate in managing environmental risks may include:</p>	<ul style="list-style-type: none"> <li>• activities directly related to fertiliser use such as: <ul style="list-style-type: none"> <li>• changing product</li> <li>• method of application</li> <li>• rate applied</li> <li>• timing</li> </ul> </li> <li>• broader range of agricultural management options such as: <ul style="list-style-type: none"> <li>• changing cultivation practices</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• land use planning</li> <li>• rotation management</li> </ul>
<p><i>Nutrient management tools</i> used to monitor the effectiveness of decisions may include:</p>	<ul style="list-style-type: none"> <li>• nutrient budgeting</li> <li>• paddock record keeping</li> <li>• soil, plant tissue and water analysis</li> <li>• yield maps</li> </ul>
<p>Monitoring results consulted to <i>improve efficiency and effectiveness</i> of plant nutrition and soil fertility programs may include:</p>	<ul style="list-style-type: none"> <li>• monitoring results after implementation of recommendations such as: <ul style="list-style-type: none"> <li>• nutrient and water use efficiency data, including: <ul style="list-style-type: none"> <li>• changes to nutrient and water use efficiency after implementation of recommendations</li> <li>• changes to production requirements</li> <li>• environmental changes</li> </ul> </li> </ul> </li> </ul>
<p>Aspects of fertiliser <i>transport, handling and storage</i> that may raise awareness of environmental issues include:</p>	<ul style="list-style-type: none"> <li>• issues contained in industry codes of practice such as: <ul style="list-style-type: none"> <li>• Aerial Agriculture Association of Australia</li> <li>• Australian Fertiliser Services Association</li> </ul> </li> </ul>

## Unit Sector(s)

Plants

## Custom Content Section

Not applicable.

# AHCPCM601A Develop and implement a plant health management strategy

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing plant health in a horticultural or agricultural enterprise, and defines the standard required to: gather information and advice on plant health for an enterprise; develop strategies to manage plant health; integrate plant health strategies into enterprise planning; determine scheduling and key responsibilities for plant health management; evaluate and modify the plant health program; document the strategic plan for plant health management; report on the implementation of the strategies.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the ability to develop a plant health and management strategy, determine plant health strategies, scheduling and key responsibilities and document a strategic plan of plant health management.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop a plant health and management program	1.1.Plant health issues are identified from published data, historical records and industry consultation. 1.2.Management issues are defined relative to desired quality, quantity and productivity requirements of marketing and production plans. 1.3.The program is developed which defines enterprise guidelines and specific responsibilities of operational elements to achieve required outcomes. 1.4.The program is communicated effectively, and systems are established to monitor business goals. 1.5.Professional assistance is sought where appropriate. 1.6.Information is assessed to determine potential key information for input to planning decisions. 1.7.The environmental implications of chemical use, alternative methods and non-chemical preventative methods are considered and documented. 1.8.Information is assessed to determine potential key information for input to planning decisions.
2. Determine plant health strategies	2.1.Information gathered is analysed for suitable approaches to plant health management.

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2.Strategies are considered in the light of their impacts.</p> <p>2.3.Strategies for plant health management are determined to integrate the most suitable methods with the proposed plants and the existing soil types.</p> <p>2.4.Environmental controls are established and specifically included in the plan.</p> <p>2.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed, and suitable controls are incorporated into the plan.</p>
3. Provide input to other planning processes	<p>3.1.Details regarding plant health management strategies are used as input to other organisational planning processes.</p> <p>3.2.Information regarding other planning processes is collected and used to inform the plant health management planning process.</p> <p>3.3.Information about the range of planning processes is communicated verbally and/or in writing according to the requirements of the circumstances and the people involved.</p>
4. Determine scheduling and key responsibilities	<p>4.1.Scheduling for plant health management is determined taking the range of seasonal, geographic, and resourcing factors into consideration.</p> <p>4.2.Key responsibilities for specific implementation processes are determined.</p> <p>4.3.Recordkeeping requirements are determined and procedures are put in place to ensure compliance with the range of applicable regulations.</p> <p>4.4.The strategic plan, including scheduling and key responsibilities, is clearly documented.</p> <p>4.5.The plan includes the type, format, frequency and detail of any reporting required by both manager(s) and operators.</p>
5. Monitor and adjust plant health management strategies	<p>5.1.The effectiveness of the plant health management strategies is evaluated at key points and adjustments made as necessary.</p> <p>5.2.Environmental impacts and OHS hazards relating to plant health management are identified, monitored and risk assessed and managed throughout the implementation process.</p> <p>5.3.Modifications are made to the strategy as and when necessary for environmental, OHS resourcing, or effectiveness reasons.</p>

ELEMENT	PERFORMANCE CRITERIA
6. Evaluate plant health management strategies and record result	6.1.Data, observations and documentation from the implementation of plant health management program is analysed against the plan according to organisation guidelines. 6.2.Recommendations for future strategies are prepared based on the analysis of the data. 6.3.A report is prepared that documents the implementation of the strategies.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- determine plant health strategies
- develop plant health management strategies
- provide input to other planning processes
- determine scheduling and key responsibilities
- monitor and adjust plant health management strategies
- evaluate plant health management strategies and record results
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- strategic aspects of managing plant quality, performance and nutrition
- management of weed, pest and disease infestations
- planning water budgets and irrigation strategies
- plant growth processes such as photosynthesis, respiration, nutrient uptake, solute transport, and metabolism, water balance and osmotic pressure

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• plant growth and development and growth regulators</li> <li>• Integrated Pest Management (IPM)</li> <li>• environmental controls and codes of practice applicable to the enterprise</li> <li>• relevant legislation and regulations relating to OHS contractor engagement, chemical use and application, and vehicle and plant use</li> <li>• environmental controls and codes of practice applicable to the business and to plant health management operations</li> <li>• sound management practices and processes to minimise plant health management control operations.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• gather information and advice on plant health for an enterprise</li> <li>• develop strategies to manage plant health</li> <li>• integrate plant health strategies into enterprise planning</li> <li>• determine scheduling and key responsibilities for plant health management</li> <li>• evaluate and modify the plant health program</li> <li>• document the strategic plan for plant health management</li> <li>• report on the implementation of the strategies.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or</p>

**EVIDENCE GUIDE**

enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Strategies may include:

- managing plant quality, performance and nutrition
- management of weed, pest and disease infestations
- planning water budgets and irrigation strategies
- plant health management and organisational planning processes
- integrated pest management
- risk management and environmental and OHS impacts.

Report structure may include:

- the approach to the implementation of the strategies that includes any difficulties or issues faced
- the methods used for treatment
- impacts on environmental and OHS
- any recommendations for future work
- results, costs, and data analysis.

**Unit Sector(s)****Unit sector**

Plants

**Co-requisite units****Co-requisite units**



<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPGD101A Support gardening work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting gardening work and defines the standard required to: prepare materials, tools and equipment for gardening work; undertake gardening work as directed; handle materials and equipment and clean up on completion of gardening work.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking gardening work.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare materials, tools and equipment for gardening work	1.1.The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions. 1.2.Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor. 1.3.Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle. 1.4.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use. 1.5.Gardening support is provided according to Occupational Health and Safety (OHS) requirements, and according to workplace information. 1.6.OHS hazards are identified and reported to the supervisor.
2. Undertake gardening work as directed	2.1.Instructions and directions provided by supervisor are followed and clarification sought when necessary. 2.2.Gardening work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines. 2.3.Interactions with other staff and customers are carried out in a positive and professional manner. 2.4.Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed. 2.5.Problems or difficulties in completing work to required standards or timelines are reported to supervisor.
3. Handle materials and	3.1.Waste material produced during gardening work is

ELEMENT	PERFORMANCE CRITERIA
equipment	<p>stored in a designated area according to supervisor's instructions.</p> <p>3.2. Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines.</p> <p>3.3. A clean and safe work site is maintained while completing gardening activities.</p>
4. Clean up on completion of gardening work	<p>4.1. Materials are returned to store or disposed of according to supervisor's instructions.</p> <p>4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions.</p> <p>4.3. Work outcomes are reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safe work procedures
- prepare materials, tools and equipment for gardening work
- undertake gardening work as directed
- handle materials and equipment
- clean up on completion of gardening work
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- safe work practices
- planting techniques
- garden tools and equipment
- maintenance practices for planted areas
- repair and maintenance of garden features

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• OHS and environmental protection legislation and enterprise procedures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare materials, tools and equipment for gardening work</li> <li>• undertake gardening work as directed</li> <li>• handle materials and equipment</li> <li>• clean up on completion of gardening work.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
Gardening work may include:	<ul style="list-style-type: none"> <li>• maintenance of planted areas including: <ul style="list-style-type: none"> <li>• watering</li> <li>• fertilising</li> <li>• staking</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• mowing</li> <li>• pruning</li> <li>• weeding</li> <li>• collecting rubbish</li> <li>• maintaining garden facilities including:                             <ul style="list-style-type: none"> <li>• assisting with repair and upkeep of site furniture and structures</li> <li>• paths and paved areas</li> <li>• garden features</li> </ul> </li> <li>• assisting in preparation of areas for planting</li> <li>• installing trees and shrubs (containerised and bare-rooted)</li> <li>• planting of annual and perennial beds.</li> </ul>
Tools and equipment may include:	<ul style="list-style-type: none"> <li>• secateurs</li> <li>• knives</li> <li>• spades</li> <li>• forks</li> <li>• trowels</li> <li>• rakes</li> <li>• hoes</li> <li>• spray equipment</li> <li>• augers</li> <li>• buckets</li> <li>• brooms</li> <li>• wheelbarrows</li> <li>• hoses and hose fittings</li> <li>• ancillary equipment such as:                             <ul style="list-style-type: none"> <li>• stabilising materials</li> <li>• weed mats</li> <li>• stakes</li> <li>• tree guards.</li> </ul> </li> </ul>
Workplace information may include:	<ul style="list-style-type: none"> <li>• procedures for disposing of waste materials</li> <li>• work instructions or verbal instructions from the supervisor.</li> </ul>
Hazards may include:	<ul style="list-style-type: none"> <li>• solar radiation</li> <li>• dust</li> <li>• noise</li> <li>• air- and soil-borne micro-organisms</li> <li>• chemicals and hazardous substances</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• sharp hand tools and equipment</li> <li>• manual handling</li> <li>• holes</li> <li>• slippery and uneven surfaces.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD201A Plant trees and shrubs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of manual planting of trees and shrubs and defines the standard required to: carry out ground preparation; excavate planting holes; apply suitable tree planting techniques for the tree species; inspect root ball quality; apply a range of treatments; apply post planting applications; monitor and record plantings.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of planting of trees, shrubs and other containerised and bare-rooted plants.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for planting operations	<p>1.1. Occupational Health and Safety (OHS) hazards are identified and reported to the supervisor.</p> <p>1.2. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>1.3. Tools and equipment for planting are used according to directions.</p> <p>1.4. Site is marked out according to planting plan and according to directions.</p> <p>1.5. Competing plants are controlled.</p> <p>1.6. Soil is modified according to directions.</p>
2. Prepare trees and shrubs for planting	<p>2.1. Planting holes are excavated according to the needs of the plant.</p> <p>2.2. Trees and shrubs are watered prior to planting.</p> <p>2.3. Root ball is verified to be damp.</p> <p>2.4. Trees and shrubs are removed from containers.</p>
3. Inspect plants and report problems	<p>3.1. Plant and root ball are inspected</p> <p>3.2. Dry, water repellent and loose root balls are reported to the supervisor.</p> <p>3.3. Presence of symptoms of pests or disease is reported to the supervisor.</p> <p>3.4. Root treatments are applied according to directions.</p>
4. Install trees, shrubs and/or other plants	<p>4.1. Plants are placed in hole.</p> <p>4.2. Planting hole is back-filled and soil consolidated.</p> <p>4.3. Plants are watered in where required to eliminate air pockets.</p>

ELEMENT	PERFORMANCE CRITERIA
	4.4. Apply mulch as directed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards
- use tools and equipment for planting
- mark out planting site
- excavate planting holes
- inspect root ball condition
- observe problems of root balls
- install plants
- apply root treatments
- follow work procedures
- participate in teams and contribute to team objective
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic botany and physiology
- chemical use, toxicity and mode of action of chemicals used
- awareness of the impact of planting activities on the surrounding environment
- planting techniques relating to specific species
- factors affecting the timing and method of tree or shrub planting
- initial establishment needs of juvenile plants
- soil amelioration techniques
- principles relating to the application of mulches and fertilisers
- basic plant structure and the physical and nutritional requirements of plants
- OHS legislative requirements and Code of Practice

**REQUIRED SKILLS AND KNOWLEDGE**

- manual handling techniques
- the effect of adverse outdoor climatic conditions.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out ground preparation
- excavate planting holes
- apply suitable tree planting techniques for the tree species
- inspect root ball quality
- apply a range of treatments
- apply post planting applications
- monitor and record plantings.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Plants may include:	<ul style="list-style-type: none"> <li>trees, shrubs and other containerised and bare-rooted plants.</li> </ul>
Planting may include:	<ul style="list-style-type: none"> <li>all plant installations and planting activities in parks and gardens</li> <li>domestic and commercial landscapes</li> <li>sporting facilities</li> <li>planting of windbreaks and shelter belts</li> <li>programmed environmental maintenance</li> <li>rehabilitation of natural areas</li> <li>reversal of environmental degradation.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Parks and gardens
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCPGD202A Prepare and maintain plant displays

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing and maintaining plant displays and defines the standard required to: select suitable plants for a range of display purposes; prepare a site for a plant display; plant or arrange plants for a plant display; maintain plants in a display.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of preparing and maintaining plant displays.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the display site	1.1.The plant display site is prepared according to instructions. 1.2.Materials, tools, equipment and machinery are used according and enterprise work procedures. 1.3.Suitable personal safety equipment is selected and used.
2. Install plants	2.1.Plants are placed in the pattern specified by the plan. 2.2.Accessories and materials chosen are as specified in the plan. 2.3.Work is undertaken according to Occupational Health and Safety (OHS) requirements.
3. Maintain plants	3.1.Health of the plants is monitored to ensure they retain optimum appearance. 3.2.Plants are fertilised and watered to maintain optimum health and appearance. 3.3.Plants are replaced when no longer at optimum health and appearance. 3.4.Rubbish, litter and decaying material are removed from plants, pots and surrounds to maintain optimum appearance of display.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

**REQUIRED SKILLS AND KNOWLEDGE**

- communicate with work team members, supervisors, suppliers and customers
- use hand tools and machinery associated with the preparation of plant displays
- use fertilisers and chemicals associated with plant maintenance
- interpret planting plans
- calculate quantities of plants and materials
- effectively complete plant display in a timely manner
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- planting techniques for annual bed displays
- maintenance techniques for annuals and/or indoor displays
- common problems occurring with display plants
- remedial action required for display plants displaying health problems.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select suitable plants for a range of display purposes
- prepare a site for a plant display
- plant or arrange plants for a plant display

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>maintain plants in a display.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Displays may include:	<ul style="list-style-type: none"> <li>displays for functions</li> <li>annual bedding displays</li> <li>herbaceous perennial displays</li> <li>indoor presentations.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Parks and gardens
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### Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCPGD203A Prune shrubs and small trees

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of pruning shrubs and small trees and defines the standard required to: confirm the pruning method; prepare tools and equipment; and prune shrubs and trees to AS 4373-2007 Pruning of amenity trees, as required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of pruning shrubs and small trees while working from the ground.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify pruning requirements	1.1. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor. 1.2. Personal protective equipment (PPE) is used according to procedures. 1.3. Pruning tools and equipment are appropriate to the location, access and size of material to be pruned. 1.4. Plants that require pruning are identified according to the pruning program and directions. 1.5. Pruning method to be used is confirmed by the supervisor.
2. Undertake pruning of shrubs and small trees	2.1. Pre-operational and safety checks are carried out on pruning tools and equipment according to manufacturer specifications and documented low risk work procedures. 2.2. Machinery, equipment and tools are operated according to documented low risk work procedures. 2.3. Pruning cuts are implemented according to directions and AS 4373 Pruning of amenity trees. 2.4. Correct manual handling techniques are used when lifting or moving heavy loads. 2.5. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.

## Required Skills and Knowledge

**REQUIRED SKILLS AND KNOWLEDGE**

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- recognise plants, shrubs and trees
- operate tools
- adjust fuel levels
- use appropriate tools, equipment and safety equipment
- identify and report site and tree hazards
- participate in teams and contribute to team objectives
- minimise environmental disturbance
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- principles of pruning
- effects of pruning on plant growth and habit
- plant health principles (e.g. CODIT) relevant to pruning
- AS 4373 Pruning of amenity trees
- plant names and growth habits
- basic botany and physiology
- correct and safe use and care of tools and equipment
- understanding of work procedures
- the effect of outdoor climatic conditions on pruning programs and tool selection
- awareness of potential public nature of pruning work
- use of hygienic practices.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• confirm the pruning method</li> <li>• prepare tools and equipment</li> <li>• prune shrubs and trees to AS 4373-2007 Pruning of amenity trees, as required.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Small trees may include:	<ul style="list-style-type: none"> <li>• trees less than three metres in height.</li> </ul>
Pruning may include:	<ul style="list-style-type: none"> <li>• modifying the shape, form, vigour, correction or control of growth</li> <li>• prevention of disease or damage</li> <li>• promotion of health</li> <li>• modifying the canopy and fruit and flower production</li> <li>• providing ornamental effects or aesthetic appeal</li> <li>• providing clearance for services, access or cultural practices.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD204A Transplant small trees

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of small tree and shrub transplanting without the use of lifting machinery and equipment and defines the standard required to: determine transplanting requirements from work documents; prepare the plant and the new site for transplanting; bind and/or wrap root balls and crowns; remove the plant safely and with minimal damage; replant the small tree and provide aftercare for transplanted plants.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the complete transplant operation involved in re-locating small trees.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for tree or shrub removal	<p>1.1. Transplanting plans/instructions are obtained and confirmed with the supervisor.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.3. All underground services are located according to supply authorities' guidelines.</p> <p>1.4. Tools and equipment appropriate to the task being undertaken are prepared and used according to supervisor's instructions and manufacturers guidelines.</p> <p>1.5. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p>
2. Prepare tree or shrub and undertake earthworks for removal	<p>2.1. Crown is prepared according to the requirements of the species, time of removal and enterprise work procedures.</p> <p>2.2. Site is cleared and watered prior to transplanting.</p> <p>2.3. Root ball width and depth is confirmed with the supervisor to ensure the root system can colonise new ground according to the needs of the species and size of the specimen.</p>
3. Remove tree or shrub from original site	<p>3.1. Soil around the root zone is excavated according to documented guidelines.</p> <p>3.2. Tree roots are pruned where required to meet AS4373 Pruning of amenity trees.</p> <p>3.3. Tree is stabilised as the root system is undercut and anti-transpirants applied as a root soak or foliar spray</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>to ensure viability of the plant is maintained.</p> <p>3.4. Root ball is bound with appropriate material to ensure adequate soil is retained and kept moist prior to transportation and installation.</p> <p>3.5. Tree is lifted and secured for potential storage and/or transportation using safe lifting techniques and in accordance with documented guidelines.</p> <p>3.6. Tree or shrub is prepared and handled to minimise damage during handling and transportation.</p>
4. Replant tree or shrub in new environment	<p>4.1. Appropriate drainage is provided to ensure root system survival is maintained according to the needs of the species and conditions of the planting site.</p> <p>4.2. Soil is modified according to the cultural requirements of the species.</p> <p>4.3. Tree or shrub is planted in prepared hole according to documented work procedures.</p> <p>4.4. Plant support devices are installed according to the supervisor's instructions and/or installation plan.</p>
5. Complete transplant operation	<p>5.1. Transplanted plant is maintained with regular aftercare activities appropriate to the requirements of the species.</p> <p>5.2. Tools and equipment are cleaned, maintained and stored according to enterprise guidelines.</p> <p>5.3. Waste is collected and disposed of or recycled to minimise damage to the external environment.</p> <p>5.4. Records of transplant are maintained in the appropriate format.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify and report site and tree hazards
- prepare crown, root ball and earthworks
- prune roots where appropriate
- provide precise watering applications

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• install support devices</li> <li>• apply anti-transpirants</li> <li>• maintain transplanted specimen</li> <li>• interpret work procedures including transplanting/installation plans and site map</li> <li>• participate in teams and contribute to team objectives</li> <li>• use tools and equipment in a safe and effective manner</li> <li>• calculate area, volumes and treatment application rates</li> <li>• use literacy skills to follow sequenced written instructions and record information accurately and legibly</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor</li> <li>• use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• enterprise guidelines for manual handling</li> <li>• safe lifting loads</li> <li>• trees and shrubs that are most suited to transplanting</li> <li>• factors affecting the timing and method of lifting trees and shrubs</li> <li>• causes of damage or drying-out of trees and shrubs, and prevention methods</li> <li>• transplanting practices associated with different soil types and relationships to plant care</li> <li>• responsible and environmentally sensible practices concerning the nutrition and watering requirements for newly transplanted trees and shrubs</li> <li>• techniques of securing and anchoring transplanted trees and shrubs</li> <li>• the effect of adverse outdoor climatic conditions (e.g., rain, hail, or very high ultraviolet radiation), which may prevent or impede transplanting operations</li> <li>• transference of soil/root borne diseases.</li> </ul>

**Evidence Guide**

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess transplanting requirements and suitability of plant and site</li> <li>• prepare the plant for transplanting and the new site</li> <li>• remove the plant safely and with minimal damage</li> <li>• replant the plant</li> <li>• provide aftercare for transplanted plants.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trees may include:	<ul style="list-style-type: none"> <li>• all species of trees and woody tree like vegetation forms.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Parks and gardens
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD205A Prepare a grave site

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing a gravesite and defines the standard required to: select and safely use machinery and equipment for grave site preparation including digging graves by hand and restore a site following a burial service.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of preparing a gravesite and involves working in association with a fellow worker or work team.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare site for excavation	<p>1.1. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.2. Personal protective clothing and equipment is selected, used and maintained.</p> <p>1.3. Tools, equipment and machinery are prepared and used according to supervisor's instructions.</p> <p>1.4. Surrounding monuments, masonry or headstones that threaten the stability of the new gravesite are inspected and removed if necessary, according to supervisor's instructions.</p> <p>1.5. Sludge pump is used to remove excess water if required.</p> <p>1.6. Gravesite is marked out to suit coffin dimensions and according to supervisor's instructions and/or enterprise policy.</p>
2. Assist with the excavation	<p>2.1. Grave is excavated according to enterprise policy.</p> <p>2.2. Sides of grave are shored where depth of grave exceeds 1.5 metres or as determined by enterprise policy.</p> <p>2.3. Surface area for 400 mm from the edge of the excavation is covered with an approved material to ensure the integrity and stability of the soil.</p> <p>2.4. Access to and egress from the excavation site is undertaken according to OHS requirements.</p> <p>2.5. Gravesite is secured with protective restraints to limit access to the site while being established and when</p>

ELEMENT	PERFORMANCE CRITERIA
	left unattended.
3. Backfill and enhance the gravesite following burial	3.1. Burial hole is back-filled with soil free from large lumps, plant debris or waste material. 3.2. Backfilling techniques are employed to consolidate the soil, to minimise cavities and to restore the ground to its original level. 3.3. Surrounding monuments, masonry or headstones are replaced as necessary. 3.4. Waste material and plant debris removed from the gravesite are disposed of in an environmentally aware and safe manner according to enterprise policy. 3.5. Gravesite is enhanced according to supervisor's instructions and/or enterprise policy.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare site for excavation
- assist with the excavation
- shore up sides of grave as required
- backfill and enhance the gravesite following burial
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- OHS responsibilities of employees
- applied understanding of safe work practices when working in and around confined spaces
- the environmental impact of soil disturbance when excavating a grave

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>the environmental implications of pumping sludge water from an excavation site and the effects it may have on surrounding gravesites.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>select and safely use machinery and equipment for grave site preparation including digging graves by hand</li> <li>restore a site following a burial service.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Grave preparation may include:	<ul style="list-style-type: none"> <li>all types of graves.</li> </ul>
Enhancing a gravesite may include:	<ul style="list-style-type: none"> <li>placement of monuments, headstones or masonry</li> <li>planting of flowers or other vegetation</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• erection of fencing</li> <li>• laying of gravel/pebbles</li> <li>• installation of other decorative features.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD206A Conduct visual inspection of park facilities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of routine visual inspection of park and recreational facilities to identify visible hazards and existing and/or potential risks and defines the standard required to: access site plans and checklists on multiple locations; inspect site facilities for risks to health and safety; evaluate condition of facilities of amenity spaces; identify and rate environmental risks and impacts from site facilities; record inspection details.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to a range of situations and environments including amenity and natural resource areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for visual inspection	<p>1.1.Site plans and inspection checklists are interpreted and clarified with the supervisor.</p> <p>1.2.Specific terminology used in checklists is clarified.</p> <p>1.3.Park site to be inspected is identified and located on the site plan.</p> <p>1.4.Park facilities, equipment and services are identified on site from checklist descriptions and site plan.</p>
2. Undertake visual inspection	<p>2.1.Park facilities, equipment and services are inspected and compared against enterprise presentation standards and Occupational Health and Safety (OHS) requirements.</p> <p>2.2.Health and safety hazards and adverse environmental impacts are identified and recorded on the appropriate form.</p> <p>2.3.Situations requiring urgent action are reported immediately to supervisor.</p>
3. Submit report	<p>3.1.Inspection activity, reports and checklists are concise and accurate, and comply with enterprise standards.</p> <p>3.2.Checklist and/or report are forwarded to supervisor promptly, according to enterprise working procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- participate in teams and contribute to team maintenance and presentation objectives
- interpret instructions, communicate with team members and supervisor, and use the written materials necessary to effectively complete the inspection task
- measure distance and calculate area
- determine the extent of problems
- rate the condition of facilities
- evaluate serious issues that may be present
- report urgent situations
- identify environmental risks and impacts from site facilities
- rate the hazards and associated environmental implications of malfunctioning facilities, equipment and services
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- purpose of park facilities inspections, in providing information for effective maintenance and repair work particularly in relation to end use of the facilities and equipment, and the safety of users
- the practical application of site plans, checklist descriptions and presentation standards to locate and effectively assess facilities and equipment against the required parameters
- the effect of adverse outdoor climatic conditions (e.g., rain, hail, wind, or very high ultraviolet radiation), on park facilities inspection activities
- potential public nature of park inspection activities
- hazards investigation and risk assessment
- occupational health and safety issues, legislative requirements and Codes of Practice
- recognition of the range of park facilities, equipment and services relevant to the enterprise (including recommended use, safety parameters, maintenance schedules and manufacturers specifications)
- terminology used to describe different components of the range of facilities,

**REQUIRED SKILLS AND KNOWLEDGE**

- equipment and services relevant to the enterprise
- the hazards that are likely to be encountered by visitors using the park facilities and equipment
  - reporting requirements, procedures and materials for use in park inspection
  - cleaning, servicing and hygiene requirements of public conveniences
  - the relevant Australian Standards.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- access site plans and checklists on multiple locations
- inspect site facilities for risks to health and safety
- evaluate condition of facilities of amenity spaces
- identify and rate environmental risks and impacts from site facilities
- record inspection details.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Parks may include:	<ul style="list-style-type: none"> <li>• a range of parks catering to public recreational activities.</li> </ul>
Facilities may include:	<ul style="list-style-type: none"> <li>• playgrounds</li> <li>• playground soft fall</li> <li>• pathways</li> <li>• play equipment</li> <li>• parks and street furniture and structures</li> <li>• fences</li> <li>• barbeques</li> <li>• steps and stairs</li> <li>• bollards</li> <li>• tree and grass protection devices</li> <li>• bins</li> <li>• signs</li> <li>• toilets</li> <li>• shelter buildings and structures</li> <li>• paved, turf and/or grassed recreational areas.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCPGD301A Implement a plant establishment program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the installation and consolidation of planted areas as part of a horticultural, agricultural or land management tree and shrub planting program and defines the standard required to: determine plant establishment methods and requirements from plans, clients quotations or instructions; interpret planting plans and specifications for a planting project; inspect quality of supplied plants and take appropriate action; conduct a site hazard identification and risk control assessment; undertake planting work, review the work and take remedial action where required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the establishment of planting areas in new projects and in programs of extensive replacement and renovation works across a range of situations and environments including amenity and natural resource areas. It excludes sports turf or recreational turf surfaces, intensive plant production and revegetation areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to establish a planted area	<p>1.1.The planting site, planting methods and plant species and cultivars are identified according to the site plan.</p> <p>1.2.Materials, tools, equipment and machinery are selected according to planted area design requirements.</p> <p>1.3.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers' specifications.</p> <p>1.4.Site hazards are identified, risks assessed and risk controls implemented.</p> <p>1.5.Suitable safety and Personal Protective Equipment (PPE) is selected, used, maintained and stored.</p> <p>1.6.A clean and safe work area is maintained throughout and on completion of work.</p>
2. Prepare the planting area	<p>2.1.Layout of services is recognised, depths checked against the site plan, and discrepancies are reported to the supervisor and the relevant authority.</p> <p>2.2.Earthworks are undertaken according to documented work procedures.</p> <p>2.3.Additives are selected and applied, as required,</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to site conditions.</p> <p>2.4. The planting site is watered, where required, according to the planting method and enterprise work procedures.</p> <p>2.5. Positions of plants are marked out on site according to the plant establishment program.</p> <p>2.6. Debris and pollutants are removed from the site and disposed of in an environmentally aware and safe manner.</p>
3. Undertake planting operation	<p>3.1. All plants are inspected for health, vigour and well established root systems prior to being planted.</p> <p>3.2. Plants with major defects are returned to the supplier or set aside to be returned.</p> <p>3.3. Plants with minor defects are trimmed or treated to maintain health and vigour.</p> <p>3.4. Plants are planted with appropriate spacings as detailed in the plant establishment program.</p> <p>3.5. Planting methods comply with the growing requirements of individual plant species and cultivars.</p> <p>3.6. Newly installed plants are provided with post-planting care.</p> <p>3.7. Pruning is undertaken, where necessary, according to the needs of the species and cultivar to ensure plants develop a sound framework for their growth and habit.</p>
4. Review the plant establishment works	<p>4.1. The plant establishment program is reviewed according to enterprise work procedures.</p> <p>4.2. Plants incorrectly planted, or situations that will prevent plants from reaching their full potential are identified, recorded and reported.</p> <p>4.3. Remedial action is undertaken to ensure all requirements of the plant establishment program are implemented.</p>
5. Complete establishment works	<p>5.1. Earthworks and surface finishes are completed to plan specifications.</p> <p>5.2. Waste material is removed from the planting site.</p> <p>5.3. Work outcomes are recorded and reported to the client or appropriate supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- inspect plant quality
- determine plant health
- interpret site plans and plant establishment specifications
- measure quantities, calculate material requirements, area, volume, ratios and application rates
- record and report work outcomes
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the objectives of the plant establishment program, including finished plant forms, site appearance, end use and time constraints
- the physiology of required plant species and cultivars, culture and planting procedures including growth rates, main nutrient and water requirements, deficiency symptoms, recommended treatments and associated environmental implications
- the identification of pests and diseases, plant symptoms of infections, treatment threshold levels, recommended treatments, methods of application and environmental implications
- soils and soil amelioration techniques
- Occupational Health and Safety (OHS) legislative requirements and codes of practice, OHS procedures, OHS employee and employer responsibilities, and hazard identification, assessment and control.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine plant establishment methods and requirements from plans, clients quotations or instructions</li> <li>• interpret planting plans and specifications for a planting project</li> <li>• inspect quality of supplied plants and take appropriate action</li> <li>• conduct a site hazard identification and risk control assessment</li> <li>• undertake planting work, review the work and take remedial action where required.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Species and cultivars may include:	<ul style="list-style-type: none"> <li>• exotic, native, endemic, evergreen, deciduous, conifer and palm trees and shrubs, ground cover plants, bedding displays, and aquatic plants.</li> </ul>
Planting methods may include:	<ul style="list-style-type: none"> <li>• tube planting</li> <li>• hand or machine assisted planting of seedlings</li> <li>• planting of divisions, and transplanting.</li> </ul>
Planting sites may include	<ul style="list-style-type: none"> <li>• large-scale or broadacre woodlots</li> <li>• parks and gardens</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>landscaped areas and recreational reserves.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD302A Plan and maintain plant displays

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of planning and establishing plant displays either indoors or as seasonal displays of annual and perennial plants in garden beds and defines the standard required to: select suitable plants for plant display purposes; prepare plans for a plant display; plant or arrange plants for a plant display; maintain a plant display.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to the planning and establishment of plant displays. This standard is applied using established routines, methods and procedures and is likely to be undertaken without supervision. Responsibility for the work of others installing and maintaining the displays may be required. Discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare plans for plant displays	<ul style="list-style-type: none"> <li>1.1. Display site is inspected for aesthetic, environmental and physical attributes.</li> <li>1.2. Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</li> <li>1.3. Personal Protective Equipment (PPE) is selected, used and maintained according to procedures.</li> <li>1.4. Location and projected life of display are identified on the display plan.</li> <li>1.5. Plant types suitable for aesthetic effects, environmental and physical attributes are identified on the display plan.</li> <li>1.6. Actions, timelines and work organisation are identified on the display plan in consultation with the supervisor or manager.</li> <li>1.7. Availability of plants, materials and services for preparing the display are confirmed.</li> <li>1.8. Materials, tools, equipment and machinery are selected according to the display plan and enterprise work procedures.</li> </ul>
2. Select plants	<ul style="list-style-type: none"> <li>2.1. Plants selected are healthy and vigorous and comply with enterprise specifications for quality.</li> <li>2.2. Number and size of plants are selected according to the display plan.</li> <li>2.3. Plants selected display the ability to survive in the</li> </ul>

ELEMENT	PERFORMANCE CRITERIA
	display position for the length of the display.
3. Place plants	3.1.Plants are placed in a pattern specified by the plan. 3.2.Accessories and materials are chosen as specified in the plan. 3.3.Work is undertaken according to OHS requirements.
4. Maintain plants	4.1.Health of the plants is monitored to ensure retain optimum appearance. 4.2.Plants are fertilised and watered to maintain optimum health and appearance. 4.3.Plants are replaced when no longer at optimum health and appearance. 4.4.Rubbish, litter and decaying material are removed from plants, pots and surrounds to maintain optimum appearance of display.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with work team members, supervisors, suppliers and customers
- prepare design plans and specifications
- calculate number of plants and materials
- determine spatial measurements of display site
- co-ordinate own activities sequentially
- effectively complete plant display in a timely manner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- aim and purpose of building plant displays
- design principles for plant displays
- features and characteristics of a range of plants used for display purposes



**REQUIRED SKILLS AND KNOWLEDGE**

- growing requirements of a range of common plants used in plant displays
- common problems occurring with display plants
- remedial action required for display plants displaying health problems.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select suitable plants for plant display purposes
- prepare plans for a plant display
- plant or arrange plants for a plant display
- maintain a plant display.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Plant displays may include:

- displays for functions
- annual bedding displays
- herbaceous perennial displays

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>indoor presentations.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD303A Perform specialist amenity pruning

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of performing specialist amenity pruning and the application of specialist pruning techniques and defines the standard required to: determine pruning requirements for a range of amenity plants; undertake a range of specialist pruning techniques; assess pruning quality; meet pruning program requirements; select use and maintain pruning tools and equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of performing specialist amenity pruning. The standard requires knowledge of pruning tools and equipment, principles and techniques of specialist pruning, and identification of relevant plants.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for specialist amenity pruning	<p>1.1.Plants are visually inspected and pruning strategy is determined according to the plants characteristics or desired outcome.</p> <p>1.2.Occupational Health and Safety (OHS) hazards are identified, risks assessed and suitable controls implemented.</p> <p>1.3.Pruning tools and equipment are selected and prepared according to the extent of the pruning program and enterprise guidelines.</p> <p>1.4.Where required, references are consulted to determine best pruning strategies for special plants.</p>
2. Undertake specialist pruning	<p>2.1.Equipment is used according to OHS requirements and manufactures specifications.</p> <p>2.2.Pruning is undertaken according to established and specialist pruning techniques.</p> <p>2.3.Site environmental concerns are adhered to in accordance with relevant legislation and/or regulations</p> <p>2.4.Waste material is disposed of according to enterprise guidelines.</p> <p>2.5.Tools, equipment and machinery are cleaned, maintained, serviced and stored consistent with enterprise guidelines and manufacturers specifications.</p> <p>2.6.Site is cleared and cleaned according to enterprise guidelines.</p>
3. Assess pruning	3.1.Plants selected for specialist pruning are visually

ELEMENT	PERFORMANCE CRITERIA
quality	<p>checked to assess pruning quality.</p> <p>3.2. Pruning work is reviewed to ensure pruning requirements have been met</p> <p>3.3. Where required remedial work is carried out to ensure the pruning work meets objectives.</p> <p>3.4. Completed pruning is recorded and communicated to management and/or the client according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- recognise common diseases, pests and nutrition deficiencies in trees
- sharpen and maintain tools required for pruning
- undertake a range of specialist pruning techniques
- assess pruning quality
- meet pruning program requirements
- store and carry tools safely
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- identification of plant species and their pruning requirements
- principles and methods of specialist pruning to achieve given objectives
- anatomy and physiology of plants, shrubs and trees
- effect on plant growth and habit after pruning
- specialist tools and equipment
- local government tree protection and preservation regulations

**REQUIRED SKILLS AND KNOWLEDGE**

- AS4373-2007 Pruning of amenity trees
- relevant Code of Practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine pruning requirements for a range of amenity plants
- undertake a range of specialist pruning techniques
- assess pruning quality
- meet pruning program requirements
- select use and maintain pruning tools and equipment.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Plants that require pruning may include:

- plants that require special treatment including fruit trees and vines

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• ornamental flowering trees and shrubs</li> <li>• standards</li> <li>• topiaries</li> <li>• pleached arbors</li> <li>• roses</li> <li>• other plants that have special pruning requirements due to flowering, growth or other characteristics.</li> </ul>
Techniques may include:	<ul style="list-style-type: none"> <li>• cleaning out</li> <li>• crown lifting</li> <li>• crown reduction</li> <li>• pruning for structural integrity</li> <li>• crown renewal</li> <li>• crown thinning</li> <li>• dead wooding</li> <li>• hedging</li> <li>• branch</li> <li>• root pruning</li> <li>• espaliers</li> <li>• topiary</li> <li>• preparation of standards</li> <li>• bonsai</li> <li>• epicormic and green shoot removal according to desired outcomes, plant habit and seasonal needs.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCPGD304A Implement a landscape maintenance program

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a landscape maintenance program of newly constructed or established landscapes and defines the standard required to: determine the scope, frequency and standards required for a range of routine landscape maintenance activities from an existing landscape maintenance program; implement landscape maintenance activities; evaluate landscape maintenance works; record the results of the maintenance works.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to implementing a landscape maintenance program on newly constructed or established landscapes and is carried out under limited supervision from others, with checking only related to overall progress. The work requires the application of extensive horticultural knowledge and a broad range of horticultural skills. Landscape maintenance is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions, and achieving outcomes within time constraints.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Interpret a landscape maintenance program	1.1.Scope of maintenance works is determined according to the landscape maintenance program. 1.2.Frequency of maintenance works is determined and implemented according to the landscape maintenance program. 1.3.Landscape maintenance standards are established in line with the landscape maintenance program. 1.4.Maintenance tasks are planned and prepared. 1.5.Occupational Health and Safety (OHS) hazards are identified, associated risks assessed and suitable controls implemented.
2. Monitor and maintain landscape areas	2.1.A site inspection checklist is prepared or used according to the landscape maintenance program. 2.2.Remedial action, repairs, renovations, treatments and replacements are identified to restore site to full effectiveness. 2.3.Maintenance tasks are implemented.

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4. Items which are beyond the scope of the maintenance program are reported to the nominated person.</p> <p>2.5. Items requiring further action are recorded.</p> <p>2.6. Results of maintenance works are evaluated and recorded.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- determine maintenance requirements
- implement maintenance operations
- treat diseased plants
- repair and renovate landscape structures and features
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- a detailed knowledge of what is included (and what is excluded) from the landscape maintenance program or contract
- actions permitted in the event of variations to maintenance programs/contracts
- appropriate horticultural practices for heritage and cultural areas
- principles and applications of an integrated pest management program
- characteristics of a range of plants
- optimal growing conditions for a range of plants
- common problems occurring in a range of plants.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the scope, frequency and standards required for a range of routine landscape maintenance activities from an existing landscape maintenance program</li> <li>• implement landscape maintenance activities</li> <li>• evaluate landscape maintenance works</li> <li>• record the results of the maintenance e works.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Programs may include:	<ul style="list-style-type: none"> <li>• care of plants</li> <li>• repairs and maintenance of landscape features and amenities.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD305A Conduct operational inspection of park facilities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of inspecting park/recreational facilities to identify hazards, existing and/or potential risks, and non-conformities with Australian Standards and Occupational Health and Safety (OHS) requirements and defines the standard required to: confirm with client the facilities to be inspected, standards to be referenced and reporting formats; conduct inspections and record details of non-conformities; note signs of potential damage or issues that may arise and require follow-up; evaluate condition of facilities; communicate directly any issues requiring urgent action; and complete inspection reports.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of conducting an operational inspection of park/recreational facilities and is likely to be under limited supervision from others and with checking only related to overall progress. The work is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for operational inspection	<p>1.1. Specific facilities and equipment to be inspected and purpose of the inspection are determined according to operational request.</p> <p>1.2. Tools and equipment for testing and inspection are selected according to enterprise work procedures.</p> <p>1.3. Pre-operational and safety checks are carried out on tools and equipment according to manufacturer specifications and enterprise work procedures.</p> <p>1.4. Appropriate checklists and reporting formats are prepared to suit the application.</p> <p>1.5. Different types of facilities are identified from checklist descriptions.</p> <p>1.6. Specific terminology used in checklists is clarified with the supervisor.</p>
2. Undertake operational inspection	<p>2.1. Modes of non-conformity with Australian Standards, OHS guidelines and enterprise standards are identified and recorded.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.2. Hazards and indications and signs of hidden faults are detected and recorded. 2.3. Checklist entries are concise and accurate. 2.4. Inspections are undertaken according to OHS requirements.
3. Finalise the park inspection	3.1. Situations requiring urgent action or closure of facilities are reported immediately to supervisors. 3.2. Recommendations to rectify non-conformities are noted as required. 3.3. An inspection report is completed and submitted to the client/supervisor.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- evaluation of condition of facilities
- understand design symbols and terminology
- compare actual measurements of inspected components with legal, OHS and/or enterprise standards and specifications
- apply judgement of estimated level of conformity
- utilise proforma reporting and work procedure documents
- estimate degree of urgency to report serious situations
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the range, use and safety parameters of park/recreational facilities and equipment, their material construction and maintenance requirements
- the operational expectations and enterprise standards for the presentation and working order of a range of park/recreational facilities and equipment
- different modes of non-conformity that may be identified in reference to relevant



**REQUIRED SKILLS AND KNOWLEDGE**

Australian Standards and OHS requirements

- terminology used to describe different components of park/recreational facilities and equipment
- inspection procedures and techniques, and legal and enterprise reporting requirements for maintenance, repair and replacement recommendations
- OHS legislative requirements and codes of practice associated with public use of park facilities
- identification, assessment and control of hazards.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- confirm with client the facilities to be inspected, standards to be referenced and reporting formats
- conduct inspections and record details of non-conformities
- note signs of potential damage or issues that may arise and require follow up
- evaluate condition of facilities
- communicate directly any issues requiring urgent action
- complete inspection reports.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Facilities may include:	<ul style="list-style-type: none"> <li>park facilities and associated hazards.</li> </ul>
Inspection is carried out for:	<ul style="list-style-type: none"> <li>existing and/or potential risks and non-conformities with Australian Standards and OHS requirements.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Parks and gardens
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCPGD306A Implement a maintenance program for an aquatic environment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a maintenance program for an aquatic environment and defines the standard required to: recognise desired and pest plant populations and monitor their levels; apply weed control methods where necessary to maintain balance and remove weeds; apply chemicals according to label directions and keep records; maintain water quality to the required standard for the purpose of the aquatic environment.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to implementing a maintenance program for an aquatic environment and is usually undertaken according to enterprise guidelines and within established routines, methods and procedures. Some discretion and judgement may be required depending on the type and size of the aquatic environment.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for maintenance activities	<p>1.1. Enterprise guidelines and legislative requirements for the maintenance of the aquatic environment are identified, interpreted and applied.</p> <p>1.2. Tools, equipment and machinery are selected and prepared for use according to enterprise guidelines and manufacturers specifications.</p> <p>1.3. Occupational Health and Safety (OHS) hazards are identified, risks assessed, and suitable controls implemented.</p> <p>1.4. Environmental implications associated with maintenance activities are identified and reported to supervisor.</p>
2. Maintain aquatic organisms	<p>2.1. Identification of indigenous, exotic and pest aquatic animals and/or plants is undertaken for the specific aquatic environment.</p> <p>2.2. Aquatic plant and/or animal monitoring is undertaken and relevant data is recorded, maintained and applied to aquatic plant maintenance activities.</p> <p>2.3. Aquatic animal and/or plant issues are reported to supervisor, with recommendations for action.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4. Control methods are implemented for excess aquatic animals and/or plants, and identified pest animals and/or plants.</p> <p>2.5. Waste plant and animal material is processed according to enterprise guidelines.</p>
3. Maintain water quality	<p>3.1. Where appropriate, water quality monitoring is undertaken for the aquatic environment and the input water resource according to standards for the end use of the aquatic environment.</p> <p>3.2. Monitoring data is recorded, maintained and applied to water quality maintenance activities.</p> <p>3.3. Debris is removed and processed using appropriate equipment according to enterprise guidelines.</p> <p>3.4. Water quality issues are reported to supervisor, with suggestions for remedial action.</p> <p>3.5. Where required, water is discharged, environment is cleaned, and water is recharged from the designated storage area or other input water resource.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate verbally and in writing with work team members, supervisors, contractors and consultants
- interpret site plans and maintenance program requirements, and utilise proforma reporting, recording, analysis and work procedure documents
- measure materials, and aquatic site dimensions
- schedule and implement monitoring activities correctly, and record, interpret and apply monitoring data
- coordinate and supervise work group and own activities to sequentially and effectively complete maintenance activities in a timely, and cost effective manner
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- recognition, physiology and biological characteristics of animals and/or plants

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<p>specific to the aquatic environment</p> <ul style="list-style-type: none"> <li>• aquatic systems ecology</li> <li>• relevant legislation regarding water pollution and management</li> <li>• wildlife habitats associated with the aquatic environment</li> <li>• food chain and nutrient cycling in aquatic systems</li> <li>• OHS legislative requirements and Codes of Practice</li> <li>• regulations and/or Codes of Practice pertaining to Hazardous Substances</li> <li>• safe systems and procedures for handling, transporting and storing chemicals and hazardous substances taking into account toxicity levels and environmental impacts</li> <li>• regulations, Codes of Practices, enterprise systems and procedures for the safe operation and maintenance of machinery and equipment in aquatic environments, and in observing correct safety procedures in working from boats or adjacent to large bodies of water</li> <li>• regulations and industry standards for water quality requirements in association with specified use.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise desired and pest plant populations and monitor their levels</li> <li>• apply weed control methods where necessary to maintain balance and remove weeds</li> <li>• apply chemicals according to label directions and keep records</li> <li>• maintain water quality to the required standard for the purpose of the aquatic environment.</li> </ul>
<b>Context of and specific resources for</b>	Competency requires the application of work practices

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Maintenance programs may include:	<ul style="list-style-type: none"> <li>• monitoring water quality and the movement of water into and out of the environment.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Parks and gardens
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCPGD401A Design plant displays

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of the design and preparation of plant displays for special occasions and defines the standard required to: design a plant display according to client requirements and site limitations; select suitable plants for a range of interior/indoor or outdoor plant display purposes; document a design for plant display.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to contractors and staff engaged in the process of designing of plant displays in a wide range of locations and situations, buildings and structures and applies to permanent, semi-permanent and temporary displays of plant life under a range of gardening, exhibition, visual merchandising, marketing and commercial leasing and hiring activities. Designing plant displays requires detailed knowledge of plant selection and a sound understanding of design principles. Responsibility for the work of others installing and maintaining the displays may be required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop the design concept plan	1.1.Design concepts for the display are developed from the client brief. 1.2.Site/location is evaluated for aesthetic, environmental and physical attributes. 1.3.Time-lines for display are determined and incorporated into the plan. 1.4.Budget parameters for concept plan are clarified with client/manager. 1.5.Concept plan is developed using common horticultural conventions.
2. Ensure compliance with the design plan	2.1.Concept plan is presented to client and agreement reached on design. 2.2.Final design plan documentation is developed. 2.3.Plants and display materials are inspected prior to installation to ensure they meet required quality standards. 2.4.Plant display is inspected to ensure compliance with design plan.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and analyse information about plant and materials specifications, cultural requirements and environmental requirements
- evaluate sites/locations to determine the effect of aesthetic, environmental and physical attributes on nature of display
- develop maintenance programs
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- site evaluation techniques
- principles of design
- plant identification, physiology, taxonomy and nomenclature
- plant selection
- characteristics of a range of plants used in plant displays
- growth and maintenance requirements of plants in natural and artificial environments
- wide range of plants commonly used in plant displays
- processes and techniques for preparing, costing and documenting plans for plant displays
- industry codes of practice
- horticultural conventions for design plans.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• design a plant display according to client requirements and site limitations</li> <li>• select suitable plants for a range of interior/indoor or outdoor plant display purposes</li> <li>• document a design for plant display.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plants may include	<ul style="list-style-type: none"> <li>• all plant species and cultivars.</li> </ul>
Displays may include:	<ul style="list-style-type: none"> <li>• displays for merchandising</li> <li>• functions</li> <li>• annual bedding displays</li> <li>• herbaceous perennial displays</li> <li>• indoor presentations.</li> </ul>
Designs plans may include:	<ul style="list-style-type: none"> <li>• a wide range of contexts and styles of presentation, design elements</li> <li>• styles and design plans and models.</li> </ul>
Plant displays may include:	<ul style="list-style-type: none"> <li>• containerised or direct planted installations.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Parks and gardens
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCPGD402A Plan a plant establishment program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing a plant establishment program and a relevant site plan and specifications, and defines the standard required to: develop a concept plan that reflects client needs, site factors and the growing requirements of plants; select the plant species and cultivars, and the required quantities of plant material and other resources; develop and document detailed site plan, specifications and quotation; detail on-site procedures for implementing the plan and maintaining the site.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes planning a plant establishment programs.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out preliminary planning activities for the plant establishment program	<p>1.1. Client preferences and requirements for the plant establishment program are understood and confirmed.</p> <p>1.2. The plant establishment site is assessed for legal attributes, biophysical factors, services and historical modifications.</p> <p>1.3. Research is conducted into plant species and cultivars, and local by-laws and restrictions that may affect the plant establishment program.</p> <p>1.4. Environmental implications of the planned programs are identified and if necessary, reported to relevant personnel for further research.</p> <p>1.5. A concept plan that reflects client preferences and requirements, takes into account site factors and any identified environmental requirements, is developed and presented to the client for discussion and approval.</p>
2. Determine requirements of the plant establishment program	<p>2.1. Plant species and cultivars that are appropriate to the site and consistent with the agreed concept plan are identified, and the required quantity calculated, costed, and availability confirmed with suppliers.</p> <p>2.2. Plant establishment procedures are selected consistent with the agreed concept plan, and according to the characteristics of available plant materials, the resources and equipment available, and the environmental factors affecting the success of the plant establishment program.</p> <p>2.3. Post-planting care is provided for according to client</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>requirements, enterprise standards and site capabilities.</p> <p>2.4.Resources, tools, equipment and machinery required for planting and post-planting care are identified, costed, and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.5.Occupational Health and Safety (OHS) hazards associated with the plant establishment program are identified; risks assessed and controls developed according to enterprise guidelines, costed and documented in the plan.</p> <p>2.6.Staged implementation and development are outlined, where appropriate, with access for future works provided for according to client, enterprise and site requirements.</p> <p>2.7.Timelines for preparations, planting and post-planting care are determined taking into account the needs of the plant species and cultivars, site conditions, and any other planning requirements.</p>
<p>3. Prepare and document the plant establishment program and specification</p>	<p>3.1.Detailed plan, specifications and quotation are prepared based on the requirements of the plant establishment program, and presented to appropriate personnel and the client for acceptance.</p> <p>3.2.Scaled site plan is produced which can be readily interpreted and understood by on-site personnel according to enterprise standards.</p> <p>3.3.Detailed on-site procedures and schedules required for the planting of the site and post-planting care of plants are developed and documented.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- comply with legislative requirements
- document plans, specifications and work procedures, and write reports for the understanding of staff, clients and contractors

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• calculate the cost and spatial and logistical requirements of components of the plant establishment program</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• identification, propagation and establishment techniques of specific plant species and cultivars</li> <li>• the advantages and disadvantages of a range of plant establishment procedures</li> <li>• maintenance requirements and practices for specific plant species and cultivars, prior to and after initial establishment</li> <li>• processes and techniques for preparing, costing and documenting plans for and scheduling plant establishment activities.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop a concept plan that reflects client needs, site factors and the growing requirements of plants</li> <li>• select the plant species and cultivars, and the required</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<p>quantities of plant material and other resources</p> <ul style="list-style-type: none"> <li>• develop and document detailed site plan, specifications and quotation</li> <li>• detail on-site procedures for implementing the plan and maintaining the site.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Establishment sites may include:	<ul style="list-style-type: none"> <li>• large-scale or broad acre woodlots</li> <li>• revegetation areas</li> <li>• parks and gardens</li> <li>• landscaped areas</li> <li>• recreational reserves</li> <li>• sports turf or recreational turf surfaces</li> <li>• commercial nursery, floriculture and production horticulture sites.</li> </ul>
Plant species and cultivars may include:	<ul style="list-style-type: none"> <li>• exotic</li> <li>• native</li> <li>• endemic</li> <li>• evergreen</li> <li>• deciduous</li> <li>• conifer and palm trees and shrubs</li> <li>• turf</li> <li>• grasses</li> <li>• ground cover plants</li> <li>• bedding displays</li> <li>• aquatic plants.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD501A Manage plant cultural practices

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing a plant cultural program and defines the standard required to: specify the plant cultural practices of the site; develop plant cultural practice management plans; manage the implementation of a plant cultural program; monitor and evaluate the processes in implementing a plant cultural program; document the program results in a report.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to parks and gardens and landscape managers program.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define the plant cultural requirements of the site	<p>1.1.The range of plant life areas and plant species is surveyed and recorded.</p> <p>1.2.Materials, equipment and labour required for implementation and maintenance are determined, acquired and maintained.</p> <p>1.3.Site hazards are identified, risk assessed and appropriate controls are implemented.</p> <p>1.4.Staff capability of skills and knowledge are assessed against implementation and maintenance requirements.</p> <p>1.5.Staff training and development is implemented in accordance with requirements.</p>
2. Develop a plant cultural program for the site	<p>2.1.Plant cultural practices are determined over the duration of a documented planning period.</p> <p>2.2.Soil types and growing media are prepared, sampled and tested through field tests by staff and laboratory tests by specialist services.</p> <p>2.3.Resources are allocated and appropriate budgets are developed for the implementation period.</p> <p>2.4.Specialist cultural practice services required are sourced and contracted.</p> <p>2.5.Schedule of operations is developed for the implementation period.</p> <p>2.6.Allowance is made in the program for environmental and cultural contingencies.</p>
3. Manage the implementation of the	<p>3.1.Routine and contracted services are implemented.</p> <p>3.2.Test results are interpreted and soils and growing</p>

ELEMENT	PERFORMANCE CRITERIA
program	<p>media are appropriately ameliorated.</p> <p>3.3. Staff are allocated, supervised and appraised for performance.</p> <p>3.4. Materials and equipment are used according to Occupational Health and Safety (OHS) requirements and documented safe operating procedures.</p> <p>3.5. Progress reports are logged detailing the on-going results of the plant cultural program.</p>
4. Monitor, review and document the program	<p>4.1. Daily workplace records, weekly or monthly expenses, and other information relevant to the plant cultural program are itemised in registers or diaries.</p> <p>4.2. Costs and expenditure are evaluated against budgets and documented in a report.</p> <p>4.3. Routine and contracted services are monitored, evaluated and performance audits recorded.</p> <p>4.4. The plant cultural program is compared to previous programs and appropriate adjustments are made</p> <p>4.5. Results are documented in a report covering all items of recorded information in the program.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- determine plant cultural requirements
- plan schedule of operations
- allocate resources
- develop a cultural program and budget documentation
- contract specialist services
- supervise, monitor and appraise the performance of work team and contracted services
- manage contingencies
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<p>specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• plant identification and selection</li> <li>• plant cultural practices</li> <li>• plant anatomy, physiology, morphology, taxonomy and nomenclature</li> <li>• plant life maintenance practices</li> <li>• operation and maintenance of irrigation systems</li> <li>• plant nutrition requirements and practices</li> <li>• soil types, properties, field tests and sampling techniques</li> <li>• legislation and regulations relevant to the plant cultural site</li> <li>• budgeting and planning.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• specify the plant cultural practices of the site</li> <li>• develop plant cultural practice management plans</li> <li>• manage the implementation of a plant cultural program</li> <li>• monitor and evaluate the processes in implementing a plant cultural program</li> <li>• document the program results in a report.</li> </ul>

**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Cultural practice requirements may include:

- soil preparation and conditioning
- planting
- plant maintenance practices
- staking
- hedging
- pruning
- all turf maintenance activities in the area of open space management.

Cultural practices may include:

- differences for each cultural practice type or cultural plant group.

Specialist turf cultural practices may include:

- turf maintenance activities such as:
  - establishment
  - renovating
  - top dressing
  - over-sowing
  - de-compaction
  - pest and disease control.

Specialist tree maintenance may include:

- practices such as mulching
- thinning
- crown reduction
- pollarding
- tree structural management.

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD502A Plan the restoration of parks and gardens

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of planning the restoration of parks and gardens of historical or cultural significance, developing a comprehensive restoration program of works and the development of a relevant site plan, specifications and work procedures and defines the standard required to: assess a restoration site and develop a concept plan; determine the requirements of restoration works; document a detailed plan, specification and quotation; document all procedures required for restoration and ongoing maintenance; document the schedules of work for restoration and maintenance.
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### Application of the Unit

<b>Application of the unit</b>	The unit applies to the process of documenting the project management plan for the restoration of park and gardens.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out preliminary planning activities for restoration works	<p>1.1. Client preferences and requirements for the park or garden are understood and confirmed.</p> <p>1.2. The site is assessed for biophysical factors, historical and cultural attributes, services and site modifications.</p> <p>1.3. Research is conducted and legal attributes and local by-laws and restrictions are identified that may affect the plan for restoration works.</p> <p>1.4. Environmental implications of the planned restoration works are identified and, if necessary, reported to relevant personnel for further research.</p> <p>1.5. A concept plan that reflects client preferences and requirements and takes into account heritage issues, site factors and any identified environmental requirements is developed and presented to the client for discussion and approval.</p> <p>1.6. Other professionals are consulted to assist in research and planning of restoration works according to legislative and enterprise requirements.</p>
2. Determine requirements of restoration works	<p>2.1. Plants that are appropriate to the site, consistent with the agreed concept plan and the original design philosophy, and take into consideration historical and cultural values are identified and the required quantity calculated and costed, and availability and genetic integrity confirmed with suppliers.</p> <p>2.2. Restoration procedures are selected consistent with</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>the agreed concept plan and according to the characteristics of available plant materials, the resources and equipment available, and the environmental factors affecting the success of the restoration works.</p> <p>2.3.Maintenance of softscape and hardscape components of the park or garden is provided for according to client requirements, enterprise standards and site capabilities.</p> <p>2.4.Resources, tools, equipment and machinery required for the planting and ongoing maintenance of the restoration works are identified, costed, and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.5.Occupational Health and Safety (OHS) hazards associated with the restoration works are identified, risks assessed and controls developed according to enterprise guidelines, costed and documented in the plan.</p> <p>2.6.Staged implementation and development are outlined, where appropriate, with access for future works provided for according to client, enterprise and site requirements.</p> <p>2.7.Timelines for preparations, planting and maintenance are determined taking into account the needs of the restoration species, the softscape and hardscape components, site conditions, and any other planning requirements.</p>
<p>3. Prepare and document the restoration plan and specifications</p>	<p>3.1.Detailed plan, specifications and quotation are prepared based on horticultural conventions, original design philosophy and the requirements of the restoration works, and are presented to the client for acceptance.</p> <p>3.2.Scaled site plan is produced which can be readily interpreted and understood by on-site personnel according to enterprise standards.</p> <p>3.3.Detailed on-site procedures and schedules required for the restoration of the park or garden and its ongoing maintenance are developed and documented.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and evaluate information
- calculate the cost and spatial and logistical requirements of components of the restoration works
- comply with legislative requirements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- historic parks and gardens management principles and guidelines
- construction procedures, plant selection and cultural practices for historically or culturally significant parks and gardens
- legislation and regulations relating to heritage sites and restoration works
- site evaluation techniques including methods of analysing the condition of soils, plants and waterways for restoration activities
- growth habits and cultural requirements of specific plants under a range of soil and environmental conditions
- maintenance requirements and practices for specific plants prior to and after initial establishment
- role of project briefs and client consultation processes in planning restoration works
- principles of the Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places and the Burra Charter.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess a restoration site and develop a concept plan</li> <li>• determine the requirements of restoration works</li> <li>• document a detailed plan, specification and quotation</li> <li>• document all procedures required for restoration and ongoing maintenance</li> <li>• document the schedules of work for restoration and maintenance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Parks and gardens may include:	<ul style="list-style-type: none"> <li>• a range of parks and gardens of cultural significance catering to public recreational and leisure activities.</li> </ul>
Relevant charters may include:	<ul style="list-style-type: none"> <li>• the Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places, and the Burra Charter.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Parks and gardens
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPGD503A Manage parks and reserves

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the management of parks and reserves and defines the standard required to: discuss management plan objectives, deliverables and timeline with client; prepare a site plan detailing landscape values, physical features and characteristics, land uses (both past and present), physical condition and biological characteristics; identify land capability and conservation issues on and surrounding the site; analyse site information and description to assess feasibility of management objectives; support discussion points with maps, plans and technical reports; develop and cost recommended actions and present to client for discussion as a draft management plan; consult with stakeholders and incorporate feedback into the final management plan; document a management plan for parks, reserves, gardens or open spaces.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of managing parks, reserves, gardens and open spaces.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Implement business, financial, marketing and human resource management plans	<p>1.1.Goals and objectives for park or reserve management, and the goals and objectives or charter of linked external agencies are identified.</p> <p>1.2.Actions required to achieve plans are identified and operational objectives determined.</p> <p>1.3.Roles, responsibilities and performance targets of staff and work groups are communicated to appropriate personnel.</p>
2. Implement and monitor a purchasing plan	<p>2.1.Purchasing plan is communicated to responsible personnel, systems initiated and monitored, and inventories maintained according to enterprise policy and procedures.</p> <p>2.2.Quantity, quality and timing of supply of each input and service are determined according to the business plan and cash flow budgets.</p> <p>2.3.The purchasing system and records facilitate the selection of suppliers and arrangement of orders.</p> <p>2.4.Inefficiencies, stock outs and system problems are isolated, solutions identified and systems modified according to enterprise policy and procedures.</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Asset databases are established and asset management reports are prepared and presented according to enterprise policy and procedures.</p> <p>2.6. Occupational Health and Safety (OHS) criteria are considered in all purchase decisions.</p>
3. Schedule park or reserve operations	<p>3.1. Schedules and timelines of operations are documented in a form that is accessible and understandable to all relevant personnel.</p> <p>3.2. Quantity, quality and timing of supply of each input and service are identified and coordinated according to the financial, physical and human resource requirements of the operation.</p> <p>3.3. Operations are coordinated to ensure that available labour matches the quantity and type of work to be completed.</p> <p>3.4. Key performance outcomes and indicators are established to measure performance of all park or reserve operations and personnel.</p> <p>3.5. Benchmarking is undertaken according to enterprise policy.</p> <p>3.6. Coordination inefficiencies and problems are isolated, solutions identified, and systems modified according to OHS requirements and enterprise policy and procedures.</p>
4. Manage enterprise office	<p>4.1. Office and administrative systems and communications necessary for the well-ordered running of a business enterprise are developed and implemented.</p> <p>4.2. Equipment relevant to the well-ordered running of the enterprises office is acquired where appropriate and is cost effective.</p> <p>4.3. OHS hazards are identified, risks assessed and suitable controls implemented.</p> <p>4.4. Innovations in office procedures are assessed and implemented where appropriate.</p>
5. Monitor, review and report on changing conditions	<p>5.1. Systems are established to monitor operational objectives, identify variance from plans and adjust actions where necessary.</p> <p>5.2. Systems are established to monitor the immediate and related environments.</p> <p>5.3. Variances likely to affect the achievement of business, financial, marketing and human resource</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>management goals and objectives are identified and reported to senior management in a timely fashion.</p> <p>5.4. Records are maintained, reports provided and reviews documented according to enterprise policy.</p>
6. Recommend improvements to operation	<p>6.1. Operations are reviewed and possible improvements affecting business planning, personnel morale, productivity and systems efficiency are identified.</p> <p>6.2. Recommendations for improvements to operations are documented, supported by appropriate evidence and reasoned arguments, and presented to senior management.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret business, financial, marketing and human resource management plans
- assign work, receive and interpret staff feedback and consultants reports, and respond effectively to achieve management objectives
- implement performance and OHS management systems
- assess financial systems, prepare and monitor budgets and liaise effectively with consultants and other industry contacts on the spatial and logistical aspects of management systems and on-ground operations
- assess environmental impacts on the immediate and related environments and impact reduction techniques
- research and consult to obtain the information required for effective maintenance and development of the park or reserve
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• enterprise management policies and procedures</li> <li>• budgeting, monitoring systems and allocation of monetary resources</li> <li>• asset and resource management</li> <li>• sports and recreational land use applications and associated environmental implications</li> <li>• management information systems</li> <li>• performance management and benchmarking</li> <li>• staff training and development principles, practices and techniques</li> <li>• technologically assisted management tools such as computing systems, software and hardware, and telecommunications equipment</li> <li>• legislative and regulatory requirements relevant to parks and reserve land use applications and management activities (e.g., OHS, HAZCHEM, dangerous goods, duty of care and Australian Standards as they apply to Parks and Gardens - AS/NZS 4486.1:1997)</li> <li>• policies applying across all levels of government and within the specific region, including those under catchment plans</li> <li>• principles of the Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places and the Burra Charter.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• discuss management plan objectives, deliverables and timeline with client</li> <li>• prepare a site plan detailing landscape values,</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>physical features and characteristics, land uses (both past and present), physical condition and biological characteristics</p> <ul style="list-style-type: none"> <li>• identify land capability and conservation issues on and surrounding the site</li> <li>• analyse site information and description to assess feasibility of management objectives</li> <li>• support discussion points with maps, plans and technical reports</li> <li>• develop and cost recommended actions and present to client for discussion as a draft management plan</li> <li>• consult with stakeholders and incorporate feedback into the final management plan</li> <li>• document a management plan for parks, reserves, gardens or open spaces.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Parks and gardens may include:	<ul style="list-style-type: none"> <li>• a range of parks and gardens of cultural significance catering to public recreational and leisure activities.</li> </ul>
Relevant charters may include:	<ul style="list-style-type: none"> <li>• the Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places, and the Burra Charter.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPGD504A Develop and implement a streetscape management plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the development and implementation of a streetscape management plan and defines the standard required to: define the need for a management plan; undertake preliminary planning activities; prepare a site description; analyse site information and description; identify management strategies; document the management plan; implement the management plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of developing and implementing a streetscape management plan and is carried out as an independent task reporting to senior management.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define the need for a streetscape management plan	1.1. Management plan objectives are identified for the streetscape. 1.2. Brief is agreed in consultation with client for streetscape. 1.3. Planning team including specialists and consultants is identified.
2. Undertake preliminary planning activities	2.1. Major stakeholders are identified. 2.2. Availability of specialists to assist in management planning work is ascertained and contracts are prepared where required. 2.3. Timelines for development of the management plan and reporting arrangements to client are established. 2.4. Resources required for the development of management strategies are identified.
3. Prepare a site description	3.1. Landscape values of the area are identified and mapped. 3.2. Physical features and characteristics of the streetscape are identified and mapped. 3.3. Land uses including current, cultural and historical modifications are researched, and their effects on the streetscape are determined and recorded. 3.4. Physical condition of site is assessed and documented. 3.5. Biological characteristics of the site are documented.

ELEMENT	PERFORMANCE CRITERIA
4. Analyse site information and description	<p>4.1.Information is evaluated in terms of core principles and objectives.</p> <p>4.2.Documents are produced including plans, technical reports and maps.</p> <p>4.3.Priorities and key management issues are determined.</p> <p>4.4.Opportunities and constraints to meeting planning objectives and goals are identified and documented.</p> <p>4.5.Presentation to clients/residents is undertaken and feedback incorporated into planning documentation.</p>
5. Identify management strategies	<p>5.1.Management strategies are identified that address defined objectives.</p> <p>5.2.Management strategies are designed to alleviate existing impacts or to target management action.</p> <p>5.3.Management strategies are costed and compared to existing budgets and available resources.</p> <p>5.4.Implementation of work is planned to prioritise outcomes and management resource allocation.</p> <p>5.5.Consultation with clients/residents is undertaken and feedback incorporated into planning documentation.</p>
6. Prepare the management plan	<p>6.1.Site information and management strategies are documented into a draft management plan for consultation.</p> <p>6.2.Consultation with stakeholders and clients is undertaken according to enterprise guidelines.</p> <p>6.3.Changes are made to the draft plan and a final plan is prepared and presented to client.</p>
7. Implement the management plan	<p>7.1.Implementation is carried out within predetermined budget, and according to schedule and strategies set out in management plan.</p> <p>7.2.Implementation strategy is modified to address on-going feedback from clients/residents according to enterprise guidelines.</p> <p>7.3.Reports on progress of implementation works are provided to clients/residents as required by the management plan.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- define the need for a management plan
- undertake preliminary planning activities
- prepare a site description
- analyse site information and description
- identify management strategies
- prepare the management plan
- implement the management plan
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- management planning principles and issues
- basic civil design
- community consultation processes
- landscape assessment, survey and analysis techniques
- horticultural, landscape and arboricultural practices used in streetscape management
- soil, plant and water testing processes and procedures, interpretation and application of results.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• define the need for a management plan</li> <li>• undertake preliminary planning activities</li> <li>• prepare a site description</li> <li>• analyse site information and description</li> <li>• identify management strategies</li> <li>• document the management plan</li> <li>• implement the management plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Streetscape management may include:	<ul style="list-style-type: none"> <li>• streetscapes</li> <li>• recreation and leisure opportunities</li> <li>• improved lifestyle for residents</li> <li>• safety hazards and risks</li> <li>• protection</li> <li>• conservation and restoration works for key plant species</li> <li>• disease and pest flora and fauna control</li> <li>• nutritional issues</li> <li>• erosion, toxicity repair works</li> <li>• habitat rehabilitation.</li> </ul>

### Unit Sector(s)

Unit sector	Parks and gardens
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCPGD505A Conduct comprehensive inspection of park facilities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers conducting comprehensive inspection of park facilities and defines the standard required to: confirm facilities to be inspected, purpose of the inspection, standards to be referenced and reporting formats with the client; identify and record instances of non-conformity with Australian Standards, Occupational Health and Safety (OHS) guidelines and manufacturers standards; conduct inspection of structures for soundness and record checklists and recommendations; assess playground equipment and make recommendations on its lifespan based on advice and specifications from the manufacturer; estimate costs of repair or replacement; communicated directly any issues requiring urgent action or closure of facilities.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to the inspection and compliance audit of park/recreational facilities to identify non-conformities with Australian Standards, legislative and OHS requirements, and manufacturers' standards.</p>
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for comprehensive inspection of park facilities	<p>1.1. Specific facilities and equipment to be inspected and purpose of the inspection are determined according to operational request.</p> <p>1.2. Tools and equipment for testing and inspection are identified, and availability confirmed with appropriate personnel.</p> <p>1.3. Pre-operational and safety checks are carried out on tools and equipment according to manufacturers specifications and enterprise work procedures.</p> <p>1.4. Appropriate checklists and reporting formats are prepared to suit the application.</p> <p>1.5. Different types of facilities are identified from checklist descriptions.</p> <p>1.6. Specific terminology used in checklists is consistent with enterprise policy and guidelines.</p>
2. Undertake comprehensive	2.1. Instances of non-conformity with Australian Standards, OHS guidelines and manufacturers

ELEMENT	PERFORMANCE CRITERIA
inspection of park facilities	<p>standards are identified and recorded.</p> <p>2.2. Inspections for structural integrity are undertaken in an efficient and safe manner according to enterprise policy.</p> <p>2.3. Safety risks and hazards and situations are identified and detailed.</p> <p>2.4. Checklist entries are concise and accurate.</p> <p>2.5. Inspections are undertaken according to OHS requirements.</p>
3. Assess age and predict effective lifespan of existing park facilities	<p>3.1. The manufacturer of playground equipment and structures is identified through reference to original plans and specifications.</p> <p>3.2. Age and future lifespan of park facilities are determined and recorded.</p> <p>3.3. Costs of repair or replacement of park facilities are estimated and recorded.</p>
4. Submit report and recommendations	<p>4.1. Situations requiring urgent action are addressed according to OHS and enterprise policy.</p> <p>4.2. Concise and accurate reports are prepared and submitted to management.</p> <p>4.3. Existing management systems are reviewed, particularly regarding frequency of inspection, and improved in consultation with management.</p> <p>4.4. Recommendations for future action are consistent with industry standards and best practice.</p> <p>4.5. Collected data and information is submitted for inclusion on the asset management system.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret standards, specifications and legal requirements
- interpret design symbols and terminology
- estimate costs of repair or replacement
- use literacy skills to fulfil job roles as required by the organisation. The level of

## REQUIRED SKILLS AND KNOWLEDGE

skill may range from reading and understanding documentation to completion of written reports

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- working knowledge of a range of park facilities and equipment including installation methods, intended use, intended users and safety parameters
- practical understanding of the terminology used to describe different components of park facilities and equipment
- the different modes of non-conformity that may be identified in relation to specific park facilities and equipment
- relevant national industry standards (e.g., AS486.1, AS4422, AS1924.1 and AS1924.2)
- Information management systems (e.g., AS4456)
- practical understanding of inspection and auditing procedures and techniques, and legal and enterprise reporting requirements for recommendations on maintenance, repair and replacement of park facilities
- OHS hazards associated with conducting a comprehensive inspection of park facilities and equipment, and the controls necessary to remove or minimise associated risks
- OHS legislative requirements and Codes of Practice
- hazard identification, assessment and control.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>confirm facilities to be inspected, purpose of the inspection, standards to be referenced and reporting formats with the client</li> <li>identify and record instances of non-conformity with Australian Standards, OHS guidelines and manufacturers standards</li> <li>conduct inspection of structures for soundness and record checklists and recommendations</li> <li>assess playground equipment and make recommendations on its lifespan based on advice and specifications from the manufacturer</li> <li>estimate costs of repair or replacement</li> <li>communicated directly any issues requiring urgent action or closure of facilities.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Parks may include</p>	<ul style="list-style-type: none"> <li>a range of parks catering to public recreational activities.</li> </ul>
<p>Facilities and equipment may include</p>	<ul style="list-style-type: none"> <li>playgrounds</li> <li>playground soft fall and pathways</li> <li>play equipment</li> <li>parks and street furniture and structures</li> <li>bridges</li> <li>boardwalks</li> <li>decks and viewing decks</li> <li>fences</li> <li>barbeques</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• steps and stairs</li> <li>• bollards</li> <li>• tree and grass protection devices</li> <li>• paved, turf and/or grassed recreational areas.</li> </ul>
Australian Standards may include	<ul style="list-style-type: none"> <li>• playgrounds</li> <li>• boardwalks</li> <li>• shelters</li> <li>• pathways</li> <li>• ramps for people with disabilities</li> <li>• lookouts and fences (e.g., AS4486.1, AS4422, AS1924.1 and AS1924.2).</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Parks and gardens
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPHT101A Support horticultural production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting horticultural production and defines the standard required to: prepare materials, tools and equipment for work; complete routine horticulture production assistance work, including the safe use and operation of farm tools and equipment; clean up and dispose of waste consistent with environmental and enterprise requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others undertaking horticultural crop production work.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for horticultural production work	<p>1.1.The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2.Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3.Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5.Work support is provided according to Occupational Health and Safety (OHS) requirements and according to workplace information.</p> <p>1.6.OHS hazards are identified and reported to the supervisor.</p>
2. Undertake horticultural production work as directed	<p>2.1.Instructions and directions provided by supervisor are followed and clarification sought when necessary.</p> <p>2.2.Work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3.Interactions with other staff and customers are carried out in a positive and professional manner.</p> <p>2.4.Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.</p> <p>2.5.Problems or difficulties in completing work to</p>

ELEMENT	PERFORMANCE CRITERIA
	required standards or timelines are reported to supervisor.
3. Handle materials and equipment	3.1. Waste material produced during work is stored in a designated area according to supervisor's instructions. 3.2. Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines. 3.3. A clean and safe work site is maintained while working.
4. Clean up on completion of work	4.1. Materials are returned to store or disposed of according to supervisor's instructions. 4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions. 4.3. Work outcomes are reported to the supervisor.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safety directions
- prepare materials, tools and equipment for work
- undertake work as directed
- handle materials and equipment
- clean up on completion of work
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- safe work practices
- planting, picking, packing, loading and transporting techniques appropriate to this

**REQUIRED SKILLS AND KNOWLEDGE**

level

- use of horticultural tools and equipment
- OHS and environmental protection legislation and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare materials, tools and equipment
- complete routine horticulture production assistance work including the safe use and operation of farm tools and equipment
- clean up and dispose of waste consistent with environmental and enterprise requirements.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Work tasks may include:

- assistance with all activities associated with

<b>RANGE STATEMENT</b>	
	horticultural production such as: <ul style="list-style-type: none"> <li>• land preparation</li> <li>• seeding/planting</li> <li>• maintaining</li> <li>• loading and unloading</li> <li>• harvesting/picking</li> <li>• sorting</li> <li>• packing.</li> <li>• assisting with routine maintenance or cleaning of sheds and other buildings, fences, fixtures and fitting.</li> </ul>
Tools and equipment may include:	<ul style="list-style-type: none"> <li>• knives</li> <li>• secateurs</li> <li>• spades</li> <li>• forks</li> <li>• ladders</li> <li>• hoes</li> <li>• packing equipment</li> <li>• boxes</li> <li>• bins and buckets</li> <li>• hoses and hose fittings.</li> </ul>
Hazards may include:	<ul style="list-style-type: none"> <li>• solar radiation</li> <li>• dust</li> <li>• noise</li> <li>• air- and soil-borne micro-organisms</li> <li>• chemicals and hazardous substances</li> <li>• sharp hand tools and equipment</li> <li>• manual handling</li> <li>• holes</li> <li>• slippery and uneven surfaces.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCPTH201A Plant horticultural crops

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of planting of horticultural crops and defines the standard required to: prepare soil or growing media for planting; apply pre-planting soil and plant treatments; carry out planting and water in plants; apply other treatments to seedlings if required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in the annual, vegetable and flower growing industries operating within established routines, methods and procedures and is likely to be under supervision and according to directions.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for crop planting operations	1.1. Instructions about planting the crop are applied. 1.2. Machinery, equipment and tools are prepared for crop planting tasks. 1.3. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor. 1.4. Personal Protective Equipment (PPE) is used and maintained according to safety procedures.
2. Prepare the site and plant material for planting	2.1. Soil or growing media is prepared. 2.2. Crop protection is implemented. 2.3. Pre planting treatments are applied. 2.4. Planting material is stored where required. 2.5. Machinery, equipment and tools for soil preparation are operated according to low risk operating procedures.
3. Carry out planting operations	3.1. Planting material is selected according to enterprise quality standard. 3.2. Planting materials are stored, handled and transported to the site. 3.3. Planting is carried out. 3.4. Plants are watered in and any post planting treatments applied.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use and maintain planting equipment
- select planting material
- apply enterprise quality standards
- measure quantities of plant materials and treatments
- estimate spacing and planting patterns
- operate machinery to manufacturers specifications and low risk operating procedures
- apply agricultural chemicals under supervision
- identify hazards
- follow safety procedures
- participate in teams and contribute to team objectives
- communicate with team members and supervisor
- read and interpret a range of workplace information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- principles of sustainable horticultural practices
- growing requirements of plants
- basic plant physiology
- soil structure and health
- basic preparation of soil and growing media
- importance of field hygiene and quality control in regard to crop planting
- principles of pest, weed and disease control
- nutritional, water and other requirements of the crop
- the importance of correct timing and procedures for crop planting
- range of pre-planting soil and plant treatments and their importance
- environmental impacts and risks of planting horticultural crops.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare soil or growing media for planting</li> <li>• apply pre-planting soil and plant treatments</li> <li>• carry out planting</li> <li>• water in plants and apply other treatments to seedlings if required.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Crops may include:	<ul style="list-style-type: none"> <li>• the range of annual, vegetable and flower crops.</li> </ul>

## Unit Sector(s)

<b>Unit Sector</b>	Production horticulture
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCPHT202A Carry out canopy maintenance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of carrying out canopy maintenance and defines the standard required to: use, store and maintain tools safely and in line with plant hygiene requirements; remove unwanted growth and treat cuts if required; shape, support or position the canopy according to enterprise requirements; dispose of cuttings according to quarantine and environmental procedures; report problems or signs of disease to supervisor.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of manual or mechanised canopy maintenance, and includes the removal of unwanted vegetative growth and the erection and removal of protective covers during the growing period of crops. This standard relates to working under direct supervision with regular checking. Reporting and recording is required under some situations.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for canopy maintenance activities	1.1. Instructions for canopy maintenance are obtained from and confirmed with the supervisor. 1.2. Tools and equipment are collected and prepared for use. 1.3. Occupational Health and Safety (OHS) hazards are identified and reported to the supervisor. 1.4. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.
2. Carry out basic canopy maintenance	2.1. Unwanted growth is identified and removed according to supervisor's instructions. 2.2. Pruned material is pulled out of the canopy according to supervisors instructions. 2.3. Perform post-pruning treatments on the canopy. 2.4. Canopy is shaped, supported or positioned according to instructions. 2.5. Control measures to regulate exposure of the crop to sun and to protect crop from damage are applied according to supervisor's instructions. 2.6. Equipment is operated and maintained according to work instructions and enterprise OHS procedures.
3. Complete canopy maintenance activities	3.1. Tools and equipment are cleaned, sharpened and stored according to enterprise housekeeping, hygiene and site quarantine procedures.

ELEMENT	PERFORMANCE CRITERIA
	3.2. Pruned material is disposed of according to enterprise environmental procedures. 3.3. Problems and anomalies are identified and reported to the supervisor.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use and maintain basic hand and power tools and equipment
- interpret instructions and communicate with team members and supervisor, and calculate hours and personal production rate
- participate in teams and contribute to team objectives
- dispose of pruning waste in an environmentally aware and sensitive manner, e.g. sort waste for mulching and minimise risk of cross contamination from infected/infested material
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic canopy maintenance techniques and their importance in relation to the desired quality of fruit the enterprise is aiming to produce
- difference between fruiting and non-fruiting wood
- the effect of different climatic conditions on canopy maintenance requirements
- the importance of hygiene and quality control when performing basic canopy maintenance activities
- OHS responsibilities of employees when maintaining a canopy.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• use, store and maintain tools safely and in line with plant hygiene requirements</li> <li>• remove unwanted growth and treat cuts if required</li> <li>• shape, support or position the canopy according to enterprise requirements</li> <li>• dispose of cuttings according to quarantine and environmental procedures</li> <li>• report problems or signs of disease to supervisor.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Maintenance may include:	<ul style="list-style-type: none"> <li>• unwanted non-fruiting wood such as suckers and water shoots</li> <li>• damaged limbs or those that have died back</li> <li>• congested shoots</li> <li>• excessive fruit, flowers, or leaves.</li> </ul>



## Unit Sector(s)

Unit sector	Production horticulture
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCPTH203A Support horticultural crop harvesting

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of supporting horticultural crop harvesting and defines the standard required to: estimate the readiness of produce for picking; harvest the crop using the correct technique; stack produce in containers without causing damage or losses; transport produce from the field according to enterprise requirements; select and grade produce at picking where required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of crop picking and related tasks such as routine estimation of crop readiness for harvest, basic sorting, bunching and grading, and transportation of the crop from the field. Crop harvesting is usually carried out within established company procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. 1 Perform routine assessment of plant products for harvest	1.1.Estimate of crop maturity is reported to the supervisor.
2. 2 Prepare equipment for harvesting	2.1.Tools, equipment and machinery appropriate to the task being undertaken are selected. 2.2.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and written work procedures. 2.3.Occupational Health and Safety (OHS) hazards are identified and reported to the supervisor. 2.4.Suitable Personal Protective Equipment (PPE) is selected, used and maintained.
3. 3 Harvest the crop	3.1..Harvesting procedures minimise plant damage. 3.2.Harvesting the crop is undertaken according to OHS requirements. 3.3.Basic sorting and grading of the crop is carried out. 3.4.Harvesting tools, equipment and machinery are cleaned and maintained. 3.5.Problems are reported to the supervisor.
4. 4 Transport the crop	4.1.Safe manual handling techniques are employed when handling containers. 4.2.Containers are moved and stacked in such a way that

ELEMENT	PERFORMANCE CRITERIA
	<p>minimises damage to the crop.</p> <p>4.3. Temperature of the crop is maintained at the levels set by industry and written work procedures.</p> <p>4.4. The crop is transported from the field to the processing or storage area.</p> <p>4.5. Containers are maintained in good working order.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess the readiness of produce for picking
- use the correct crop harvesting technique the efficiently
- stack produce without damage or loss
- transport produce
- select and grade produce
- participate in teams and contribute to team objectives
- dispose of out-of-standard plant material in an environmentally aware and sensitive manner, such as the careful disposal of rotten produce to minimise smell and the spread of insect pests and disease
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- recognition of crop maturity of a range of crops
- enterprise quality procedures
- grading characteristics of each crop
- the importance of maintaining quality of produce including cooling requirements and quick transport from field to processing areas
- the effect of adverse climatic conditions (e.g., rain, hail, extreme wind with dust, or

**REQUIRED SKILLS AND KNOWLEDGE**

very high ultraviolet radiation), which may downgrade the quality of affected crop, prevent or impede harvest operations or severely influence the time taken to complete the harvest program.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- estimate the readiness of produce for picking
- harvest the crop using the correct technique
- stack produce in containers without causing damage or losses
- transport produce from the field according to enterprise requirements
- select and grade produce at picking where required.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Crops may include:	<ul style="list-style-type: none"> <li>• a wide variety of horticultural crops including those for human consumption.</li> </ul>
Horticultural crops may include:	<ul style="list-style-type: none"> <li>• all fruit</li> <li>• vegetables</li> <li>• herbs</li> <li>• flowers</li> <li>• foliage</li> <li>• bulbs</li> <li>• tubers</li> <li>• nuts</li> <li>• fungi</li> <li>• wild harvest plants</li> <li>• oils</li> <li>• olives</li> <li>• grains</li> <li>• seeds</li> <li>• hops</li> <li>• other specialised crops not specifically named as broad acre crops.</li> </ul>
Harvesting practices may include:	<ul style="list-style-type: none"> <li>• the correct use of equipment</li> <li>• select picking</li> <li>• reporting or recording tallies</li> <li>• removing out-of-type plants</li> <li>• removing rotten or immature fruit.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCPHT204A Undertake field budding and grafting

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of undertaking field budding and grafting and defines the standard required to: take budding and grafting material from plants; select and prepare stock for budding and grafting; demonstrate a range of budding and grafting techniques; maintain labels and records of the budding and grafting operation; and dispose of unused grafting material according to environmental and disease management procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of undertaking budding and grafting of trees, shrubs, vines and other plant types in nurseries or in-field situations. Field budding and grafting is usually carried out within established company procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare parent material for budding and grafting	<p>1.1.Parent plant is prepared and the method of taking budding or grafting material is employed suitable to the species according to organisational procedures.</p> <p>1.2.Tools and equipment are free from contamination, and hygiene practices are followed according to organisational guidelines.</p> <p>1.3.Tools appropriate to the task being undertaken are chosen and used according to organisational guidelines, and safe working practices are employed.</p>
2. Prepare budding and grafting materials	<p>2.1.Budding/grafting material is selected for propagation according to organisational guidelines and supervisors instructions.</p> <p>2.2.Viability of materials is maintained by appropriate storage according to the requirements of the species.</p> <p>2.3.Discarded material is disposed of according to organisational waste disposal guidelines and/or procedures.</p> <p>2.4.Stock is prepared according to species and organisational guidelines.</p> <p>2.5.Budding/grafting materials and stock are handled in a way that prevents damage.</p>
3. Bud/graft scion	<p>3.1.Budding/grafting method is selected according to species and organisational guidelines.</p> <p>3.2.Bud/graft is sealed according to instructions.</p> <p>3.3.Labels and identification are correct and applied</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to organisational guidelines.</p> <p>3.4. Records are completed accurately and at the required time according to organisational guidelines.</p> <p>3.5. Out-of-specification process and equipment performance is identified, rectified and/or reported.</p>
4. Complete budding/grafting activities	<p>4.1. Equipment is cleaned as required.</p> <p>4.2. Unused grafting material is disposed of/stored according to company procedures.</p> <p>4.3. Waste generated by both the grafting and cleaning procedures is collected, treated, disposed of or recycled according to company procedures.</p> <p>4.4. Workplace information is recorded in the appropriate format.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- access workplace information to identify grafting requirements
- select, fit and use appropriate personal protective equipment (PPE)
- select appropriate material for budding/grafting
- prepare material for grafting
- select and prepare equipment as required
- bud/graft plants according to instructions
- operate equipment safely
- treat plants after budding/grafting
- store unused grafting material
- take corrective action in response to out-of-specification results or non-compliance
- sort, collect, treat, recycle or dispose of waste as required
- clean equipment after use
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor

## REQUIRED SKILLS AND KNOWLEDGE

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- botany, plant anatomy and physiology
- root stocks and scion stock
- importance of selection and use of rootstock
- stages of the budding/grafting procedure and their purpose
- common problems and corrective action required
- operation, components and purpose of budding/grafting and equipment
- maintenance requirements of equipment
- procedures and responsibilities for reporting problem
- environmental issues and controls
- cleaning requirements of work area and equipment
- recording requirements and procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- take budding and grafting material from plants
- select and prepare stock for budding and grafting
- demonstrate a range of budding and grafting techniques
- maintain labels and records of the budding and grafting operation
- dispose of unused grafting material according to

<b>EVIDENCE GUIDE</b>	
	environmental and disease management procedures.
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plants may include:	<ul style="list-style-type: none"> <li>• trees</li> <li>• shrubs</li> <li>• vines and other plant types in nurseries or in field situations.</li> </ul>
Materials may include:	<ul style="list-style-type: none"> <li>• cuttings</li> <li>• buds</li> <li>• dormant or green material</li> <li>• nursery rootstock</li> <li>• rootlings</li> <li>• mature plants.</li> </ul>
Budding/grafting methods may include:	<ul style="list-style-type: none"> <li>• T buds</li> <li>• chip</li> <li>• wedge</li> <li>• side bark.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCPTH205A Carry out postharvest operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of carrying out post-harvest operations and defines the standard required to: use a range of equipment for handling and transporting produce; minimise handling damage to produce; label produce accurately and correctly; maintain records of post harvest operations to allow traceability and transport; grade, treat, pack and store harvested produce according to market requirements and industry and enterprise standards.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of carrying out routine post-harvest operations in a horticultural enterprise. Post-harvest operations are usually carried out within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for postharvest operations	<p>1.1. Post-harvest operations to be performed and client specifications are identified according to enterprise work procedures.</p> <p>1.2. Materials, tools, equipment and machinery appropriate to the task being undertaken are selected.</p> <p>1.3. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</p> <p>1.4. Where applicable to crop under cultivation, Hazard Analysis Critical Control Point (HACCP) and food safety requirements are complied with.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified, and risks are assessed and reported to supervisor.</p> <p>1.6. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p> <p>1.7. All work is performed in an environmentally aware and safe manner according to enterprise procedures.</p> <p>1.8. Site quarantine protocols, and farm and personal hygiene requirements, are applied and followed as required by enterprise procedures and supervisor instructions.</p>
2. Transport harvested produce	<p>2.1. Safe manual handling techniques are employed when handling containers.</p> <p>2.2. Field handling practices are conducted in a way that minimises damage to harvested produce.</p> <p>2.3. Temperature of harvested produce is maintained at</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>levels set by industry and enterprise work procedures.</p> <p>2.4. Produce is transported with due care from field to post-harvest processing or storage area.</p> <p>2.5. Containers are maintained according to enterprise requirements.</p>
3. Grade, label, treat, weigh and pack produce	<p>3.1. Harvested produce is graded and labelled according to client specifications and enterprise work procedures.</p> <p>3.2. Post-harvest treatments are applied to produce according to enterprise work procedures and industry best practice.</p> <p>3.3. Post-harvest practices are economical, methodical, meet established work schedules and minimise damage to produce.</p> <p>3.4. Post-harvest operations are undertaken according to OHS requirements.</p> <p>3.5. Tools, equipment and machinery are cleaned and maintained according to enterprise work procedures.</p> <p>3.6. Quality parameters of produce and specifications for packaging materials, containers, filling techniques and labelling of packed produce are identified and confirmed according to enterprise work procedures.</p> <p>3.7. Correct packaging materials and containers for specific produce are selected.</p> <p>3.8. Filled containers are weighed, weight recorded and repacked to correct weight, if required.</p> <p>3.9. Correct filling techniques for specific containers and produce are used to fill and arrange produce within containers according to client specifications, enterprise work procedures and industry best practice.</p> <p>3.10. Where required, wraps and lids are applied and containers are labelled according to client specifications, enterprise work procedures and industry best practice.</p>
4. Store produce in a facility	<p>4.1. Containers are placed onto pallets or racks to ensure stability and optimum airflow.</p> <p>4.2. Pallets or racks are transported to, and arranged in, storage facility according to enterprise work procedures.</p> <p>4.3. Storage facility monitoring gauges are read</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>accurately and efficiently with abnormal readings reported to supervisor.</p> <p>4.4. Condition of stored produce is checked and damaged produce and containers are removed from storage facility according to enterprise work procedures.</p> <p>4.5. Storage facility and packing containers are cleaned to a level of hygiene acceptable to enterprise and industry standards, without damaging monitoring or refrigeration equipment.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate orally with team members and supervisors
- correctly disposing of chemical and hazardous substances, their containers and other waste materials to minimise environmental impact
- counting and calculating quantities, treatment application rates and storage requirements
- interpreting and confirming information from chemical labels, Material Safety Data Sheets (MSDSs), work instructions and enterprise work procedures
- participating in teams and contributing to team objectives
- recording information about work activities on proformas
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- attributes of enterprise produce in relation to desired quality of produce to be presented to client
- characteristics and procedures for the use of coolrooms
- cool chain principles and practices
- correct storage temperatures for a range of enterprise produce
- environmental effects of post-harvest treatments

**REQUIRED SKILLS AND KNOWLEDGE**

- how to dispose of waste materials to minimise damage to external environment
- humidity levels and their effect on quality of enterprise produce
- hygiene issues in the handling and storage of plant produce
- importance of maintaining quality of produce, including handling and cooling requirements
- industry standards for packaging
- relationship between quality attributes of produce and packing techniques and packaging
- storage methods relevant to different enterprise produce.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- use a range of equipment for handling and transporting produce
- minimise handling damage to produce
- label produce accurately and correctly
- maintain records of post harvest operations to allow traceability
- transport, grade, treat, pack and store harvested produce according to market requirements and industry and enterprise standards.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Crops may include:	<ul style="list-style-type: none"> <li>a wide variety of horticultural crops including those for human consumption.</li> </ul>
Treatments may include:	<ul style="list-style-type: none"> <li>applying fungicides and insecticides by spraying or dipping applying preservatives</li> <li>brushing</li> <li>drying</li> <li>observing quarantine requirements</li> <li>removing dirt and foreign material</li> <li>ripening or de-greening with ethylene gas</li> <li>storing in a controlled environment</li> <li>stripping excess leaves</li> <li>trimming</li> <li>washing/hydration</li> <li>waxing and polishing.</li> </ul>

## Unit Sector(s)

Unit sector	Production horticulture
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## Co-requisite units

Co-requisite units	

## Competency field

Competency field	
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## AHCPTH206A Handle and move mushroom boxes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of working in the mushroom industry and specifies the outcomes required to handle and move mushroom boxes as part of the post-harvest process on a mushroom farm and defines the standard required to: carry out an inventory of mushroom boxes; supply appropriate quantities of empty boxes to mushroom pickers in a number of picking rooms; collect filled boxes at a rate and in a manner that ensure the continued smooth flow of picking and packing work and that do not impede the movement of other traffic in the area; handle filled boxes in such a way that mushroom quality is maintained and record coolroom air and mushroom pulp temperatures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes involved with handling and moving mushroom boxes. These activities are usually carried out within established routines, methods and farm procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Distribute boxes for filling to picking rooms.	<p>1.1. Materials, tools and equipment appropriate to the task being undertaken are selected, assembled where required, and positioned.</p> <p>1.2. Pre-operational and safety checks are carried out on materials, tools and equipment according to manufacturer specifications and farm procedures.</p> <p>1.3. Empty boxes are distributed to pickers in a timely and efficient manner to ensure smooth flow of picking work.</p> <p>1.4. Personal Protective Equipment (PPE) and clothing are selected and used.</p> <p>1.5. Occupational Health and Safety (OHS) requirements and hazards associated with the tasks are identified and appropriate action is taken to minimise risks to self and others.</p> <p>1.6. Site quarantine protocols and farm and personal hygiene requirements are applied and followed as required by farm procedures and supervisor instructions.</p> <p>1.7. All work is performed in an environmentally aware and safe manner according to farm procedures and</p>

ELEMENT	PERFORMANCE CRITERIA
	supervisor instructions.
2. Collect and move filled boxes.	<p>2.1. Collection of filled boxes is coordinated with delivery of empty boxes to minimise trolley trips and ensure smooth flow of picking work.</p> <p>2.2. Filled boxes are stacked on trolleys to the recommended height.</p> <p>2.3. Stacked trolleys are moved from picking rooms safely and with consideration for other traffic flow in the area.</p> <p>2.4. Filled boxes are handled carefully to ensure mushroom quality is maintained.</p> <p>2.5. Filled boxes are moved in a timely and efficient manner to ensure smooth flow of packing and loading work.</p> <p>2.6. Filled boxes are stacked in coolroom according to farm procedures.</p> <p>2.7. Coolroom air and mushroom pulp temperatures are recorded according to farm procedures.</p> <p>2.8. Variations from expected or required ranges of temperature or any other anomalies observed are reported to supervisor and remedial action is taken as directed.</p>
3. Finalise tasks	<p>3.1. Trolleys and other equipment are checked, cleaned and returned to store area or positioned for work for next shift.</p> <p>3.2. Where required, faulty items are reported to supervisor for repair or replacement.</p> <p>3.3. Daily work records are completed legibly and accurately according to farm procedures.</p> <p>3.4. Work outcomes are reported to supervisor, feedback on performance is sought, and any required improvements are noted for future action.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- estimate quantities of boxes
- maintain safe work practices including manual handling
- estimate rate of packing for collection
- handle boxes to maintain quality
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- safe manual handling techniques
- quality requirements
- collection and packing procedures
- storage requirements for mushrooms.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out an inventory of mushroom boxes
- supply appropriate quantities of empty boxes to mushroom pickers in a number of picking rooms
- collect filled boxes at a rate and in a manner that



<b>EVIDENCE GUIDE</b>	
	<p>ensure the continued smooth flow of picking and packing work and that do not impede the movement of other traffic in the area</p> <ul style="list-style-type: none"> <li>• handle filled boxes in such a way that mushroom quality is maintained</li> <li>• record coolroom air and mushroom pulp temperatures.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Packaging materials may include:	<ul style="list-style-type: none"> <li>• boxes and cartons</li> <li>• bulk bins</li> <li>• customised packaging</li> <li>• net bags</li> <li>• pre-packs</li> <li>• trays</li> <li>• crates.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCPTH207A Perform mushroom substrate process tasks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of working in the mushroom industry and specifies the outcomes required to: perform tasks associated with filling, spawning and casing as part of mushroom substrate preparation. This unit applies to the second phase of production: maintain site quarantine protocols and personal hygiene; fill units with mushroom substrate; apply spawn into mushroom substrate; prepare and apply casing mixture; complete records.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to working the preparation of mushroom substrate either in a general mushroom farming enterprise or in a specialist substrate preparation enterprise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for each process stage.	<p>1.1.Task requirements are sought from and clarified with supervisor.</p> <p>1.2.All tools, machinery and equipment required for process stage are checked and prepared according to farm procedures.</p> <p>1.3.Faults or variations from required settings or farm quality standards observed at any stage in the process are reported to supervisor and remedial action is carried out as directed.</p> <p>1.4.Personal Protective Equipment (PPE) and clothing are selected and used according to farm Occupational Health and Safety (OHS) procedures.</p> <p>1.5.OHS requirements and hazards associated with tasks are identified and appropriate action is taken to minimise risks to self and others.</p> <p>1.6.Site quarantine protocols and farm and personal hygiene requirements are applied and followed as required by farm procedures or supervisor instructions.</p> <p>1.7.All work is performed in an environmentally aware and safe manner according to farm procedures.</p>
2. Fill units with mushroom substrate.	<p>2.1.Filling equipment is operated safely and at a speed that maintains continuous operation according to farm procedures, and supervisor and manufacturer instructions.</p> <p>2.2.Units are filled with mushroom substrate according to farm procedures and to required farm standards.</p>
3. Assist with spawning	<p>3.1.Spawn is visually inspected for abnormalities and</p>

ELEMENT	PERFORMANCE CRITERIA
processes.	<p>any abnormalities found are reported to supervisor.</p> <p>3.2.Spawn is applied and mixed into mushroom substrate according to farm procedures.</p> <p>3.3.Spawn usage rate is checked and any observed variation from farm standard is reported to supervisor.</p> <p>3.4.If applicable, supplement is applied and mixed as directed by manager.</p> <p>3.5.Spawned mushroom substrate is installed in spawn run rooms according to farm procedures.</p> <p>3.6.Samples of mushroom substrate are taken according to farm procedures.</p> <p>3.7.Mushroom substrate is checked for presence of pests and where pests are found, supervisor is advised and remedial action is taken as directed.</p>
4. Prepare and apply casing mixture.	<p>4.1.Required quantities of pesticides, peat, limestone and additives for casing are assembled and checked according to farm procedures, Material Safety Data Sheets (MSDSs) and OHS requirements.</p> <p>4.2.Casing ingredients are blended according to farm procedures.</p> <p>4.3.If applicable, supplement is applied and mixed as directed.</p> <p>4.4.Casing depth, structure and consistency are checked and any variation from farm standards is reported to supervisor and remedial action is taken as directed.</p> <p>4.5.Samples of prepared casing and mushroom substrate before casing has been added are taken according to farm procedures.</p>
5. Finalise mushroom substrate processes	<p>5.1.Equipment and tools are returned to storage area after cleaning, checking for future serviceability and carrying out basic preventative maintenance according to farm procedures, and supervisor and manufacturer instructions.</p> <p>5.2.Faults are reported to supervisor or maintenance personnel for remedial action.</p> <p>5.3.Clean-up activities are carried out at the end of each process stage according to farm procedures and supervisor instructions.</p> <p>5.4.Records are completed legibly and accurately according to farm procedures.</p> <p>5.5.Work outcomes are reported to supervisor, feedback</p>

ELEMENT	PERFORMANCE CRITERIA
	on performance is sought and any required improvements are noted for future action.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- Perform mushroom substrate process tasks applies to the
- following work instructions and schedules
- maintaining quality standards
- maintaining safety of self and others
- observing variations from required quality standards
- reading production schedules and farm procedures
- reporting faults and variations to supervisor
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- farm standards and procedures, including those relating to OHS, food safety, HACCP, quality systems, emergency procedures, organisational structure and workplace communication channels and protocols
- impact on the rest of mushroom production cycle of deviations of mushroom substrate quality from farm standards for substrate
- industry and workplace awards and conditions
- overview of mushroom production cycle
- overview of substrate production
- site quarantine protocols.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• maintain site quarantine protocols and personal hygiene</li> <li>• fill units with mushroom substrate</li> <li>• apply spawn into mushroom substrate</li> <li>• prepare and apply casing mixture</li> <li>• complete records.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Mushroom substrate may include:	<ul style="list-style-type: none"> <li>• the range of ingredients and processes required for Phase II compost preparation.</li> </ul>
Growing systems may include:	<p>in the earlier stages of this process:</p> <ul style="list-style-type: none"> <li>• trays</li> <li>• shelves</li> <li>• or tunnels</li> </ul> <p>later stages may involve the use of:</p> <ul style="list-style-type: none"> <li>• trays</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• shelves</li> <li>• or bags.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Production horticulture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPTH208A Water mushroom crops

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of working in the mushroom industry and specifies the outcomes required to: water mushroom crops using a watering tree or a hand-held hose with attachments; estimate flow rate of water as delivered by the range of watering equipment in use on a mushroom farm; follow farm site quarantine procedures; measure correct doses of additives for water; deliver water to the mushroom crop at required rate and pressure; record water use accurately, legibly and in accordance with farm procedures; use Personal Protective Equipment (PPE) correctly and follow farm Occupational Health and Safety (OHS) procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes involved with watering mushroom crops in and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to use watering equipment.	<p>1.1. Watering equipment components are assembled and checked for serviceability, and pre-operational checks are conducted according to farm procedures.</p> <p>1.2. Watering equipment is connected to water supply.</p> <p>1.3. Chemicals are added to water according to supervisor instructions and farm procedures.</p> <p>1.4. Water meter for the area to be watered is read and result is recorded according to farm procedures.</p> <p>1.5. Rooms that require watering are identified from supervisor instructions.</p> <p>1.6. Required watering pattern is identified according to supervisor instructions and farm procedures.</p> <p>1.7. PPE and clothing are selected and used.</p> <p>1.8. OHS hazards associated with watering mushroom crops are identified and appropriate action is taken to minimise the risks to self and others.</p>
2. Operate watering equipment.	<p>2.1. Site quarantine protocols and farm and personal hygiene requirements are applied and followed as required by farm procedures and supervisor instructions.</p> <p>2.2. Water pressure delivered through the equipment is checked and adjusted to farm standard or manufacturer instructions to ensure correct spray or droplet pattern is achieved throughout the watering</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>operation.</p> <p>2.3. Water is provided in the correct quantity and pressure and is evenly distributed with minimum waste and minimum adverse environmental impact.</p> <p>2.4. Faults or variations from required settings or farm quality standards observed at any stage in the process are reported to supervisor and remedial action is carried out as directed.</p>
3. Finalise watering operations	<p>3.1. Water meter for the area that has been watered is read and actual amount of water used is recorded according to farm procedures.</p> <p>3.2. Watering equipment is disconnected from water supply and returned to storage area.</p> <p>3.3. Watering equipment is checked for serviceability for future use and any requirement for maintenance or replacement of equipment or components is reported to supervisor according to farm procedures.</p> <p>3.4. Work outcomes are reported to supervisor, feedback on performance is sought and any required improvements are noted for future action.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work procedures
- estimating flow rate of water as delivered by the range of watering equipment in use on mushroom farm
- following farm site quarantine procedures where in place and as required
- giving and receiving information both in writing and orally
- measuring correct doses of additives for water
- organising and manoeuvring watering tree and hose
- recording water use accurately, legibly and in accordance with farm procedures
- using PPE correctly and following farm OHS procedures
- walking at a steady and predictable pace to ensure water is delivered to the mushroom crop at required rate

## REQUIRED SKILLS AND KNOWLEDGE

- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- basic understanding of effects of water on casing structure, mycelium, yields and quality
- effect on mushrooms of underwatering, overwatering, insufficient evaporation, late watering and moisture imbalance
- factors affecting effective operation of watering tree or other equipment used
- how panning occurs
- 'light', 'medium' and 'heavy' water and when each type is used
- safe and effective use of fungicides and other water additives.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- estimate flow rate of water as delivered by the range of watering equipment in use on a mushroom farm
- follow farm site quarantine procedures
- measure correct doses of additives for water
- deliver water to the mushroom crop at required rate and pressure
- record water use accurately, legibly and in

<b>EVIDENCE GUIDE</b>	
	<p>accordance with farm procedures</p> <ul style="list-style-type: none"> <li>• use PPE correctly and follow farm OHS procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Watering processes and equipment may include:	<ul style="list-style-type: none"> <li>• all types of watering processes and equipment used in commercial mushroom production.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCPHT209A Produce trellis dried grapes

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release. New unit based on Victorian accredited unit VPAU729 Produce trellis dried grapes

### Unit Descriptor

This unit of competency covers the skills and knowledge required to operate a trellis dried grape system in a viticulture production environment including the ability to comply with processor quality standards and requirements, follow work plans, have a sound knowledge of workplace safety and comply with enterprise requirements.

### Application of the Unit

The unit applies to vineyard workers who perform summer pruning and crown bunch removal, emulsion application, harvest and post-harvest drying.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Summer prune a grape crop for <i>trellis drying</i>	1.1 Leaf coverage on fruiting canes is reduced to assist cutting, emulsion application and drying 1.2 Canes are cut in accordance with enterprise standards 1.3 Replacement canes are left intact and undamaged to ensure next year's fruiting 1.4 Grapes requiring emulsion treatment are sprayed to ensure full and complete coverage
2. Prepare for harvesting trellis dried grapes	2.1 Uncut <i>grapes</i> are identified, crown bunches cut and hung on trellis without damage for drying or removed 2.2 Crop is sampled and tested for moisture content and readiness to harvest 2.3 Harvest tools, equipment and machinery are selected and checked 2.4 Suitable personal protective equipment is selected, used, maintained and stored
3. Harvest trellis dried grapes	3.1 Harvesting machinery and ancillary equipment is operated in a safe manner and at speeds to suit crop conditions 3.2 Quality of the crop is maximised by implementing and maintaining standards that meet processor and enterprise requirements 3.3 Full bulk bins are removed, stored and treated as soon as possible to minimise deterioration of crop quality 3.4 Harvest tools, equipment and machinery are cleaned of pests and other contaminants to maintain crop quality 3.5 Risks to self, others and the environment are recognised and controlled
4. Carry out postharvest drying	4.1 Drying tools, equipment and machinery are selected and checked 4.2 Post-harvest drying is undertaken as directed to meet processor requirements 4.3 Moisture and temperature of crop are monitored during drying and returned to bulk bins after appropriate cool down has occurred 4.4 Tool, equipment and machinery malfunctions, faults, irregular performance, damage and the need for corrective action are identified and reported



## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

#### Ability to:

- summer prune vines according to enterprise requirements
- handle and use trellis drying tools, equipment and machinery safely
- select, fit and use appropriate personal protective clothing and/or equipment
- demonstrate safe and environmentally responsible workplace practices
- record information according to enterprise requirements

### Required knowledge includes:

#### Knowledge of:

- summer pruning requirements and procedures
- crown/cordon bunch picking/removal requirements and procedures
- the parts of a grape vine
- year round preparation required for trellis drying
- processor quality standards and requirements
- environmental impact issues
- hazard identification and control

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and includes achievement of the following:</p> <ul style="list-style-type: none"> <li>• undertake summer pruning and crown bunch removal</li> <li>• carry-out harvest and post-harvest drying</li> </ul>

	<ul style="list-style-type: none"> <li>• follow work plans</li> <li>• comply with processor quality standards and requirements</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other units</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</li> <li>• The assessment environment should not disadvantage the candidate</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Grape</i></b> varieties include:	<ul style="list-style-type: none"> <li>• sultanas</li> <li>• currants</li> <li>• Sunmuscats</li> <li>• other grape varieties suitable for trellis drying</li> </ul>
<b><i>Trellis drying</i></b> methods include:	<ul style="list-style-type: none"> <li>• emulsion treated</li> <li>• naturals</li> </ul>
Property characteristics include:	<ul style="list-style-type: none"> <li>• terrain</li> <li>• type of trellis system</li> <li>• water accessibility</li> <li>• irrigation</li> <li>• machinery access</li> <li>• level of mechanisation</li> <li>• property design/layout</li> <li>• soil types</li> <li>• crop yield</li> </ul>
Seasonal conditions include:	<ul style="list-style-type: none"> <li>• humidity</li> <li>• temperature</li> <li>• rainfall</li> </ul>

## Unit Sector(s)

Production Horticulture

## AHCPHT301A Carry out a crop regulation program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of co-ordinating a crop regulation program in which thinning and pruning of flower, fruit or vegetable crops is undertaken to control yield and quality and defines the standard required to: prepare for crop regulation activities; co-ordinate work groups; use a range of methods to achieve crop regulation goals; assess the effects on plant growth, habit and production levels of thinning and pruning operations; record or report activities; store and maintain equipment and materials.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under limited supervision from others with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for the crop regulation program	<p>1.1.The site and operational requirements of the crop regulation program are identified according to the site plan and enterprise work procedures.</p> <p>1.2.Crop regulation materials are selected according to enterprise work procedures.</p> <p>1.3.Services are located using site plans and in consultation with the supervisor.</p> <p>1.4.Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p> <p>1.5.Suitable safety and Personal Protective Equipment (PPE) are selected, used and maintained.</p>
2. Prepare crop regulation equipment	<p>2.1.Tools, equipment and machinery are selected according to enterprise work procedures.</p> <p>2.2.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</p> <p>2.3.Tools, equipment and machinery are calibrated and adjusted according to manufacturer's guidelines and enterprise work procedures.</p>
3. Implement the crop regulation program	<p>3.1.Enterprise work team and contractors are identified and work tasks are co-ordinated in a sequential, timely and effective manner in consultation with the supervisor.</p> <p>3.2.Work pattern is planned to cover the site in an efficient, sequential and co-ordinated manner</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to enterprise work procedures.</p> <p>3.3. Crop regulation tasks are undertaken according to OHS requirements and with due consideration of the environmental implications.</p> <p>3.4. Crop regulation tasks are monitored and remedial action is undertaken where necessary to achieve program objectives.</p> <p>3.5. A clean and safe work area is maintained throughout and on completion of work.</p>
4. Complete crop regulation activities	<p>4.1. Waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p> <p>4.2. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p> <p>4.3. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate orally and in writing with work team members, supervisors and contractors
- utilise proforma recording, reporting and work procedure documents
- interpret site plans and crop regulation specifications
- measure quantities, calculate material requirements, area, volume, ratios and application rates, and calibrate machinery
- co-ordinate work group, contractors and own activities
- monitor enterprise plants for quality
- minimise noise, dust, high activity vehicle traffic and water run-off to prevent nuisance-level environmental disturbance
- use chemicals to label and MSDS directions
- carry out thinning and pruning techniques
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- principles of thinning and pruning and the methods used to achieve crop regulation goals
- effects on plant growth, habit and production levels of thinning and pruning operations in relation to the market goals of the enterprise
- enterprise quality procedures and characteristics of a crop relative to varying market requirements
- types of crop regulation materials
- safe work procedures for use of machinery and equipment
- environmental impacts of crop regulation and disposal of waste.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare for crop regulation activities
- co-ordinate work groups
- use a range of methods to achieve crop regulation goals
- assess the effects on plant growth, habit and production levels of thinning and pruning operations
- record or report activities
- store and maintain equipment and materials.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Crop regulation methods may include:	<ul style="list-style-type: none"> <li>• chemical and manual thinning</li> <li>• selective harvesting</li> <li>• training</li> <li>• summer and winter pruning</li> <li>• hedging, skirting, topping and trimming.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCPTH302A Coordinate horticultural crop harvesting

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of coordinating harvesting activities for horticultural crops and defines the standard required to: prepare for crop harvesting activities; maintain harvest requirements; coordinate a work group; monitor crop quality.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of coordinating harvesting activities for horticultural crops including preparing for harvest, maintaining harvest requirements, monitoring crop quality and delivering the crop and involves working under limited supervision with checking only related to overall progress
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for crop harvesting	<p>1.1.The crop to be harvested and the requirements and procedures to assure crop quality are identified according to enterprise work procedures.</p> <p>1.2.Crop maturity is determined by experience, specification charts, aids or devices and according to client, enterprise and industry quality assurance specifications.</p> <p>1.3.Suitable weather conditions for picking are established according to enterprise work procedures.</p> <p>1.4.Tools, equipment and machinery are selected according to harvest requirements and enterprise work procedures.</p> <p>1.5.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</p> <p>1.6.Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p> <p>1.7.Suitable safety and Personal Protective Equipment (PPE) are selected, used and maintained.</p>
2. Co-ordinate harvesting activities	<p>2.1.The crop to be harvested and the requirements and procedures to assure crop quality are identified according to enterprise work procedures.</p> <p>2.2.Crop maturity is determined by experience, specification charts, aids or devices and according to client, enterprise and industry quality assurance specifications.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3.Suitable weather conditions for picking are established according to enterprise work procedures.</p> <p>2.4.Tools, equipment and machinery are selected according to harvest requirements and enterprise work procedures.</p> <p>2.5.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</p> <p>2.6.OHS hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p> <p>2.7.Suitable safety and PPE are selected, used and maintained.</p>
3. Monitor crop quality throughout harvest	<p>3.1.PPE is selected, maintained and used according to OHS procedures.</p> <p>3.2.Harvesting procedures and the harvested crop comply with client, enterprise and industry quality assurance specifications.</p> <p>3.3.The crop is handled carefully to prevent damage according to enterprise work procedures.</p> <p>3.4.Sorting and grading of the crop complies with client, enterprise and industry quality assurance specifications.</p> <p>3.5.Crop storage minimises postharvest deterioration according to enterprise work procedures.</p> <p>3.6.The crop is transported with minimum damage according to enterprise work procedures.</p> <p>3.7.Picking tallies or harvest yields are calculated and recorded according to enterprise work procedures.</p>
4. Deliver crop to specified destination	<p>4.1.Delivery details including quantity, timing and destination are confirmed according to enterprise work procedures.</p> <p>4.2.Crop is delivered with damage levels that are within client, enterprise and industry quality assurance specifications.</p> <p>4.3.Delivered crop complies with client, enterprise and industry quality assurance specifications.</p> <p>4.4.Delivery documentation is completed accurately according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate ideas and information to work team members, supervisors, contractors and clients
- utilise proforma reporting, analysis and work procedure documents, and interpret quality specifications
- measure materials
- interpret harvest specifications and schedules
- interpret and apply test results
- calculate tallies, working hours, yields and quality results
- coordinate work group, contractors and own activities
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- recognition of the maturity parameters of a range of crops
- enterprise quality procedures and characteristics of a crop relative to varying market requirements
- grading characteristics of each crop
- the importance of maintaining quality of produce including cooling requirements and quick transport from field to processing areas
- industry wage rates and conditions, contractors services, conditions and rates
- licensing requirements for use of forklifts, trucks and machinery
- the effect of adverse climatic conditions (e.g., rain, hail, extreme wind, or very high ultraviolet radiation), which may prevent or impede crop harvesting operations, or severely influence the time taken to complete the tasks necessary to fulfil the operation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare for crop harvesting activities</li> <li>• maintain harvest requirements</li> <li>• coordinate a work group</li> <li>• monitor crop quality.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Crops may include:	<ul style="list-style-type: none"> <li>• horticultural crops including those for human consumption.</li> </ul>
Horticultural crops may include:	<ul style="list-style-type: none"> <li>• all fruit</li> <li>• vegetables</li> <li>• herbs</li> <li>• flowers</li> <li>• foliage</li> <li>• bulbs</li> <li>• tubers</li> <li>• nuts</li> <li>• fungi</li> <li>• wild harvest plants</li> <li>• oils</li> <li>• olives</li> <li>• grains</li> <li>• seeds</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• hops</li> <li>• specialised crops not specifically named as broad acre crops.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Production horticulture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPHT303A Implement a post-harvest program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing a post-harvest program for horticultural crops and defines the standard to: coordinate the post-harvest operations consistent with the plan; implement post-harvest treatments and packing, presentation and storage requirements according to industry best practice and market specifications; and dispose of hazardous waste materials in line with guidelines and enterprise requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to implementing a post-harvest program and is likely to be carried out under limited supervision from others with checking only related to overall progress. The work requires the application of extensive horticultural knowledge and a broad range of horticultural skills. The post-harvest program usually follows established routines, methods and procedures where some discretion and judgement is required. This includes selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for implementation of post-harvest operations	<p>1.1. Post-harvest operations to be performed are identified according to enterprise work procedures, the marketing plan and industry guidelines and confirmed with the supervisor.</p> <p>1.2. Materials, tools, equipment and machinery are selected according to enterprise work procedures.</p> <p>1.3. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer specifications and enterprise work procedures.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p> <p>1.5. Suitable safety and personal protective equipment (PPE) are selected, used and maintained.</p>
2. Coordinate post-harvest work	2.1. Enterprise work team is identified and tasks are coordinated in a sequential, timely and effective



ELEMENT	PERFORMANCE CRITERIA
	<p>manner in consultation with the supervisor.</p> <p>2.2. Post-harvest operations are undertaken according to OHS requirements and with due consideration of environmental implications.</p> <p>2.3. A clean, safe and hygienic work area is maintained throughout and on completion of work.</p>
<p>3. Implement post-harvest treatments</p>	<p>3.1. Harvested produce is graded and labelled according to the marketing plan and enterprise work procedures.</p> <p>3.2. Produce that does not meet specifications and enterprise standards is identified and disposed of according to enterprise environmental procedures.</p> <p>3.3. Post-harvest treatments are selected according to harvested produce requirements, the enterprise integrated pest management strategy and the marketing plan.</p> <p>3.4. Timing, rate, application method, environmental requirements and handling techniques conform to the requirements of the harvested produce, enterprise work procedures and industry best practice.</p> <p>3.5. Post-harvest practices are economical, methodical, meet established work schedules and minimise damage to produce.</p> <p>3.6. Tools, equipment and machinery are cleaned and maintained according to enterprise work procedures.</p>
<p>4. Implement hazardous waste disposal guidelines</p>	<p>4.1. Waste disposal requirements of the enterprise are reviewed and operational tasks determined.</p> <p>4.2. Collection of waste and disposal are monitored with variation from enterprise environmental procedures addressed promptly.</p> <p>4.3. Conditions likely to impact on business viability are reported promptly to the supervisor.</p>
<p>5. Implement packing and presentation requirements of produce</p>	<p>5.1. Packing and presentation requirements specified in the marketing plan and enterprise work procedures are reviewed and operational tasks determined.</p> <p>5.2. Packing and presentation of produce conform to the requirements of the harvested produce, the marketing plan and industry best practice.</p> <p>5.3. Packing and presentation processes are monitored and remedial action taken, where necessary.</p> <p>5.4. Packing and presentation processes are recorded according to enterprise work procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
6. Implement storage requirements of produce	<p>6.1.Storage requirements specified in the marketing plan and enterprise work procedures are reviewed and operational tasks determined.</p> <p>6.2.Storage and handling of produce conform to the requirements of the harvested produce, the marketing plan and industry best practice.</p> <p>6.3.Storage processes and facilities are monitored and remedial action taken, where necessary.</p> <p>6.4.Storage processes and conditions are recorded according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate orally and in writing with team members and supervisors
- interpret and confirm chemical labels, material safety data sheets (MSDS), work instructions and enterprise work procedures
- record information about work activities on proformas
- participate in teams and contribute to team objectives
- count and calculate quantities, treatment application rates and storage requirements
- correctly dispose of chemical substances, their containers and other waste materials to minimise environmental impact
- implement enterprise OHS policy and procedures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the attributes of produce in relation to the desired quality of produce to be presented to the client
- Integrated Pest Management principles and enterprise policy
- the importance of maintaining the quality of produce, including handling and cooling requirements
- the relationship between the quality attributes of produce and packing techniques and packaging
- industry standards for packaging

**REQUIRED SKILLS AND KNOWLEDGE**

- cool chain principles and practices
- characteristics and procedures for the use of coolrooms
- storage methods for a range of produce
- the correct storage temperatures for a range of produce
- humidity levels and their effect on the quality of produce
- hygiene issues in the handling and storage of plant produce
- environmental effects of post-harvest treatments and hazardous waste disposal methodologies, application and purpose
- enterprise confined spaces policy and safety procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- coordinate the post harvest operations consistent with the plan
- implement post-harvest treatments and packing, presentation and storage requirements according to industry best practice and market specifications
- dispose of hazardous waste materials in line with guidelines and enterprise requirements.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Post-harvest operations may include:	<ul style="list-style-type: none"> <li>• transporting harvested produce from the field to post-harvest processing or storage facilities</li> <li>• grading</li> <li>• applying treatments</li> <li>• packing</li> <li>• labelling</li> <li>• storing harvested produce for a range of horticultural crops.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCPTH304A Harvest horticultural crops mechanically

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating machinery to harvest horticultural crops and defines the standard required to: operate horticultural harvesting machinery and equipment in a safe, efficient and controlled manner; conduct pre- and post-operational checks; perform minor maintenance and fault-finding; and record work activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the operation of machinery and related equipment used in the harvest of horticultural crops. This unit does not cover the harvesting of broadacre crops or sugar cane.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare machinery for use	<p>1.1. Select and use appropriate personnel protective equipment (PPE).</p> <p>1.2. Conduct routine pre-operational checks and housekeeping tasks.</p> <p>1.3. Replace and/or report damaged or worn components.</p> <p>1.4. Identify and report potential Occupational Health and Safety (OHS) hazards.</p> <p>1.5. Identify and report potential environmental implications.</p> <p>1.6. Attach ancillary equipment and check for correct operation.</p>
2. Operate machinery and equipment	<p>2.1. Operate machinery and equipment in a safe, efficient and controlled manner.</p> <p>2.2. Operate machinery according to task requirements, conditions and manufacturer operating guidelines.</p> <p>2.3. Monitor machinery performance and efficiency and make adjustments as required.</p> <p>2.4. Assess and minimise potential risks to self, others and the environment.</p>
3. Complete work	<p>3.1. Follow shutdown procedures.</p> <p>3.2. Complete operational records.</p> <p>3.3. Carry out routine operator servicing.</p> <p>3.4. Identify and report malfunctions, faults, irregular performance or damage.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- conduct pre-operational checks
- operate machinery in a safe, efficient and controlled manner
- perform operator maintenance tasks
- attach and uncouple associated equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- manufacturer and/or workplace requirements for pre-operational checks, machinery operation techniques, operator level servicing, and shutdown and emergency procedures
- basic diagnostic techniques
- equipment characteristics, technical capabilities and limitations
- components and controls features and functions
- horticulture quality assurance and hygiene requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• operate horticultural harvesting machinery and equipment in a safe, efficient and controlled manner</li> <li>• conduct pre and post operational checks</li> <li>• perform minor maintenance and fault-finding</li> <li>• record work activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Mechanical harvesting may include:	<ul style="list-style-type: none"> <li>• machinery and equipment used in harvesting root and leafy vegetables and tree crops, including fruits and nuts.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCPTH305A Regulate crops

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of regulating crops and defines the standard required to: interpret requirements for pruning or thinning according to the crop regulation program; select, use and maintain a range of plant thinning or pruning tools; record and report signs of diseases and pests; select and prepare chemicals; remove waste material and dispose of it according to environmental and disease management procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of regulating crops by thinning and pruning flower, fruit or vegetable crops to control yield and quality.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify crop regulation requirements	<p>1.1.Plants that require crop regulation are identified according to enterprise work procedures.</p> <p>1.2.The purpose and methods of crop regulation are determined according to enterprise work procedures.</p> <p>1.3.Services are located using site plans and in consultation with the supervisor.</p> <p>1.4.Access to the site is determined in consultation with the supervisor.</p> <p>1.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p>
2. Prepare for crop regulation	<p>2.1.Crop regulation tools, equipment and machinery are selected according to enterprise work procedures.</p> <p>2.2.Pre-operational and safety checks are carried out on crop regulation tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</p> <p>2.3.Chemicals to be used for crop regulation are selected and prepared according to manufacturer's specifications and enterprise work procedures.</p> <p>2.4.Suitable safety and Personal Protective Equipment (PPE) are selected, used and maintained.</p>
3. Undertake crop regulation	<p>3.1.Safety equipment is erected around the crop regulation site during and between work periods.</p> <p>3.2.The plant material to be thinned or pruned is identified according to the crop regulation program.</p> <p>3.3.The crop regulation program is undertaken</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>according to enterprise work procedures and OHS requirements.</p> <p>3.4. Crop regulation tools, equipment and machinery are operated safely and effectively.</p> <p>3.5. Signs of diseases and pests are recorded and reported to the supervisor.</p>
4. Complete crop regulation	<p>4.1. Waste material removed from the site is disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p> <p>4.2. Correct manual handling techniques are used when lifting or moving heavy loads.</p> <p>4.3. Crop regulation tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p> <p>4.4. A clean and safe work area is maintained throughout and on completion of work.</p> <p>4.5. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- participate in teams and contribute to team objectives
- communicate orally with work team members and supervisors
- utilise proforma recording, reporting and work procedure documents
- interpret site plans
- interpret crop regulation specification
- measure quantities, estimate quantities of plant material to be regulated
- select and prepare regulatory chemicals
- calculate material requirements, area, volume, ratios and application rates
- calibrate machinery
- co-ordinate own activities with the work group
- monitor enterprise plants for quality
- minimise noise, dust, high activity vehicle traffic and water run-off to prevent nuisance-level environmental disturbance

## REQUIRED SKILLS AND KNOWLEDGE

- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- principles of thinning and pruning and the methods used to achieve crop regulation goals
- effects on plant growth, habit and production levels of thinning and pruning operations in relation to the market goals of the enterprise
- the purpose of tools, equipment and machinery used for crop regulation and the correct and safe use and care of these tools, equipment and machinery
- the effect of outdoor climatic conditions (e.g., rain, hail, total fire ban days, or very high ultraviolet radiation), which may prevent or impede crop regulation activities, or influence the selection of crop regulation tools, equipment and safety equipment to minimise the hazards presented.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- interpret requirements for pruning or thinning and work to instructions
- use and maintain a range of plant thinning or pruning tools
- report signs of diseases and pests
- apply chemicals under supervision
- remove waste material and dispose of it according to environmental and disease management procedures.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources

<b>EVIDENCE GUIDE</b>	
	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Crop regulation methods may include:	<ul style="list-style-type: none"> <li>removal of flowers or crops using hands, sticks, shakers and thinning sprays</li> <li>pruning methods such as winter or summer pruning</li> <li>minimal 'hand clean up' pruning and after machine pruning.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCPHT306A Establish horticultural crops

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of establishing horticultural crops and defines the standard required to: prepare and service machinery and equipment; carry out tillage and apply pre-planting treatments; carry out sowing operation and fertiliser application; monitor the environmental impacts of establishing the crop; clean, secure and store machinery and equipment; and keep records of the sowing operation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers on horticultural cropping enterprises and involves the application of some judgement and discretion. Work is likely to be carried out under minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare machinery and equipment for use	<p>1.1.Machinery and equipment are selected and confirmed against the work plan and prepared to manufacturer specifications.</p> <p>1.2.Equipment is securely attached and calibrated for operation according to manufacturer specifications.</p> <p>1.3.Existing and potential Occupational Health and Safety (OHS) hazards in the workplace are identified, risks assessed and controlled in line with enterprise requirements.</p>
2. Prepare for horticultural crop establishment	<p>2.1.Soil and weather conditions are monitored for optimal seeding conditions.</p> <p>2.2.Soil conservation and sustainable land management practices and procedures are recognised and confirmed according to enterprise requirements.</p> <p>2.3.Seeding, fertiliser, and pest and weed control requirements are confirmed against the work plan and prepared to manufacturer specifications using safe handling procedures.</p> <p>2.4.Contingency plans are prepared for unusual seasonal conditions.</p>
3. Sow the crop	<p>3.1.Suitable personal protective equipment (PPE) is selected, used and maintained according to OHS requirements.</p> <p>3.2.Seeding and fertiliser applications are carried out in line with the work plan.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Pest and weed control treatment is coordinated with seeding and fertiliser applications as required.</p> <p>3.4. Environmental implications associated with sowing operations are identified, impacts assessed and procedures adopted in line with enterprise requirements.</p>
4. Complete seeding operations	<p>4.1. Seeding, machinery and equipment operation records are maintained according to enterprise requirements.</p> <p>4.2. Machinery and equipment damage, malfunctions or irregular performance are reported in line with enterprise requirements.</p> <p>4.3. Machinery and equipment is cleaned, secured and stored in line with manufacturer specifications and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- sow seed and apply fertiliser at the required placement and rate
- identify types of weeds and insects harmful to crop establishment
- perform pre-operational and safety checks, servicing and maintenance on machinery and equipment
- calibrate, operate machinery and attach/detach equipment
- demonstrate emergency operating procedures in normal and adverse conditions
- recognise and report machinery damage, faults or malfunctions and perform minor repairs
- demonstrate safe, environmentally responsible and sustainable land management practices
- monitor and minimise impacts to the environment associated with sowing operations
- read and interpret manufacturers specifications, work and maintenance plans, and material safety data sheets (MSDS)
- obtain relevant licences and permits

## REQUIRED SKILLS AND KNOWLEDGE

- clean, secure and store machinery and equipment
- interpret and apply task instructions
- communicate with work team and supervisor
- record and report equipment faults, workplace hazards and accidents
- assess and calculate the application of fertiliser/pesticide requirements and application rates
- calibrate equipment and calculate volumes, consumption and servicing requirements
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- crop types, preparation of seeds, seeding methods and application techniques
- fertiliser types, rates of application and crop nutrient requirements
- effects of weather conditions (normal and adverse) on seeding and fertilising applications
- operating principles and operating methods for machinery and equipment
- pre-operational and safety checks, servicing and maintenance procedures for seeding machinery and equipment
- principles of weight distribution with regard to load shifting and vehicle movement
- sustainable land management and soil conservation techniques
- positive environmental practices, negative environmental impacts and minimisation measures associated with seeding operations
- procedures for cleaning, securing and storing machinery, equipment and materials
- enterprise policies with regard to seeding operations, and recording and reporting routines
- relevant state/territory legislation, regulations and codes of practice with regard to workplace OHS and the use and control of hazardous substances
- PPE and when and how it should be used
- relevant state/territory legislation and regulations with regard to licensing requirements and the use and control of machinery and equipment.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare and service machinery and equipment</li> <li>• carry out tillage and apply pre-planting treatments</li> <li>• carry out sowing operation and fertiliser application</li> <li>• monitoring the environmental impacts of establishing the crop</li> <li>• clean, secure and store machinery and equipment</li> <li>• keep records of the sowing operation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Crops established may include:	<ul style="list-style-type: none"> <li>• all horticultural crops and excludes wheat and coarse grains, cotton, grain legumes, oilseeds, sugar, temperate and tropical pastures.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCPT307A Prepare raw materials and compost the feedstocks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing and mixing raw materials into a suitable feedstock mixture for commercial-scale composting, and composting feedstock mixtures to manufacture compost products and defines the standard required to: prepare raw materials for composting according to enterprise product requirements; prepare batches for composting according to defined compost recipes; compost feedstock mixtures to manufacture compost; conduct and interpret basic field test results to confirm effective processing and define intervention required to rectify composting processes; establish and maintain appropriate compost batch documentation accurately and promptly.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to an employee of an enterprise engaged in commercial-scale composting operations. Work is likely to be performed as a part of a team and under the supervision of a site manager or operations manager. Where work requires the use of load-shifting or other equipment, appropriate training / certification must be provided according to state and territory safety and licensing requirements.
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### Licensing/Regulatory Information

Refer to Application of the Unit

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Organise for processing	<p>1.1. Job sheet is reviewed to clearly identify all processing requirements.</p> <p>1.2. Machinery, equipment and materials appropriate to the job requirements are selected and checked for serviceability and safe operation.</p> <p>1.3. Potential Occupational Health and Safety (OHS) hazards are identified and assessed, and appropriate action is taken to minimise risk to self and others.</p> <p>1.4. Suitable Personal Protective Equipment (PPE) is selected, fitted, used, maintained and stored according to work requirements, manufacturer specifications and enterprise procedures.</p> <p>1.5. Enterprise OHS guidelines are complied with.</p>
2. Prepare raw materials and compost the feedstock mixture	<p>2.1. Raw materials and additives for processing are identified, collected and checked to ensure compliance with enterprise procedures, including assessment of physical contamination according to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>enterprise guidelines.</p> <p>2.2.Composting technology and methods to be used are confirmed as appropriate to raw material types and enterprise product requirements.</p> <p>2.3.Raw materials are variously pre-processed into suitable forms for composting according to enterprise product requirements.</p> <p>2.4.Pre-processed raw materials are mixed into suitable feedstock mixtures for composting according to documented recipes or batches.</p> <p>2.5.Feedstock mixtures for composting are handled according to technology, appropriate method, and industry best practice and enterprise procedures.</p> <p>2.6.Batch numbers or codes are assigned and batch documentation is created to enable tracking of batch through compost production cycle.</p>
3. Monitor composting process	<p>3.1.Composting batch is monitored by observation and use of field testing equipment to maintain effective composting process and efficient compost production schedule according to relevant Australian standards for the product.</p> <p>3.2.Processing and operations records are maintained for process control and to track batch through the compost production cycle.</p> <p>3.3.Faults or variations observed at any stage of process are reported to supervisor and remedial action is taken to maintain effective and consistent compost production.</p>
4. Conduct quality control inspection	<p>4.1.Finished compost is inspected and assessed for compliance with enterprise product requirements and relevant Australian standards.</p> <p>4.2.Faults or variations observed are reported to supervisor.</p> <p>4.3.Non-compliant product is further processed with necessary adjustments made as directed to processing technique and compost batch management to achieve compliance with product quality requirements.</p> <p>4.4.Compliance of compost batch with product requirements is confirmed.</p> <p>4.5.Batch documentation is completed for compliant compost product.</p> <p>4.6.Sales and operational staff members are informed that product is suitable for sale and/or preparation of</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>value-added products.</p> <p>4.7. Work outcomes are reported to supervisor, feedback on performance is sought and any required improvements are noted for future action.</p>
5. Clean up area	<p>5.1. Loading-shifting machinery and other processing equipment are cleared and cleaned as required to avoid contamination between batches.</p> <p>5.2. Raw materials and finished compost products are cleared away to designated areas, and processing site is cleaned to ensure safe and effective future operation according to enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe operating procedures
- establishing and maintaining compost batch documentation
- conducting basic field tests according to specified procedures
- operating equipment safely and efficiently
- identifying and handling raw materials and products
- preparing batches for composting according to defined compost recipes
- preparing raw materials in accordance with enterprise product requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- awareness of compost quality standards
- basic principles of composting science as related to commercial compost

**REQUIRED SKILLS AND KNOWLEDGE**

- production
- characteristics of a range of raw materials
  - fundamental characteristics of compost quality
  - steps in pre-processing compost materials
  - batch documentation techniques
  - key process control stages critical to consistent compost production
  - overview of systems and technologies used in compost production, particularly as relevant to candidate's workplace
  - range and characteristics of categories of compost product.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare raw materials for composting according to enterprise product requirements
- prepare batches for composting according to defined compost recipes
- conduct and interpret basic field test results to confirm effective processing and define intervention required to rectify composting processes
- establish and maintain appropriate compost batch documentation accurately and promptly.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Composting technology may include:	<ul style="list-style-type: none"> <li>both aerobic and vermiculture composting technologies.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCPTH308A Prepare value added compost-based products

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing and/or blend finishing compost with other materials or products to produce various value added compost-based products, and defines the standard required to: interpret batch sheets and follow enterprise production procedures; recognise, quantify and handle products according to enterprise requirements and procedures; recognise value added products and their characteristics; prepare batches of value-added product according to defined batch recipes and methods.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the people working at a commercial-scale composting facility. It will require taking responsibility for work output with checking related to overall progress, and taking limited responsibility for the work output of others for example as a loader operator or team leader. Where work requires the use of load-shifting or other equipment, appropriate training/certification must be provided according to state and territory safety and licensing requirements.
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Organise for value-added product preparation	<p>1.1. Job sheet or work order is reviewed to clearly identify all product requirements.</p> <p>1.2. Equipment required for safe, effective and efficient product preparation is identified and organised.</p> <p>1.3. Occupational Health and Safety (OHS) hazards in workplace are identified, and risk is assessed and managed according to enterprise procedures.</p> <p>1.4. Environmental implications associated with product preparation are identified, assessed and reported to supervisor.</p>
2. Prepare value-added products	<p>2.1. Compost and product additives are clearly identified and confirmed against job sheet and enterprise procedures.</p> <p>2.2. Suitable Personal Protective Equipment (PPE) and clothing are selected, used, maintained and stored according to OHS requirements.</p> <p>2.3. Required quantities of compost and product additives are measured and transported to product preparation</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>area.</p> <p>2.4.Compost and product additives are regularly monitored and checked against value-added product specifications and variations or non-conformances are identified and reported, and remedial action is taken according to enterprise procedures and product specifications.</p> <p>2.5.Preparation method and machinery to be used are confirmed as appropriate for product and as meeting enterprise product requirements.</p> <p>2.6.Plant and machinery are operated in a safe and controlled manner, and monitored for performance and efficiency.</p> <p>2.7.Compost, materials and other product additives are blended and processed according to product requirements.</p> <p>2.8.Products are monitored and adjustments to machinery operations are made to meet job sheet specifications.</p> <p>2.9.Batch numbers of compost materials and other additives are combined or reassigned.</p> <p>2.10. Blending, processing machinery and site are cleared and cleaned as required to avoid contamination between batches according to enterprise procedures.</p>
3. Conduct quality inspection and readiness for sale	<p>3.1.Value-added product is inspected and checked for compliance with job sheet and product requirements.</p> <p>3.2.Product details are documented accurately and promptly according to enterprise procedures.</p> <p>3.3.Value-added product is transported to holding bay and quantity of product is confirmed.</p> <p>3.4.Value-added product is clearly labelled according to regulatory and customer requirements.</p> <p>3.5.Value-added product is released for dispatch according to enterprise procedures.</p> <p>3.6.Work outcomes are reported to supervisor, feedback on performance is sought and any required improvements are noted for future action.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- demonstrating safe and environmentally responsible workplace practices
- following Material Safety Data Sheets (MSDSs)
- identifying and handling raw materials, products, additives and contaminants
- interpreting and applying instructions
- measuring and calculating volumes and consumption requirements
- reading and interpreting job sheets
- recording and reporting equipment faults, workplace hazards and accidents
- using emergency and personal protective equipment
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- common product contaminants
- enterprise product specifications and standards
- environmental license requirements, aspects and management measures associated with operation of machinery and equipment
- hazards in handling materials and additives and appropriate risk control measures
- identification of contaminants
- legislation, regulations and codes of practice with regard to workplace OHS and use and control of hazardous substances
- operating principles and methods for plant and machinery
- procedures for cleaning, securing and storing machinery, equipment and materials
- potential risks and hazards associated with operation of machinery and equipment
- product types and characteristics
- raw materials, compost and additives commonly used to manufacture value-added products
- relevant Australian standards for products
- relevant state and territory legislation, regulations and codes of practice with regard to licensing, roads and traffic requirements
- value-added product types and characteristics.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret batch sheets and follow enterprise production procedures</li> <li>• recognise, quantify and handle products according to enterprise requirements and procedures</li> <li>• recognise value added products and their characteristics</li> <li>• prepare batches of value added product according to defined batch recipes and methods.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Compost-based products from aerobic, anaerobic and vermiculture composting systems may include:	<ul style="list-style-type: none"> <li>• composted and pasteurised mulches</li> <li>• composted and pasteurised soil conditioners</li> <li>• effluent, storm water or emission treatment products</li> <li>• general and special purpose landscaping soils</li> <li>• soft fall or loose fill materials for playground surfacing or other applications</li> <li>• mushroom substrate</li> <li>• ornamental mulches</li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• products for agricultural disease suppression</li> <li>• products for erosion control or site remediation</li> <li>• sports turf substrates</li> <li>• standard and specialised potting mixes.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Production horticulture
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPTH309A Supervise mushroom substrate preparation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the process of applying, monitoring and supervising the achievement of farm quality standards and processes associated with mushroom substrate preparation, and defines the standard required to: organise the process of mushroom substrate preparation; observe and report non compliance with farm quality standards; supervise staff so that standards relating to productivity, workflow requirements, farm procedures and quality are met; contribute as a team member to performance of mushroom substrate processes; record and report production information.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to the role of a mushroom farm supervisor to apply, monitor and supervise the achievement of farm quality standards and process associated with mushroom substrate preparation (Phase II) either in a general mushroom farming enterprise or in a specialist substrate preparation enterprise. It requires responsibility for own work and coordination and supervision of a work team. Where work requires the use of load shifting equipment, appropriate training/certification must be provided according to state and territory safety and licensing requirements.</p>
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### Licensing/Regulatory Information

Refer to Application of the Unit

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Confirm that all requirements to commence mushroom substrate preparation are met	<p>1.1.Details of required quantities of substrate and dates/times to be achieved for each stage of the process are obtained and communicated to personnel involved in substrate preparation.</p> <p>1.2.Availability, quality, serviceability and cleanliness of all rooms, work areas, machinery, equipment and materials required for mushroom substrate preparation are ascertained and remedial action is taken if required according to farm procedures.</p> <p>1.3.Personnel are given instructions about mushroom substrate processing tasks to be performed.</p> <p>1.4.Personal Protective Equipment (PPE) and clothing are selected and used by all those involved in mushroom substrate processing tasks.</p> <p>1.5.Occupational Health and Safety (OHS) requirements and hazards associated with each task are identified and appropriate action is taken to minimise risks to self and others.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>1.6.Site quarantine protocols and farm and personal hygiene requirements are applied, followed and monitored as required by farm procedures or manager instructions.</p> <p>1.7.All work of the team is monitored to ensure that it is performed in an environmentally aware and safe manner while satisfying farm procedures and productivity and workflow requirements.</p>
2. Monitor mushroom substrate preparation process	<p>2.1.Mushroom substrate preparation processes are monitored to ensure that work is performed according to farm procedures and that all equipment is operated according to manufacturer instructions, and at a speed that maintains safe and continuous operation.</p> <p>2.2.Random samples of materials and/or outputs are taken according to farm procedures.</p> <p>2.3.Probes are monitored to ensure that they are functioning and correctly positioned to provide representative readings.</p> <p>2.4.Production information required for farm Hazard Analysis Critical Control Point (HACCP) system is recorded according to farm procedures.</p> <p>2.5.Faults or variations from required settings or farm quality standards observed at any stage in the process are reported to manager and remedial action is taken as directed.</p> <p>2.6.Compost, rooms and work areas are monitored for presence of pests and remedial action is taken as required and according to farm procedures.</p>
3. Finalise mushroom substrate preparation process	<p>3.1.Clean-up activities at end of each process stage are monitored to ensure they comply with farm procedures.</p> <p>3.2.Equipment and hand tools are returned to storage area after cleaning and checked for future serviceability.</p> <p>3.3.Basic preventative maintenance is carried out according to farm procedures and any faults are reported to maintenance personnel for remedial action.</p> <p>3.4.Records are completed legibly and accurately according to farm procedures.</p> <p>3.5.Feedback on performance is provided to personnel under supervision.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and implementing safe work procedures
- accepting responsibility for quality of own work
- contributing to productive work environment
- interpreting work schedules
- maintaining safety of self and others
- managing own work and supervising that of others
- observing employment requirements
- promoting workplace cooperation
- recording and reporting farm and HACCP information
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- casing function, application, required depth and required surface structure
- farm standards and procedures, including those relating to OHS, food safety, HACCP, quality systems, emergency procedures, organisational structure and workplace communication channels and protocols
- impact on rest of mushroom production cycle of deviations of mushroom substrate quality from farm standards for substrate
- industry and workplace awards and conditions
- overview of mushroom production cycle
- overview of Phase I and Phase II substrate production
- relevant legislation and industry codes of practice
- site quarantine protocols.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• organise the process of mushroom substrate preparation</li> <li>• observe and report non compliance with farm quality standards</li> <li>• supervise staff so that standards relating to productivity, workflow requirements, farm procedures and quality are met</li> <li>• contribute as a team member to performance of mushroom substrate processes</li> <li>• record and report production information.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Mushroom substrate may include:	<ul style="list-style-type: none"> <li>• the range of ingredients and processes required for Phase II compost preparation.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Production horticulture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPHT401A Assess olive oil for style and quality

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers assessing olive oil for style and quality and defines the standard required to: identify olive oil styles; identify common olive oil defects; modify horticultural and/or processing practices to remedy variations from desired style and quality.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to olive growers or managers assessing oil produced from an olive crop.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish and implement appropriate tasting protocols	1.1.Appropriate tasting conditions are established. 1.2.Accepted industry tasting procedures are applied. 1.3.Oils are tasted in the order that will best show character of each oil.
2. Determine style and sensory quality of the olive oil	2.1.Characteristics of the olive oil are identified and assessed. 2.2.Style of oil is assessed by tasting. 2.3.Sensory quality of oil is assessed by smelling and tasting. 2.4.Observed defects are analysed and recorded for future action.
3. Determine the analytical quality of the olive oil	3.1.Samples of oils are sent to laboratory for testing of key chemical indices. 3.2.Analytical quality of oil is assessed by interpreting key chemical indices. 3.3.Observed chemical indices that are beyond the normal range are recorded for future action.
4. Identify factors influencing the style and quality of the olive oil	4.1.Horticultural factors that may influence style and quality of the olive oil are identified. 4.2.Processing factors that may influence style and quality of the olive oil are identified. 4.3.Other factors that may influence style and quality of the olive oil are identified.
5. Implement findings of tastings and chemical analyses	5.1.Records of season's tastings and chemical analyses are maintained according to enterprise procedures. 5.2.Horticultural and processing activities and methods are evaluated in terms of modifications and improvements to be made for next season. 5.3.Horticultural production plan for next season is adjusted, documented and communicated to

ELEMENT	PERFORMANCE CRITERIA
	<p>horticultural personnel according to enterprise procedures.</p> <p>5.4. Processing requirements for next season are documented and communicated to processing personnel according to enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- general tasting skills, including ability to detect and describe aromas and flavours, and to distinguish between bitterness and pungency in oils
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- cause of olive oil defects and how they can be remedied
- horticultural and processing practices that affect olive oil style, and reasons for the effect
- relationship between critical chemical parameters and oil style and quality.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify olive oil styles</li> <li>• identify common olive oil defects</li> <li>• modify horticultural and/or processing practices to remedy variations from desired style and quality.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Assessment techniques may include:	<ul style="list-style-type: none"> <li>• a range of techniques growers use to assess olive oil in terms of style and quality.</li> </ul>
Accepted industry tasting procedures may include:	<ul style="list-style-type: none"> <li>• COI/T.20/Doc. no. 13 General Methodology for the Organoleptic Assessment of Virgin Olive Oil; and methods and standards adopted by the International Olive Oil Council for the sensory analysis of olive oil.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCPHT402A Develop a crop regulation program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a crop regulation program and defines the standard required to: assess and select cost-effective techniques, resources and equipment for the regulation of horticultural crops; prepare a cost-benefit analysis on available crop regulation methods; develop a crop regulation program to achieve the yield and quality specified in the enterprise production plan; document detailed schedules and work procedures; and document a crop regulation plan, specifications and quotation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who develop a crop regulation program. It covers the process of developing a crop regulation program to control the yield and quality of horticultural crops.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess crop regulation methods	<p>1.1. Production targets and production requirements in terms of quantity, quality and availability of specified crops are identified from the enterprise production plan.</p> <p>1.2. Research is conducted into the characteristics and growing requirements of plant species and cultivars that may affect the crop regulation program.</p> <p>1.3. The benefits and limitations of available crop regulation methods for specified crops are assessed based on published data on the species and cultivars, historical records, own experience and enterprise guidelines.</p> <p>1.4. Implementation risk of available methods is evaluated and risk controls recorded and costed.</p> <p>1.5. A cost-benefit analysis is conducted on available crop regulation methods, and the most cost-effective approach to crop regulation is determined and submitted to management for approval.</p>
2. Identify the requirements of a crop regulation program	<p>2.1. The crop regulation program is developed to achieve the appropriate yield and quality specified in the enterprise production plan.</p> <p>2.2. Resources, tools, equipment and machinery required for the crop regulation program are identified, costed and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.3. Occupational Health and Safety (OHS) hazards</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>associated with the implementation of the crop regulation program are identified; risks assessed and controls developed according to enterprise guidelines, and are budgeted and documented in the plan.</p> <p>2.4.Environmental implications of the crop regulation program are identified and documented in the plan.</p> <p>2.5.Staged implementation and development are outlined, where appropriate, according to the range of conditions over the growing cycle of the plant species and cultivars.</p> <p>2.6.Timelines for crop regulation activities are determined taking into account the needs of the plant species and cultivars, site conditions, and any other planning requirements.</p>
3. Prepare and document the crop regulation program and specifications	<p>3.1.Detailed plan, specifications and quotation are prepared based on the requirements of the program and presented to management for acceptance.</p> <p>3.2.Scaled site plan is produced which can be readily interpreted and understood by on-site personnel according to enterprise standards.</p> <p>3.3.Detailed on-site procedures and schedules required for the crop regulation program are developed and documented.</p>
4. Monitor the crop regulation program	<p>4.1.Implementation of the program is monitored to ensure requirements of the enterprise production plan are achieved.</p> <p>4.2.The crop regulation program is reviewed and monitored to ensure it remains responsive to changing conditions.</p> <p>4.3.Appropriate courses of action are implemented to alleviate or overcome identified shortcomings in the program.</p> <p>4.4.Remedial action undertaken is documented and reported to management according to enterprise policies.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- comply with legislative requirements
- document plans, specifications, schedules and work procedures, and write reports for the understanding of staff, managers and contractors
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- site evaluation techniques including analysis of the condition of soils, plants and the site for production activities
- the characteristics of soil and other growth media types and the use of additives to enhance the available nutrition for specific plant species and cultivars
- the relationship between enterprise crop regulation methods, such as thinning, pruning and RDI, and the yield and quality of specific crops
- processes and techniques for preparing, costing and documenting plans for scheduling crop regulation activities
- specific crop physiology and timing of regulation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this



<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess and select cost-effective techniques, resources and equipment for the regulation of horticultural crops</li> <li>• prepare a cost-benefit analysis on available crop regulation methods</li> <li>• develop a crop regulation program to achieve the yield and quality specified in the enterprise production plan</li> <li>• document detailed schedules and work procedures</li> <li>• document a crop regulation plan, specifications and quotation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Horticultural crops may include:	<ul style="list-style-type: none"> <li>• all fruit</li> <li>• vegetables</li> <li>• herbs</li> <li>• flowers</li> <li>• foliage</li> <li>• bulbs</li> <li>• tubers</li> <li>• nuts</li> <li>• fungi</li> <li>• wild harvest plants</li> <li>• oils</li> <li>• olives</li> <li>• grains</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• seeds</li> <li>• hops</li> <li>• other specialised crops not specifically named as broadacre crops.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Production horticulture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPHT403A Develop harvesting and processing specifications to produce an olive oil

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing harvesting and processing specifications to produce an olive oil and defines the standard required to: select an appropriate style of oil that can be produced from a crop and describe it using standard industry terminology; estimate and schedule fruit maturity; arrange for an appropriate method of processing to produce the desired style and quality of oil; incorporate specifications into a contract; and document the specifications and related processing requirements in a report.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who develop specifications that will produce the required quantity, style and quality of oil from an olive crop and relates to the work involved with the commercial-scale growing of olives for the production of olive oil.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Specify the style and other characteristics desired of the olive oil	1.1.Desired properties of the olive oil are specified using standard industry terminology.
2. Establish the appropriate time and conditions for harvesting	2.1.Maturity of fruit is estimated using informal and formal methods, and according to enterprise and industry procedures. 2.2.Harvest is scheduled so that fruit picked will produce desired quality, style and amount of olive oil. 2.3.Range of harvest methods available is evaluated and the ones most likely to contribute to production of desired olive oil are selected. 2.4.Where required, harvesting personnel are obtained and briefed about harvest requirements and procedures.
3. Specify post-harvest handling and processing method	3.1.Post-harvest handling and treatment for olive crop are specified using standard industry terminology. 3.2.Processing method is specified using standard industry terminology.

ELEMENT	PERFORMANCE CRITERIA
	3.3. Packaging, storage and transport requirements for processed olive oil are specified using standard industry terminology.
4. Select an olive oil processor	4.1. Details of suitable available processors are obtained. 4.2. Criteria for selecting a processor are reviewed and applied. 4.3. Most suitable processor is selected using predetermined criteria. 4.4. Specifications and related processing requirements are agreed with selected processor and incorporated into a contract. 4.5. Document the specifications and related processing requirements in a report.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- judging crop maturity
- researching available processors and methods of extraction
- tasting skills to assess olive oil style and quality
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- how an olive oil is produced from olives
- market preferences for styles of olive oil

## REQUIRED SKILLS AND KNOWLEDGE

- methods of olive oil extraction and advantages/disadvantages associated with each
- relevant legislation and regulations covering food safety, trade practices and contract law
- influence of processing on chemical composition of oil (polyphenols, aroma and flavour compounds)
- influence of various harvesting methods on olive oil style and quality (bitterness, pungency, aroma and flavour)
- post-harvest handling (including storage and transport) requirements for olive fruit intended for olive oil processing
- post-processing storage and handling requirements of olive oil.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select an appropriate style of oil that can be produced from a crop and describe it using standard industry terminology
- estimate and schedule fruit maturity
- arrange for an appropriate method of processing to produce the desired style and quality of oil
- incorporate specifications into a contract
- document the specifications and related processing requirements in a report.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Harvesting specifications may include:	<ul style="list-style-type: none"> <li>• arrangements for delivery and collection of harvested crop</li> <li>• cost per tonne of fruit processed</li> <li>• delivery and collection of processed olive oil</li> <li>• price paid for processing, or amount of oil traded in lieu of processing fee</li> <li>• processing specifications include:                             <ul style="list-style-type: none"> <li>• availability, particularly at time of optimum maturity</li> <li>• capability supported by referees</li> <li>• cleanliness</li> <li>• capacity and location of the mill</li> <li>• commercial terms offered</li> <li>• flexibility regarding processing parameters</li> <li>• methods of extraction available</li> <li>• price or processing fee</li> <li>• type and condition of pre-processing handling</li> <li>• storage facilities and type of olive milling.</li> </ul> </li> </ul>
Post-harvest handling may include:	<ul style="list-style-type: none"> <li>• transporting harvested produce from the field to post-harvest processing or storage facilities</li> <li>• grading</li> <li>• applying treatments</li> <li>• packing, labelling and storing harvested produce.</li> </ul>

## Unit Sector(s)

Unit sector	Production horticulture
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCPHT404A Implement and monitor a horticultural crop harvesting program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the implementation and monitoring of a horticultural crop harvesting program and defines the standard required to: organise resources for the harvest; establish strategies for pre-harvest and harvest; estimate crop quality and yield; evaluate harvest operations and outcomes; document a crop harvesting report.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those who work in production horticultural enterprises either as employees or contractors who implement and monitor a horticultural crop harvesting program.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan for harvesting	<p>1.1. Crop maturity and quality are assessed and recorded.</p> <p>1.2. Optimum time to harvest crop is estimated according to crop maturity assessment and customer requirements.</p> <p>1.3. Pre-harvest treatments for control and eradication of pests are determined and carried out according to Occupational Health and Safety (OHS) requirements.</p> <p>1.4. Where applicable to enterprise's operations, requirements for licences or permits are identified and met.</p> <p>1.5. Resource requirements are assessed, giving consideration to size of crop and estimated timing of harvest.</p> <p>1.6. Labour and equipment required to carry out harvesting operations are confirmed and arranged within budgetary constraints.</p> <p>1.7. Enterprise requirements for harvesting are identified and communicated to all harvest personnel.</p> <p>1.8. Insurance requirements are assessed and risk management strategies planned and implemented.</p> <p>1.9. Where applicable to enterprise's operations, requirements for fire prevention and control are identified and arranged according to OHS requirements.</p>
2. Coordinate the harvest strategy	<p>2.1. Effective communication strategies are implemented to ensure personnel safety and smooth flow of operations.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2. Harvesting operations are implemented and adjusted as required, according to factors such as market or customer requirements, weather, equipment and staff or contractor availability.</p> <p>2.3. Equipment operation is coordinated for maximum efficiency and monitored for performance effectiveness.</p> <p>2.4. Existing and potential hazards are identified and controlled according to OHS and enterprise requirements.</p>
3. Complete harvest operation	<p>3.1. Storage resources are located for efficient operations.</p> <p>3.2. Strategies for drying crops are identified if necessary.</p> <p>3.3. Work is monitored to ensure that crop is graded, packed and stored according to enterprise requirements.</p> <p>3.4. Harvesting operations and outcomes, including resource allocation, are evaluated against harvest strategy.</p> <p>3.5. Feedback on performance is provided to personnel under supervision.</p> <p>3.6. Own performance is assessed, feedback on performance is sought and any required improvements are noted for future action.</p> <p>3.7. Strategies identified, crop quality, pre-harvest treatments and outcomes of harvest are documented in a report for continual analysis and effective planning management.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- establishing strategies, procedures and controls for crop harvesting
- implement treatments for control and eradication of pests
- implementing safe workplace and positive environmental practices

## REQUIRED SKILLS AND KNOWLEDGE

- coordinate equipment
- work within budgetary constraints
- evaluate harvest operations and outcomes
- document a crop harvesting report
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- crop measurement techniques and parameters
- customer requirements
- environmental controls and codes of practice applicable to harvesting operations
- functions and limitations of harvesting equipment
- market information and sources
- location and relative skills and abilities of available staff, contractors or casual staff
- relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, and vehicle and plant use
- required productivity rates
- weather or other conditions that may affect harvest
- where relevant to enterprise's production: food safety and Hazard Analysis Critical Control Point (HACCP) requirements, and requirements for export markets, such as EUREPGAP, Codex Alimentarius and the Bioterrorism Act (US).

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• organise resources for the harvest</li> <li>• establish strategies for pre-harvest and harvest</li> <li>• estimate crop quality and yield</li> <li>• evaluate harvest operations and outcomes</li> <li>• document a crop harvesting report.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Horticultural crops may include:	<ul style="list-style-type: none"> <li>• all fruit</li> <li>• vegetables</li> <li>• herbs</li> <li>• flowers</li> <li>• foliage</li> <li>• bulbs</li> <li>• tubers</li> <li>• nuts</li> <li>• fungi</li> <li>• wild harvest plants</li> <li>• oils</li> <li>• olives</li> <li>• grains</li> <li>• seeds</li> <li>• hops</li> <li>• other specialised crops not specifically named</li> </ul>

<b>RANGE STATEMENT</b>	
	as broad acre crops.
Harvesting programs may include:	<ul style="list-style-type: none"> <li>• the correct use of equipment</li> <li>• select picking</li> <li>• reporting or recording tallies</li> <li>• removing out-of-type plants</li> <li>• removing rotten or immature fruit.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Production horticulture
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPHT405A Manage mushroom substrate preparation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing mushroom substrate preparation and defines the standard required to: monitor and manipulate all interactions between inputs, conditions and outputs for each stage of substrate process; record and analyse production data; establish and review farm procedures for mushroom substrate preparation; set and monitor productivity standards for mushroom substrate and rest of production cycle.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the role of managers either in a general mushroom farming enterprise or in a specialist substrate preparation enterprise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Confirm status of system requirements for mushroom substrate preparation	<p>1.1. Mushroom substrate preparation processes are overseen and managed to ensure that work is performed according to farm procedures, and that all equipment is operated according to manufacturer instructions and at a speed that maintains safe and continuous operation.</p> <p>1.2. Details of quantities of substrate required and dates/times to be achieved for each process stage are determined and communicated to personnel involved in the various stages of substrate preparation.</p> <p>1.3. Availability, quality, serviceability, and cleanliness of all rooms, work areas, machinery, equipment and materials required for mushroom substrate preparation are ascertained.</p> <p>1.4. Staff duties and responsibilities are allocated.</p> <p>1.5. Where problems with process are identified, remedial action is initiated as required and according to farm procedures.</p> <p>1.6. Personal Protective Equipment (PPE) and clothing are selected and used by all personnel involved in mushroom substrate processing tasks.</p> <p>1.7. Impact of mushroom substrate preparation processes on other enterprise activities is determined, personnel advised and adjustments to schedules and operations are made where required and according to farm procedures.</p> <p>1.8. Occupational Health and Safety (OHS) requirements and hazards associated with each task are identified and appropriate action is taken to minimise risks to</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>self and others.</p> <p>1.9. Site quarantine protocols and farm and personal hygiene requirements are determined, applied and managed as required.</p> <p>1.10. All work of team is managed to ensure that it is performed according to farm procedures and in an environmentally aware and safe manner.</p>
2. Confirm quality and consistency of Phase II outputs	<p>2.1. Phase II process is managed to ensure it conforms to required production schedule and farm procedures.</p> <p>2.2. Key factors and critical points are recorded.</p> <p>2.3. Random representative samples of end product are taken in line with farm procedures and are dispatched to laboratory for analysis.</p> <p>2.4. Test results are recorded in farm records, compared to farm standards and remedial action is taken if required.</p>
3. Monitor and manipulate spawning and spawn run	<p>3.1. Condition and quality of compost are assessed before spawning and, if required, remedial action is taken according to farm procedures.</p> <p>3.2. Temperature readings are taken and recorded according to farm procedures and adjustments are made to thermostat if required.</p> <p>3.3. Carbon dioxide content is measured, recorded and controlled according to farm procedures.</p> <p>3.4. Spawn growth and appearance of mycelium are monitored during spawn run period.</p> <p>3.5. Where supplement is to be added to substrate at spawning, product and its rate of application are selected and instructions are given to appropriate personnel.</p> <p>3.6. Room hygiene and occurrence of pests and diseases are monitored and, if required, control measures are implemented according to farm procedures.</p>
4. Manage clean-up procedure	<p>4.1. Clean-up activities at the end of each process stage are managed to ensure they comply with farm procedures.</p> <p>4.2. Cook-out or chemical disinfestations treatment is conducted as appropriate prior to removal of spent substrate.</p> <p>4.3. Return of equipment and hand tools to storage area after cleaning, basic preventative maintenance and checking for future serviceability is monitored to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>ensure compliance with farm procedures.</p> <p>4.4. Faults are reported to maintenance personnel for remedial action.</p> <p>4.5. Inventory of all inputs is made to ensure availability of sufficient stock for future use.</p> <p>4.6. Records are completed legibly and accurately according to farm procedures.</p> <p>4.7. Feedback on performance is provided to personnel under supervision.</p> <p>4.8. Own performance is assessed, feedback on performance sought and any required improvements are noted for future action.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and overseeing safe work practices
- accepting responsibility for quality of own work
- contributing to productive work environment
- developing work schedules
- explaining quality standards and task requirements to personnel
- managing own work and that of others
- monitoring and recording key parameters including environmental impacts
- observing employment requirements
- promoting workplace cooperation
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• casing function, application, required depth and required surface structure</li> <li>• detailed knowledge of all stages in Phase II substrate preparation process</li> <li>• farm standards and procedures, including those relating to OHS, food safety, Hazard Analysis Critical Control Point (HACCP), quality systems, emergency procedures, organisational structure and workplace communication channels and protocols</li> <li>• how mushrooms are grown, with a focus on interaction between compost, environmental factors (such as temperature, water, relative humidity, carbon dioxide and ammonia) and mushroom growth</li> <li>• industry and workplace awards and conditions</li> <li>• key parameters to be recorded and monitored and appropriate ranges in relation to temperature, ammonia, relative humidity, moisture content, carbon dioxide and time</li> <li>• overview of Phase I compost production</li> <li>• overview of mushroom production cycle and possible impact of deviations from farm standards on substrate and rest of production cycle</li> <li>• relevant legislation and industry codes of practice</li> <li>• site quarantine protocols.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• monitor and manipulate all interactions between inputs, conditions and outputs for each stage of substrate process</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>record and analyse production data</li> <li>establish and review farm procedures for mushroom substrate preparation</li> <li>set and monitor productivity standards for mushroom substrate and rest of production cycle.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Mushroom substrate may include:	<ul style="list-style-type: none"> <li>the range of ingredients and processes required for Phase II compost preparation and a range of mushroom substrate components and products.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCPTH406A Control Phase II mushroom substrate process

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved with control phase II of mushroom substrate processing and defines the standard required to: differentiate between Phase I substrate and substrate ready for spawning and describe desired parameters of each stage; monitor and manage Phase II process for at least eight crops; assess room or tunnel layout and determine most appropriate locations for taking substrate and air measurements; carry out effective troubleshooting during Phase II process.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to a manager on a mushroom farm.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Confirm the requirements for Phase II mushroom substrate preparation	<p>1.1. Phase II mushroom substrate process is monitored and managed to ensure that process is performed according to farm procedures and schedules, and that all equipment is operated safely and according to manufacturer instructions.</p> <p>1.2. Checks are made to ensure all temperature probes are functioning correctly.</p> <p>1.3. Occupational Health and Safety (OHS) requirements and hazards associated with Phase II process are identified and appropriate action is taken to minimise risks.</p> <p>1.4. Personal Protective Equipment (PPE) and clothing are selected and used according to farm OHS procedures.</p> <p>1.5. Site quarantine protocols and farm and personal hygiene requirements are determined, applied and monitored as required by farm procedures.</p> <p>1.6. Condition and quality of compost are assessed before filling and any required remedial action is communicated according to farm procedures.</p>
2. Carry out Phase II process	<p>2.1. Placement of probes in air and substrate is monitored to ensure placement complies with required farm procedures.</p> <p>2.2. The evenness of filling and amount filled are checked.</p> <p>2.3. Room or tunnel is checked at completion of filling to ensure that doors are secure and vents and thermostats are set according to farm procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4.Key factors and critical points are measured and recorded legibly and accurately according to farm procedures.</p> <p>2.5.Equipment settings are adjusted as required and according to farm procedures to ensure optimum conditions for each Phase II sub-stage.</p> <p>2.6.Random representative samples are taken for laboratory chemical testing.</p> <p>2.7.Ammonia measurements are taken or ammonia levels assessed prior to cool down for spawning.</p> <p>2.8.Feedback on performance is provided to personnel under supervision.</p> <p>2.9.Own performance is assessed, feedback on performance sought and any required improvements are noted for future action.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- accepting responsibility for quality of own work
- contributing to productive work environment
- developing work schedules
- maintaining safety of self and others
- managing own work and that of others
- monitoring and recording key parameters
- OHS, environment and employment legislation and enterprise procedures
- promoting workplace cooperation
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of



**REQUIRED SKILLS AND KNOWLEDGE**

cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- basic interpretation of chemical test results
- concept of compost selectivity and biological indicators of compost quality
- factors influencing air quantity and distribution
- farm standards and procedures, including those relating to OHS, food safety, Hazard Analysis Critical Control Point (HACCP), quality systems, emergency procedures, organisational structure and workplace communication channels and protocols
- industry and workplace awards and conditions
- key parameters to be recorded and monitored relating to temperature, ammonia and moisture content
- knowledge of how different systems (shelf, tray and tunnel) impact on temperature zones in substrate
- knowledge of objectives and desired parameters of each sub-stage of Phase II substrate preparation
- overview of Phase I compost production and how it impacts on Phase II process
- relevant legislation and industry codes of practice
- site quarantine protocols
- understanding of importance of correct probe placement and calibration.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- differentiate between Phase I substrate and substrate ready for spawning and describe desired parameters

<b>EVIDENCE GUIDE</b>	
	<p>of each stage</p> <ul style="list-style-type: none"> <li>• monitor and manage Phase II process for at least eight crops</li> <li>• assess room or tunnel layout and determine most appropriate locations for taking substrate and air measurements</li> <li>• carry out effective troubleshooting during Phase II process.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Mushroom substrate may include:	<ul style="list-style-type: none"> <li>• the range of ingredients and processes required for Phase II compost preparation.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Production horticulture
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCPHT407A Manage mushroom crop development

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing mushroom crop development and defines the standard required to: recognise stages of growth and development, and factors impacting on yields and mushroom quality; recognise the interdependency of stages of growth and impact of early stages of production cycle on production results; monitor and manage growing room conditions, watering and flush development of mushroom crops.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to staff on a mushroom farm who manage mushroom crop development, including the selection, application and management of the mushroom casing, and all activities up to the end of the harvesting period.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Manage casing application	<p>1.1. Casing materials and recipe are selected and instructions are given to appropriate personnel.</p> <p>1.2. Occupational Health and Safety (OHS) requirements and hazards are identified and appropriate action is taken to minimise the risks to self and others.</p> <p>1.3. Personal Protective Equipment (PPE) and clothing are selected and used according to farm OHS procedures.</p> <p>1.4. Condition and quality of spawn run are assessed before casing and, if required, remedial action is taken according to farm procedures.</p> <p>1.5. Where supplement is to be added to substrate at casing, product and its rate of application are selected and instructions are given to appropriate personnel.</p> <p>1.6. Casing mixture is checked against farm standards for moisture, structure and depth, and remedial action is taken if required.</p>
2. Control environment during casing colonisation growth phase	<p>2.1. Crop is installed in growing room according to farm procedures.</p> <p>2.2. Air conditioning system in the growing room is set up and checked for correct functioning.</p> <p>2.3. Temperature, relative humidity and carbon dioxide content are measured, recorded, and where required, adjusted.</p> <p>2.4. Mycelium growth is assessed and decisions are made</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>on the timing and quantity of water to be applied.</p> <p>2.5. Pest and disease status is monitored and recorded and, where required, remedial action is taken.</p>
<p>3. Initiate fruit body formation and manage pinning and pre-picking growth phases</p>	<p>3.1. Growth is assessed and changes are made to temperature and ventilation to initiate fruit body formation according to farm procedures.</p> <p>3.2. Temperature, relative humidity and carbon dioxide content are measured, recorded and adjusted.</p> <p>3.3. Variations from expected or required ranges of temperature, relative humidity and carbon dioxide content are identified and analysed, and appropriate remedial action is taken.</p> <p>3.4. Mycelium development and pin development are assessed and timing and quantity of water and additives to be applied to water are determined.</p> <p>3.5. Pest and disease status are monitored and recorded, and remedial action is taken where required.</p> <p>3.6. OHS requirements and hazards are identified and appropriate action is taken to minimise the risks to self and others.</p>
<p>4. Assess crop maturity, flush development and quality, and monitor the harvesting process</p>	<p>4.1. Crop maturity is assessed to determine when and what to pick.</p> <p>4.2. Pickers are given instructions about tasks to be performed.</p> <p>4.3. Picking results are monitored to ensure instructions continue to be appropriate and are being carried out.</p> <p>4.4. Markets are consulted to ensure product meets market needs and specifications.</p> <p>4.5. Crop quality is monitored, disorders stimulated by environmental conditions are recognised, and remedial action is implemented if required.</p> <p>4.6. Pest and disease status during this stage are monitored and recorded, and remedial action is taken where required.</p> <p>4.7. Daily work schedule for waterers is planned and picking and watering schedules are coordinated.</p> <p>4.8. Harvest process is reviewed for compliance with quality standards and areas for improvement are identified where appropriate, documented and implemented.</p> <p>4.9. Feedback is provided to pickers on individual and team performance.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- maintaining environment within parameters for production
- accepting responsibility for quality of own work
- contributing to productive work environment
- developing work schedules
- managing own work and supervising work of others
- maintaining safety of self and others
- implement and review QA procedures including food safety
- observing employment requirements
- promoting workplace cooperation
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- available options of additives to irrigation water to promote mushroom quality and the main considerations of their use
- basic understanding of air conditioning principles, particularly relative humidity
- casing function, application and depth and surface structure requirements
- desirable physical, biological and chemical characteristics of casing
- farm standards and procedures, including those relating to OHS, food safety, Hazard Analysis Critical Control Point (HACCP), quality systems, emergency procedures, organisational structure and workplace communication channels and protocols
- goals and sub-stages of Phase II substrate preparation and impact of Phase II on yields and quality
- growth phases of a mushroom crop and interactions that occur between the

**REQUIRED SKILLS AND KNOWLEDGE**

- compost, casing, environmental factors (such as temperature, water, relative humidity and carbon dioxide) and growth of the mushroom
- how nature of casing and the appearance and quantity of mycelium growth in casing affect the number, distribution and quality of fruit bodies formed
  - impact of mushroom numbers and size on picking and quality
  - industry and workplace awards and conditions
  - overview of Phase I substrate production and its impact on yields and quality
  - management impacts of supplementing at spawning or casing
  - management requirements of casing - Compost Added at Casing (CAC) and/or Casing Inoculums (CI)
  - OHS and environmental legislation, industry codes of practice and enterprise procedures
  - site quarantine protocols.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- recognise stages of growth and development, and factors impacting on yields and mushroom quality
- recognise the interdependency of stages of growth and impact of early stages of production cycle on production results
- monitor and manage growing room conditions, watering and flush development of mushroom crops.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or



**EVIDENCE GUIDE**

enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Mushrooms may include:

- all species and cultivars of fungi.

Farm standards and procedures may include:

- those relating to:
- OHS, food safety
- HACCP
- quality systems
- emergency procedures
- organisational structure
- workplace communication channels and protocols.

**Unit Sector(s)****Unit sector**

Production horticulture

**Co-requisite units**

Co-requisite units		

## Competency field

Competency field	
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## AHCPHT408A Overseer vineyard practices

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release. New unit based on NSW accredited unit NSWTVIT501A Implement and manage vineyard practices

### Unit Descriptor

This unit of competency covers the process of overseeing vineyard practices for the production of grapes including knowledge of grape varieties, growing systems, vineyard establishment, vine training, vine health control, harvesting, planning and reporting processes, relevant legislation and supervision of workers.

### Application of the Unit

This unit applies to vineyard supervisors who develop and implement a program of vineyard practices and monitor and review the growing program.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define the requirements of the vineyard	1.1 The range of grape varieties and cultivars, and growing systems are identified 1.2 <b>Materials, equipment</b> and labour required for maintaining the vineyard are determined 1.3 <b>Consumables</b> required for maintaining the vineyard are determined 1.4 Staff skills and knowledge are checked
2. Develop a program of <i>vineyard practices</i>	2.1 Vineyard practices are determined from planting out to harvest and for the annual growing season 2.2 Resources are allocated 2.3 Allowance in the program is made for unforeseen circumstances, damage caused by weather, and new developments
3. Implement the program	3.1 Daily workplace <b>records</b> and other information relevant to the vineyard program are gathered and stored 3.2 Staff are allocated and supervised, as required 3.3 Materials and equipment are used according to <b>workplace health and safety</b> requirements and enterprise <b>safe operating procedures</b>
4. Monitor and review the program	4.1 The vineyard program is checked against previous programs and adjustments are made as necessary 4.2 Production plans are reviewed to determine and align schedule of activities 4.3 Vineyard practices are regularly reviewed to identify opportunities for improvements in performance 4.4 Costs and estimates of the vineyard program are compared with resource allocation

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

**Required skills include:****Ability to:**

- recognise grape varieties and cultivars
- determine maintenance requirements for the vineyard
- plan and program vineyard practices
- manage implementation of vineyard practices
- determine and organise work schedules
- source information
- gather and record information

**Required knowledge includes:****Knowledge of:**

- grape varieties and cultivars
- vineyard practices for a range of grape varieties and cultivars, and growing systems
- trellis and harvesting systems
- irrigation systems
- plant nutrition practices
- weed, pest and disease control practices
- legislation or local by-laws relevant to safe operating practices and workplace health and safety

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine maintenance requirements for the vineyard
- oversee the implementation of vineyard practices
- develop and organising work schedules

	<ul style="list-style-type: none"> <li>• supervise workers</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other units</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</li> <li>• The assessment environment should not disadvantage the candidate</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><b><i>Vineyard practices</i></b> include:</p>	<ul style="list-style-type: none"> <li>• soil preparation</li> <li>• planting</li> <li>• trellising</li> <li>• training</li> <li>• fertilising</li> <li>• weed, pest and disease control</li> <li>• inter row cultivation</li> <li>• irrigation</li> <li>• pruning</li> <li>• crop monitoring</li> <li>• harvesting and equipment</li> <li>• machinery maintenance</li> </ul>
<p><b><i>Materials and equipment</i></b></p>	<p>Large and small motorised machinery and equipment such as:</p> <ul style="list-style-type: none"> <li>• tractors</li> <li>• soil cultivation, spraying, pruning and harvesting machinery and equipment</li> <li>• hand tools such as secateurs, loppers and pruning saws</li> </ul>
<p><b><i>Consumables</i></b> may include but are not limited to:</p>	<ul style="list-style-type: none"> <li>• fertilisers</li> <li>• soil conditioners and ameliorants</li> <li>• irrigation components</li> <li>• sprays and chemicals</li> <li>• fuels and oils</li> <li>• posts and wire</li> <li>• vine protection devices</li> <li>• vine rootlings</li> <li>• personal protective equipment</li> <li>• first aid requirements</li> <li>• office requirements</li> </ul>
<p><b><i>Workplace health and safety</i></b></p>	<p>Hazards may include:</p> <ul style="list-style-type: none"> <li>• disturbance or interruption of services</li> <li>• solar radiation</li> <li>• dust, noise, soil-, air- and water-borne micro-organisms,</li> </ul>

	<ul style="list-style-type: none"><li>• chemicals and hazardous substances</li><li>• sharp hand tools and equipment</li><li>• manual handling</li><li>• moving vehicles</li><li>• machinery and machinery parts</li><li>• slippery and uneven surfaces</li><li>• falling and flying objects</li></ul>
<b><i>Safe operating procedures</i></b>	Safe operating procedures developed for machinery and equipment and particular vineyard cultural practices
<b><i>Records</i></b>	Records may be recorded manually or with proprietary software

## Unit Sector(s)

Production Horticulture



## AHCPT502A Develop a horticultural production plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing a production plan for a horticultural enterprise, and defines the standard required to: establish product specifications; research site factors and land use issues; select and source plants or plant material for seeding or propagation; design and incorporate infrastructure into planning; specify a monitoring program to cover the operation from sowing to sale; and document and cost the production plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires consideration of market requirements and site factors, suitable plant species and cultivars, resources and equipment for establishing production sites, planting and maintenance, and preparation of plans, specifications, quotations and associated documents. Work is likely to be under limited supervision with checking related to overall progress by senior managers. Responsibility for the work of others and team coordination may be required. Planning is usually undertaken within policy guidelines and procedures where discretion and judgement are required in the selection of technology, organisation of work, and the achievement of outcomes within time and budgetary constraints.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out preliminary planning activities	<p>1.1. Client preferences and requirements for the horticultural product are understood and confirmed according to enterprise marketing and business plans.</p> <p>1.2. The production site is assessed for growing environment factors, services and site modifications.</p> <p>1.3. Research is conducted into the characteristics and growing requirements of plant species and cultivars, legal attributes of the production site, and local by-laws and restrictions that may affect the production plan.</p> <p>1.4. Sustainable land use issues that may affect planned production are identified and, if necessary, reported to relevant personnel for further research.</p> <p>1.5. Production targets are set that are consistent with the marketing strategy and business plan.</p> <p>1.6. Production requirements in terms of quantity, quality and availability of the product are determined.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>1.7. A preliminary plan that reflects client preferences and requirements, and takes into account site factors and any identified sustainable land use requirements, is developed and presented to appropriate personnel for discussion and approval.</p>
<p>2. Determine the requirements of horticultural production</p>	<p>2.1. Plant species and cultivars that are appropriate to the site and consistent with the agreed preliminary plan are identified, and the required quantity calculated, costed and availability confirmed with the supplier.</p> <p>2.2. Plant establishment procedures consistent with the agreed preliminary plan are selected according to the characteristics and growing requirements of available plant materials, site factors, resources and equipment available and the sustainable land use factors affecting the success of production.</p> <p>2.3. Design of the production site includes irrigation and drainage systems, and takes into account the growing requirements of plants and sustainable land use practices.</p> <p>2.4. Cultural management of the growing environment from planting to harvest is provided for according to client requirements, site capabilities and enterprise standards, and encourages optimal growth.</p> <p>2.5. Harvesting dates to meet market deadlines are determined according to enterprise policies.</p> <p>2.6. Resources, tools, equipment and machinery required for the establishment of the production site, propagation of plants, planting, cultural management of the growing environment, harvesting and post-harvest care are identified, costed and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.7. Occupational Health and Safety (OHS) hazards associated with production activities are identified, risks assessed and controls developed according to enterprise guidelines, costed and documented in the plan.</p> <p>2.8. Policy concerning out-of-standard products is identified according to enterprise customer service, quality assurance policies and marketing strategy.</p>
<p>3. Schedule production activities</p>	<p>3.1. Staged implementation and development of product are outlined, where appropriate, with access for future works provided for according to client,</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>enterprise and site requirements.</p> <p>3.2. Timelines for preparations, the establishment of the production site, propagation of plants, planting, cultural management of the growing environment, harvesting and post-harvest care are determined taking into account the needs of the plant species and cultivars, the softscape and hardscape components, site conditions and any other planning requirements.</p> <p>3.3. Timing within the plan ensures that available enterprise production facilities and space are effectively and efficiently utilised.</p> <p>3.4. Marketing is planned and scheduled according to the production schedule and marketing strategy.</p>
4. Plan monitoring of the production plan	<p>4.1. Production activities to be monitored, the format for recording factors, frequency of monitoring and the thresholds for remedial action are determined according to enterprise and industry quality assurance policies.</p> <p>4.2. Required remedial action is documented for implementation by staff according to enterprise and industry quality assurance policies.</p> <p>4.3. Effectiveness of the monitoring system is reviewed on a regular basis according to enterprise and industry quality assurance policies.</p> <p>4.4. The production program is compared with feedback and projections from clients according to sound business practice.</p>
5. Prepare and document the production plan and specification	<p>5.1. Detailed plan, specifications and quotation are prepared based on horticultural conventions and the requirements of production, and presented to appropriate personnel for acceptance.</p> <p>5.2. Scaled production site plan is produced which can be readily interpreted and understood by on-site personnel according to enterprise standards.</p> <p>5.3. Detailed on-site procedures and schedules required for production are developed and documented.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- research and evaluate information
- comply with legislative requirements
- calculate the cost and spatial and logistical requirements of components of the horticultural production plan
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- establishment and maintenance of a range of enterprise horticultural products in relation to client needs and the standards required by the marketplace
- establishment procedures, plant selection and cultural practices for a range of enterprise horticultural products
- the advantages and limitations of sustainable horticulture systems
- the role of business and marketing plans and client consultation processes in planning horticultural production
- processes and techniques for preparing, costing and documenting plans for and scheduling horticultural production.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish product specifications</li> <li>• research site factors and land use issues</li> <li>• select and source plants or plant material for seeding or propagation</li> <li>• design and incorporate infrastructure into planning</li> <li>• specify a monitoring program to cover the operation from sowing to sale</li> <li>• document and cost the production plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Industry sectors involved in production may include	<ul style="list-style-type: none"> <li>• nursery</li> <li>• turf</li> <li>• floriculture and production horticulture.</li> </ul>
Products may include	<ul style="list-style-type: none"> <li>• fruit</li> <li>• vegetables</li> <li>• herbs</li> <li>• flowers</li> <li>• foliage</li> <li>• bulbs</li> <li>• tubers</li> <li>• nuts</li> <li>• mushrooms</li> <li>• seeds</li> <li>• wild harvest plants and oils</li> <li>• trees</li> <li>• shrubs</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>turf</li> <li>containerised and bare-rooted grown plants.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Production horticulture
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPT503A Manage a controlled growing environment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing controlled growing environments, and defines the standard required to: identify the growing requirements of the crop; prepare specifications for controlled growing infrastructure; develop a management plan to cover staff training, budgets, operating procedures and remedial actions; develop environmental monitoring procedures; and evaluate and document the achievements towards management objectives.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the management of a horticultural production site consisting of one or several controlled growing environments. The work is usually undertaken without supervision, with only general guidance on progress sought by senior management. Responsibility for the work of others may be involved and team coordination may be required. Management of controlled growing environments requires extensive horticultural knowledge and practical skills, particularly in plant physiology and growth needs, controlled environment systems, monitoring, reporting and forward planning.
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### Licensing/Regulatory Information

Not Applicable



## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify crop requirements	<p>1.1.Crop growth and production requirements are determined according to a documented production plan.</p> <p>1.2.Environmental parameters for optimal growing conditions for the specific crop are researched using available information resources.</p> <p>1.3.Controlled growing environment factors are identified, evaluated and recorded.</p>
2. Determine requirements for controlled growing environment	<p>2.1.Structures, machinery, equipment and resources required to control environmental conditions are identified, costed and availability confirmed.</p> <p>2.2.Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</p> <p>2.3.Detrimental environmental impacts associated with the controlled growing environment system are identified and controls sanctioned.</p>
3. Prepare a	3.1.Management objectives for controlled growing

ELEMENT	PERFORMANCE CRITERIA
management plan for controlled growing environment	<p>environment are determined consistent with production plan and market requirements for crop quantity and quality.</p> <p>3.2.A schedule of environmental control procedures is developed according to controlled environment management objectives.</p> <p>3.3.Staff training needs are evaluated in regard to operation and maintenance of environmental control systems, and reported.</p> <p>3.4.A budget supporting the controlled environment management plan is documented and approval sought.</p> <p>3.5.The schedule of environmental control procedures is communicated clearly to staff.</p>
4. Manage controlled growing environment	<p>4.1.Controlled environment indicators and thresholds for remedial action are identified for monitoring according to industry best practice.</p> <p>4.2.Monitoring frequency and schedule is developed according to the requirements of the production plan and communicated clearly to staff.</p> <p>4.3.All monitoring data is recorded, analysed and applied to management of the controlled environment system to ensure optimal plant development.</p> <p>4.4.Remedial action undertaken is documented and reported.</p> <p>4.5.Costs of the controlled growing environment system are monitored against budget.</p> <p>4.6.Budget adjustments are recorded and reported.</p> <p>4.7.Recorded information, budget data and production outputs are evaluated and operational achievements towards management objectives are documented in a report.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- research information using available technology
- evaluate training needs
- assess risk
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- plant physiology and biochemistry
- techniques and methods of implementing optimal growing conditions for a range of horticultural crops
- controlled environmental conditions in regard to crop plant physiology, growth stages, and product quality and quantity
- quality production methods and techniques for a range of controlled environment plants
- legislation and regulations relating to the controlled environment systems
- market requirements for crop quantity and quality
- monitoring, analysis and recording systems
- staff training requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify the growing requirements of the crop</li> <li>• prepare specifications for controlled growing infrastructure</li> <li>• develop a management plan to cover staff training, budgets, operating procedures and remedial actions</li> <li>• develop environmental monitoring procedures</li> <li>• evaluate and document the achievements towards management objectives.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plants may include:	<ul style="list-style-type: none"> <li>• flower</li> <li>• foliage crops</li> <li>• oil crops</li> <li>• vegetables</li> <li>• fruit</li> <li>• nuts</li> <li>• mushroom crops</li> <li>• containerised plants</li> <li>• open-rooted grown plants.</li> </ul>
Growing environment factors may include:	<ul style="list-style-type: none"> <li>• relevant aspects of ambient humidity</li> <li>• light</li> <li>• growing media mean temperature</li> <li>• season and day length</li> <li>• air quality</li> <li>• nutrient and dissolved gas availability</li> <li>• toxicities and deficiencies</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• weeds</li> <li>• pests</li> <li>• diseases and beneficial organisms</li> <li>• site aspect and slope</li> <li>• natural and artificial water supplies.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Production horticulture
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPTH504A Develop a grape production plan

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release. New unit based on NSW accredited unit NSWTVIT505A Develop a winegrape production plan

### Unit Descriptor

This unit of competency covers the process of developing a production plan for a grape growing enterprise.

### Application of the Unit

This unit applies to vineyard managers who use knowledge of issues and trends affecting the industry, grape market requirements and vineyard site factors, suitable plant species and cultivars, resources and equipment for establishing a vineyard to develop a grape production plan.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Carry out preliminary planning activities	<p>1.1 <b>Trends and issues</b> affecting the Australian viticulture industry are identified and evaluated for their impact on planning decisions</p> <p>1.2 <b>Client preferences and requirements</b> for the production of grapes are determined</p> <p>1.3 The vineyard site is assessed for <b>growing environment factors</b>, services and site modifications</p> <p>1.4 Research is conducted into the characteristics and growing requirements of grape varieties and cultivars, legal attributes of the site, and local by-laws and restrictions that may affect the production plan</p> <p>1.5 <b>Sustainable land use</b> issues that may affect planned production are identified</p> <p>1.6 Production targets are set that are consistent with the marketing strategy and business plan</p> <p>1.7 Production requirements in terms of quantity and quality of grapes are determined</p> <p>1.8 A draft plan that reflects client preferences and requirements, and takes into account site factors and any identified sustainable land use requirements is developed</p>
2. Determine the production requirements for grapes	<p>2.1 Grape varieties, species and cultivars that are appropriate to the site and consistent with the agreed preliminary plan are identified, and the required quantity calculated, costed and availability confirmed with the supplier</p> <p>2.2 <b>Establishment procedures</b> consistent with the agreed preliminary plan are selected according to the characteristics and growing requirements of available planting material, site factors, the resources and equipment available and the sustainable land use factors affecting the success of production</p> <p>2.3 Design of the vineyard includes irrigation and drainage systems, and takes into account the growing requirements of grapes and sustainable land use practices</p> <p>2.4 <b>Cultural management</b> practices to achieve optimal growth are documented</p> <p>2.5 Harvesting dates to meet market specifications and deadlines are determined</p> <p>2.6 Resources, tools, equipment and machinery required for</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>production are identified and costed</p> <p>2.7 OHS hazards associated with production activities are identified, risks assessed and controls identified and documented in the plan</p> <p>2.8 Policy concerning grapes not meeting specifications, is identified according to customer requirements, quality assurance policies and marketing strategy</p>
3. Schedule grape production activities	<p>3.1 Staged implementation and development of the grape enterprise are documented</p> <p>3.2 Timelines for grape production activities are determined and documented</p> <p>3.3 Marketing is planned and scheduled according to the production schedule and marketing strategy</p>
4. Plan monitoring of the grape production plan	<p>4.1 Production activities to be monitored, the format for recording factors, frequency of monitoring and the thresholds for remedial action are determined</p> <p>4.2 Required remedial action is documented for implementation by staff</p> <p>4.3 Effectiveness of the monitoring system is reviewed on a regular basis</p> <p>4.4 The production program is compared with feedback and projections from clients</p>
5. Prepare and document the grape production plan and specifications	<p>5.1 Detailed plans, specifications and quotations are prepared based on industry conventions and the requirements of production</p> <p>5.2 Scaled vineyard site plan is produced which can be readily interpreted and understood by on-site personnel</p> <p>5.3 Detailed on-site procedures and schedules required for grape production are developed and documented</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.



**Required skills include:**

**Ability to:**

- document plans, specifications and production work procedures
- prepare reports for staff, managers, clients and contractors
- calculate the cost and logistical requirements of the production plan
- communicate and negotiate verbally and in writing with the client, staff, managers, suppliers, contractors and consultants
- research, evaluate and record relevant information
- comply with legislative requirements

**Required knowledge includes:**

**Knowledge of:**

- trends and issues impacting the Australian viticulture industry
- establishment and management of grape production in relation to client needs and the standards required by the marketplace
- processes and techniques for preparing, costing and documenting plans for and scheduling grape production
- establishment procedures, plant selection and cultural practices for grape production
- the role of business and marketing plans and client consultation processes in planning grape production

**Evidence Guide**

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• document plans, specifications and production work procedures</li> <li>• calculate the cost and logistical requirements of the production plan</li> <li>• prepare reports for staff, managers, clients and</li> </ul>

	contractors
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other units</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</li> <li>• The assessment environment should not disadvantage the candidate</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Trends and issues</i></b> of the industry include:</p>	<ul style="list-style-type: none"> <li>• industry strategies</li> <li>• tourism</li> <li>• export market</li> <li>• e commerce</li> <li>• quarantine, both regional and national</li> <li>• biosecurity</li> <li>• safety</li> <li>• overseas regulations and agreements</li> <li>• labelling regulations</li> <li>• food regulations</li> </ul>
<p><b><i>Client preferences and requirements</i></b> include:</p>	<ul style="list-style-type: none"> <li>• purpose or intended use of the grapes</li> <li>• preferred varieties and cultivars</li> <li>• plant characteristics</li> <li>• growth habits and cultural requirements</li> <li>• quality and grades</li> <li>• quarantine specifications and protocols</li> <li>• postharvest care, storage and delivery</li> <li>• quantities and availability</li> <li>• non-compliance policy</li> <li>• contractual arrangements</li> <li>• pricing structures</li> <li>• budget limitations</li> <li>• payment terms</li> <li>• timelines for delivery of product</li> </ul>
<p><b><i>Growing environment factors</i></b> include:</p>	<ul style="list-style-type: none"> <li>• rainfall</li> <li>• humidity</li> <li>• wind</li> <li>• sunlight intensity</li> <li>• mean temperatures</li> <li>• season length</li> <li>• air quality and flow</li> <li>• soil types and profiles</li> <li>• nutrient toxicities and deficiencies</li> <li>• presence or absence of weeds, pests, diseases and</li> </ul>

	<ul style="list-style-type: none"> <li>• beneficial organisms</li> <li>• the aspect and slope of the site</li> <li>• watercourses and other water sources</li> <li>• existing flora and fauna</li> </ul>
<i>Sustainable land use</i> issues include:	<ul style="list-style-type: none"> <li>• waste minimisation</li> <li>• energy conservation</li> <li>• water resource management</li> <li>• cultural practices</li> <li>• weed, pest and disease control</li> <li>• conservation of heritage values such as native vegetation</li> </ul>
Grape <i>establishment procedures</i> include:	<ul style="list-style-type: none"> <li>• soil testing for physical and chemical characteristics</li> <li>• modification of soil profiles</li> <li>• application of soil treatments; preparation of soil for planting</li> <li>• propagation of planting material, growing-on; planting methods</li> <li>• post-planting care</li> <li>• installation of propagation facilities</li> <li>• installation of irrigation and/or drainage systems</li> <li>• protection of young plants</li> <li>• erection of trellising</li> </ul>
<i>Cultural management</i> of the growing environment includes:	<ul style="list-style-type: none"> <li>• soil preparation</li> <li>• irrigation</li> <li>• fertilising</li> <li>• weed</li> <li>• pest and disease control</li> <li>• integrated pest management</li> </ul>
Crop regulation includes:	<ul style="list-style-type: none"> <li>• canopy management</li> <li>• pruning</li> <li>• de-budding</li> <li>• use of growth hormones and retardants</li> <li>• light manipulation</li> <li>• air temperature and humidity control</li> <li>• trellising and tying</li> </ul>

## Unit Sector(s)

Production Horticulture



## AHCPTH505A Evaluate wine

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release. New unit based on NSW accredited unit NSWTVIT502A Manage and evaluate wine production

### Unit Descriptor

This unit of competency covers evaluating a variety of wine types and styles, enabling recommendations for the improvement of wine making and viticultural practices to enhance the quality of wine produced.

### Application of the Unit

This unit applies to vineyard managers who use knowledge of wine type, style and quality in order to determine the relative contributions of winemaking technique and viticulture practice to the wine.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse chemical components of wine	<p>1.1 Chemical components for a particular <i>wine style</i> are determined and where required, testing laboratories are identified</p> <p>1.2 Samples of grapes, juice and/or wine are taken according to standard sampling procedures and laboratory requirements</p> <p>1.3 Simple wine analysis procedures are performed and results recorded</p> <p>1.4 Results of <i>chemical analyses</i> are evaluated and compared with desired values to identify potential chemical problems in the winemaking process and any required additions or fining agents</p>
2. Resolve wine making problems	<p>2.1 Wine or juice is evaluated using standard laboratory and <i>organoleptic procedures</i></p> <p>2.2 The protein stability of a wine is identified using a buttes or heat technique</p> <p>2.3 The need for cold stabilisation of a wine is identified</p> <p>2.4 <i>Additives and/or fining agents</i> are used to alleviate problems or improve quality, and their effectiveness is evaluated and their use adjusted where indicated</p> <p>2.5 Wine making and handling processes are carried out in a <i>hygienic working environment</i></p> <p>2.6 Cellar operations procedures and instructions are clearly described, recorded and utilised during the winemaking process</p>
3. Taste and evaluate a wine	<p>3.1 Accepted <i>tasting procedures</i> are used for tasting the wine</p> <p>3.2 The <i>flavour and aroma components</i> and <i>characteristics of the wine</i> are identified using sensory evaluation methods</p> <p>3.3 The relative contribution and interaction of wine components to the wine taste, aroma and appearance are identified using accepted wine description terminology</p> <p>3.4 Characteristics of wine that make it suitable for cellaring and the ideal cellaring conditions are identified</p> <p>3.5 Tasting notes are made during the tasting process according to industry standards</p> <p>3.6 Records of wine evaluation are made and stored according to industry standards</p>
4. Analyse the effect of	<p>4.1 Evidence of the winemaking technique is identified in the</p>

ELEMENT	PERFORMANCE CRITERIA
<i>winemaking techniques</i> on wine quality	<p>wine to distinguish it from other influences on the wine</p> <p>4.2 Faults in the wine attributable to the winemaking technique are identified and distinguished from bottle age characteristics</p> <p>4.3 The effect of winemaking techniques on suitability of wine for cellaring is determined</p>
5. Analyse the effect of site characteristics, viticultural practices and grape varieties on wine quality	<p>5.1 Effects of climate are identified in the wine</p> <p>5.2 Effects of the physical characteristics of vineyard sites are identified in the wine</p> <p>5.3 Effects of <i>grape variety</i> are identified and analysed</p> <p>5.4 Effects of viticultural practices are identified in the wine and evaluated in terms of modifications and improvements to be made for the next season</p> <p>5.5 Viticultural production plan for next season is adjusted, documented and communicated to vineyard personnel</p>
6. Analyse current <i>packaging methods, bottle closure methods</i> and <i>wine labelling laws</i>	<p>6.1 The range of wine packaging available and used in the Australian wine industry are identified</p> <p>6.2 The range of wine bottle closure methods used in the Australian wine industry are identified and compared</p> <p>6.3 Current wine labelling regulations and their impact on the wine industry are identified and interpreted</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

#### Ability to:

- determine wine characteristics and faults using organoleptic evaluation techniques
- document plans, specifications and production work procedures and write reports for staff, managers, clients and contractors
- communicate and negotiate verbally and in writing with the client, staff, managers, suppliers, contractors and consultants
- research, evaluate and record information
- comply with legislative requirements



## Required knowledge

### Knowledge of:

- changes to the physical characteristics of grapes during ripening including size, hardness and colour
- changes to the chemical characteristics of grapes during ripening including acid, sugar and flavour
- factors involved in the initiation and management of primary, secondary and malolactic fermentation processes
- ideal Australian cellaring conditions
- vintage ratings in Australia
- sensory evaluation of wines with potential for cellaring
- varieties of wine grapes in Australia
- types and styles of wine produced in Australia
- 'balance' in relation to wine taste
- climatic and physical features of wine grape growing areas and wine styles produced
- main export markets
- food safety requirements
- cleaning procedures and processes, including:
  - cleaning and sanitising agents
  - cleaning systems and equipment
  - waste disposal
  - wastewater removal
- packaging, regulations and relationship to product marketing and quality

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- perform chemical analyses necessary for the winemaking process
- evaluate wine

	<ul style="list-style-type: none"> <li>• identify and recommend improvements to viticultural practices that will contribute to enhanced wine quality in the next season</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other units</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</li> <li>• The assessment environment should not disadvantage the candidate</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Wine types and styles***  
include:

- dry white table wine
- dry red table wine
- sweet white table wine
- sparkling wine
- fortified wine
- blended wines

***Grape varieties***

The major grape varieties used in the production of wine in Australia include:

- major red varieties:
  - Shiraz
  - Cabernet Sauvignon
  - Merlot
  - Pinot Noir
- major white varieties:
  - Chardonnay
  - Semillon
  - Riesling
  - Sauvignon Blanc
  - Sultana

The minor and newer wine varieties in Australia include:

- red varieties:
  - Cabernet Franc
  - Malbec
  - Grenache
  - Chambourcin
  - Italian varieties
- white varieties:
  - Chenin Blanc
  - Marsanne
  - Verdelho

	<ul style="list-style-type: none"> <li>Italian varieties</li> </ul>
<b>Chemical analyses</b> include:	<ul style="list-style-type: none"> <li>pH</li> <li>sugar</li> <li>titratable acid (TA)</li> <li>sulphur dioxide</li> <li>alcohol</li> <li>malic/lactic acid</li> </ul>
<b>Organoleptic procedures</b> include:	<ul style="list-style-type: none"> <li>human sensory mechanisms; sight, smell, taste and feel</li> <li>the four basic tastes; salt, sweet, sour, bitter</li> <li>taste positions on tongue and in mouth; positions on tongue where tastes are experienced and positions in mouth where sensations are experienced</li> </ul>
<b>Additives and fining agents</b>	<p>Additives and finings include:</p> <ul style="list-style-type: none"> <li>bentonite</li> <li>PVPP</li> <li>egg albumin</li> <li>casein</li> <li>gelatine</li> <li>copper</li> </ul> <p>Reasons for using additives and finings include:</p> <ul style="list-style-type: none"> <li>moderating tannins</li> <li>moderating phenolic content</li> <li>reducing colour</li> <li>reducing protein content</li> </ul> <p>Trials to determine requirements include:</p> <ul style="list-style-type: none"> <li>setting up</li> <li>evaluation</li> </ul> <p>Addition of additives/fining agents include:</p> <ul style="list-style-type: none"> <li>calculation of additions to bulk wine</li> <li>addition procedures</li> </ul>
<b>Hygienic working environment</b>	<p>The elements of winery hygiene include:</p> <ul style="list-style-type: none"> <li>hygienic working environment</li> <li>key areas and equipment, including: <ul style="list-style-type: none"> <li>tanks</li> <li>barrels</li> <li>hoses and pipes</li> <li>presses</li> <li>crushers/destemmers</li> <li>receival area</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• floors</li> <li>• drains</li> </ul>
<b><i>Tasting procedures</i></b>	<p>Procedures essential for correct wine evaluation include:</p> <ul style="list-style-type: none"> <li>• explanation of reasons for tasting and evaluating wine</li> <li>• tasting conditions including: <ul style="list-style-type: none"> <li>• physical environment</li> <li>• tasting glasses</li> <li>• amount of wine</li> <li>• temperature of wine</li> </ul> </li> <li>• tasting procedures</li> <li>• taste and feel thresholds for different flavour/taste and mouth/feel relationships</li> <li>• mouth-feel sensations: <ul style="list-style-type: none"> <li>• cause</li> <li>• feeling</li> <li>• location in mouth</li> </ul> </li> <li>• wine descriptions: <ul style="list-style-type: none"> <li>• accepted terminology - flavour wheel</li> <li>• colour</li> <li>• nose</li> <li>• palate</li> <li>• recording of notes</li> </ul> </li> </ul>
<b><i>Major flavour and aroma components</i></b> include:	<ul style="list-style-type: none"> <li>• flavour compounds</li> <li>• colour compounds</li> <li>• tannins</li> <li>• acids sugars</li> <li>• sugar</li> <li>• alcohol</li> <li>• water</li> <li>• wine components</li> <li>• flavour/aroma from grape</li> <li>• contribution to flavour/aroma/bouquet from wine making procedures: <ul style="list-style-type: none"> <li>• grape composition, including changes during ripening and composition at ripening</li> <li>• composition changes, including change from grape juice to wine</li> </ul> </li> </ul>
<b><i>Characteristics of wine</i></b> include:	<ul style="list-style-type: none"> <li>• wine type and style</li> <li>• age</li> <li>• chemical components</li> </ul>

	<ul style="list-style-type: none"> <li>• packaging</li> </ul>
<b>Winemaking techniques</b> include:	<ul style="list-style-type: none"> <li>• fermentation techniques</li> <li>• wood fermentation and maturation techniques</li> <li>• processing techniques including crushing, skin contact, pressing, filtration,fining, blending</li> <li>• ageing techniques including: <ul style="list-style-type: none"> <li>• effect on style of wine</li> <li>• effect on composition of wine</li> <li>• effect on quality of wine</li> </ul> </li> <li>• sparkling wine production techniques: <ul style="list-style-type: none"> <li>• Methode Champenoise</li> <li>• transfer systems</li> <li>• Charmat</li> <li>• carbonation</li> </ul> </li> <li>• fortified wine production techniques</li> </ul>
Faults in wine include:	<ul style="list-style-type: none"> <li>• common wine faults</li> <li>• origin of wine faults</li> <li>• effect of wine faults on wine</li> <li>• sensory description of wine faults</li> <li>• bottle age versus wine faults</li> </ul>
<b>Packaging methods and bottle closure methods</b>	<p>Packaging methods include:</p> <ul style="list-style-type: none"> <li>• bottle</li> <li>• cask</li> <li>• cans</li> <li>• sachets</li> </ul> <p>and a consideration of:</p> <ul style="list-style-type: none"> <li>• wine package labels - front and back</li> <li>• label integrity program</li> </ul> <p>Wine bottle closures include:</p> <ul style="list-style-type: none"> <li>• corks</li> <li>• screw caps</li> </ul> <p>and a consideration of:</p> <ul style="list-style-type: none"> <li>• effect on marketability</li> <li>• effect of wine quality</li> </ul>
<b>Wine labelling laws</b> include:	<ul style="list-style-type: none"> <li>• Australian Wine and Brandy Corporation Act 1980 and regulations (including Label Integrity Program, Protected Names legislation)</li> <li>• Australian Food Standards</li> <li>• Food packaging legislation</li> </ul>

	<ul style="list-style-type: none"><li>• Trade Practices Act 1974</li></ul>
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## Unit Sector(s)

Production Horticulture

## AHCPTH506A Manage a wine making process

### Modification History

Release	TP Version	Comments
1	AHC10v5	Initial release. New unit based on NSW accredited unit NSWTVIT502A Manage and evaluate wine production

### Unit Descriptor

This unit of competency covers the process of acquiring grapes for processing and the preparation for, and production of, a variety of wine types and styles.

### Application of the Unit

This unit applies to vineyard managers who also have a role in the wine making process.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine <i>type and style of wine</i> to be produced and <i>winemaking process</i> to be followed	1.1 The type and style of wine to be produced from the crop is determined according to variety and characteristics of the <i>grapes, winemaking factors</i> , consumer preferences, client requirements and industry trends 1.2 The winemaking process to be followed is determined according to type and style of wine to be produced, quality and quantity of grapes available, and availability of required <i>equipment</i> and personnel
2. Acquire, deliver and <i>prepare grapes</i> for fermentation	2.1 Grapes are harvested and handled in accordance with standard vineyard practices and quality criteria 2.2 Grapes meeting the desired variety and quality parameters are acquired and delivered to the winery 2.3 Grapes are prepared for fermentation, and must or juice is delivered to fermentation vessels to meet the desired wine type and style requirements
3. Initiate a ferment	3.1 <i>Yeast types/strains</i> are selected to produce a given wine type and style 3.2 Fermentation vessels are prepared and must or juice is transferred according to wine type and style requirements 3.3 Yeast culture is prepared according to specifications 3.4 Yeast is added to fermentation vessels according to specified instructions
4. Manage <i>primary fermentation</i>	4.1 Physical characteristics of ferment are monitored and adjusted 4.2 Chemical characteristics of ferment are monitored and adjusted 4.3 Potential fermentation problems are predicted 4.4 The presence of undesirable fermentation characteristics is detected 4.5 Steps to rectify fermentation problems are outlined 4.6 Gross lees or pressings are racked off into appropriate vessels at a determined time 4.7 Records of additions and adjustments are maintained
5. Manage <i>secondary fermentation</i>	5.1 Oak barrels are obtained and checked for serviceability for use if required 5.2 Wine is inoculated with selected malolactic fermentation bacteria 5.3 Malolactic fermentation is managed to the predetermined end point

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
6. Mature wine in storage vessels	<p>6.1 Suitable maturation <i>storage vessels</i> to produce a given wine style are selected, obtained and checked for serviceability and use</p> <p>6.2 Wine is transferred into the selected vessels according to determined wine style characteristics</p> <p>6.3 Condition of wine in storage is monitored</p> <p>6.4 Wine is bottled and sealed</p> <p>6.5 Records are made and maintained</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

#### Ability to:

- calculate the cost and logistical requirements of components of the wine production
- plan processes that may be used to maximise production of grapes that meet winery quality requirements
- operate the range of equipment required to process grapes from winery receipt point to the fermentation tank
- perform must handling processes
- make additions and finings as required
- operate the filtration and bottling processes
- identify, establish, supervise and monitor daily cellar work practices

### Required knowledge

#### Knowledge of:

- vineyard practices relevant to the production of grapes that meet the requirements of the winery
- changes to the physical characteristics of grapes during ripening including size, hardness and colour
- changes to the chemical characteristics of grapes during ripening including acid, sugar and flavour
- processes involved in handling grapes from the vineyard to the winery in order to produce wine
- the range of equipment and the ability to use this equipment to process grapes and must in a winery
- factors involved in the initiation and management of primary, secondary and malolactic

- fermentation processes
- routine winemaking and cellar operation procedures
- cleaning procedures and processes, including:
  - cleaning and sanitising agents
  - cleaning systems and equipment
  - waste disposal
  - wastewater removal
- must and marc handling procedures
- equipment and processes for filtration of wine
- ideal Australian cellaring conditions
- varieties of wine grapes in Australia
- types and styles of wine produced in Australia
- 'balance' in relation to wine type and style
- climatic and physical features of wine grape growing areas and wine styles produced

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• acquire and process grapes for wine production</li> <li>• initiate and manage the fermentation process</li> <li>• perform chemical analyses necessary for the winemaking process</li> <li>• organise and undertake routine cellar operations</li> <li>• identify and recommend improvements to viticultural practices that will contribute to enhanced wine quality in the next season.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>
<p>Method of assessment</p>	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed</li> </ul>

	<p>Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other units</p> <ul style="list-style-type: none"> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</li> <li>• The assessment environment should not disadvantage the candidate</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role</li> </ul>
<p>Guidance information for assessment</p>	<p>To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the

<p>candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Wine types and styles</i></b></p>	<p>Relevant wine types include:</p> <ul style="list-style-type: none"> <li>• dry white table wine</li> <li>• dry red table wine</li> <li>• sweet white table wine</li> <li>• sparkling wine</li> <li>• fortified wine</li> <li>• blended wines</li> </ul>
<p><b><i>Grape varieties</i></b></p>	<p>The major grape varieties used in the production of wine in Australia include:</p> <ul style="list-style-type: none"> <li>• major red varieties:                             <ul style="list-style-type: none"> <li>• Shiraz</li> <li>• Cabernet Sauvignon</li> <li>• Merlot</li> <li>• Pinot Noir</li> </ul> </li> <li>• major white varieties:                             <ul style="list-style-type: none"> <li>• Chardonnay</li> <li>• Semillon</li> <li>• Riesling</li> <li>• Sauvignon Blanc</li> <li>• Sultana</li> </ul> </li> </ul> <p>The minor and newer wine varieties in Australia include:</p> <ul style="list-style-type: none"> <li>• red varieties:                             <ul style="list-style-type: none"> <li>• Cabernet Franc</li> <li>• Malbec</li> <li>• Grenache</li> <li>• Chambourcin</li> <li>• Italian varieties</li> </ul> </li> <li>• white varieties:                             <ul style="list-style-type: none"> <li>• Chenin Blanc</li> <li>• Marsanne</li> <li>• Verdelho</li> <li>• Italian varieties</li> </ul> </li> </ul>
<p><b><i>Winemaking processes, operations and equipment include:</i></b></p>	<ul style="list-style-type: none"> <li>• handling operations:                             <ul style="list-style-type: none"> <li>• heading down</li> <li>• pumping over</li> <li>• racking</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• transfer</li> <li>• blending</li> <li>• cooling and temperature control</li> <li>• cold stabilisation</li> <li>• filtering</li> <li>• making additions</li> <li>• preparing for bottling</li> <li>• cleaning and</li> <li>• a consideration of reasons for each operation, procedures involved and problems occurring in wine handling</li> </ul> <p>Specific processes for still white and red wine production include:</p> <ul style="list-style-type: none"> <li>• fermentation methods</li> <li>• open</li> <li>• closed</li> <li>• skin contact techniques</li> <li>• plunging</li> <li>• header boards</li> <li>• pumping over</li> <li>• pressing process</li> <li>• free run/pressings</li> <li>• use of oak, including the different types of oak available and their application to the wine making process including French, American and others</li> <li>• methods of addition</li> <li>• barrel types and size (relationship between surface area/volume to flavour)</li> <li>• chips</li> <li>• beads</li> <li>• staves</li> <li>• clarification and stabilising techniques</li> <li>• techniques</li> <li>• methods</li> <li>• bottling process</li> </ul> <p>Plant and equipment used in wine making operations include:</p> <ul style="list-style-type: none"> <li>• Crushers, de-stemmers, presses</li> </ul>
<p>Grape selection criteria and <i>winemaking factors</i> include:</p>	<ul style="list-style-type: none"> <li>• types of grapes used</li> <li>• ripeness of grapes</li> <li>• fermentation techniques</li> <li>• maturation</li> </ul>

	<ul style="list-style-type: none"> <li>• additions</li> </ul>
<b><i>Grape preparation operations</i></b> include:	<ul style="list-style-type: none"> <li>• sulphur dioxide application</li> <li>• crushing</li> <li>• de-stemming</li> <li>• pressing</li> </ul>
<b><i>Types of yeast</i></b>	<p>Factors to be considered in relation to types of yeast used in wine production include:</p> <ul style="list-style-type: none"> <li>• the fermentation process</li> <li>• yeast types (commercial, wild) and their effects on characteristics of wine</li> <li>• chemical changes due to fermentation</li> <li>• killer yeasts</li> </ul>
<b><i>Primary fermentation</i></b> procedures	<p>Factors to be managed and monitored in relation to the process of fermentation include:</p> <ul style="list-style-type: none"> <li>• initiation</li> <li>• yeast selection</li> <li>• must preparation</li> <li>• yeast inoculum preparation</li> <li>• yeast addition techniques</li> <li>• chemical/physical characteristics</li> <li>• problems (stuck fermentation, off flavours/aromas)</li> <li>• racking off gross lees</li> <li>• timing</li> </ul>
<b><i>Secondary fermentation</i></b> procedures include:	<ul style="list-style-type: none"> <li>• selection of oak barrels if required</li> <li>• malolactic fermentation and its effect in wine production</li> <li>• initiation and monitoring</li> <li>• timing</li> <li>• identification of sensory changes due to malolactic fermentation</li> </ul>
<b><i>Storage vessels</i></b> include:	<ul style="list-style-type: none"> <li>• stainless steel tanks</li> <li>• barrels</li> <li>• plastic/nylon pallet containers</li> <li>• bottles and casks</li> </ul>
<b><i>Equipment</i></b>	<p>Equipment used in post-crush must and wine handling include:</p> <ul style="list-style-type: none"> <li>• pumps, hoses, pipes, fittings</li> <li>• filters</li> <li>• tanks</li> <li>• barrels</li> </ul>

<p>Cellar operations include:</p>	<ul style="list-style-type: none"> <li>• daily procedures; planning, monitoring, adjustments to wine in storage</li> <li>• staff instruction; communication and evaluation of performance</li> </ul>
<p>Chemical analyses include:</p>	<ul style="list-style-type: none"> <li>• pH</li> <li>• sugar</li> <li>• titratable acid (TA)</li> <li>• sulphur dioxide</li> <li>• alcohol</li> <li>• malic/lactic acid</li> </ul>
<p>Additives and fining agents include:</p>	<ul style="list-style-type: none"> <li>• bentonite</li> <li>• PVPP</li> <li>• egg albumin</li> <li>• casein</li> <li>• gelatine</li> <li>• copper</li> </ul> <p>Reasons for using additives and finings include:</p> <ul style="list-style-type: none"> <li>• moderating tannins</li> <li>• moderating phenolic content</li> <li>• reducing colour</li> <li>• reducing protein content</li> </ul> <p>Trials to determine requirements include:</p> <ul style="list-style-type: none"> <li>• setting up</li> <li>• evaluation</li> </ul> <p>Addition of additives/fining agents include:</p> <ul style="list-style-type: none"> <li>• calculation of additions to bulk wine</li> <li>• addition procedures</li> </ul>
<p>Hygienic working environment</p>	<p>The elements of winery hygiene include:</p> <ul style="list-style-type: none"> <li>• hygienic working environment</li> <li>• key areas and equipment, including:             <ul style="list-style-type: none"> <li>• tanks</li> <li>• barrels</li> <li>• hoses and pipes</li> <li>• presses</li> <li>• crushers/destemmers</li> <li>• receival area</li> <li>• floors</li> <li>• drains</li> </ul> </li> </ul>
<p>Characteristics of wine</p>	<ul style="list-style-type: none"> <li>• wine type and style</li> </ul>



<p>include:</p>	<ul style="list-style-type: none"> <li>• age</li> <li>• chemical components</li> <li>• packaging</li> </ul>
<p>Winemaking techniques include:</p>	<ul style="list-style-type: none"> <li>• fermentation techniques</li> <li>• wood fermentation and maturation techniques</li> <li>• processing techniques including crushing, skin contact, pressing, filtration, fining, blending</li> <li>• ageing techniques including:             <ul style="list-style-type: none"> <li>• effect on style of wine</li> <li>• effect on composition of wine</li> <li>• effect on quality of wine</li> </ul> </li> <li>• sparkling wine production techniques:             <ul style="list-style-type: none"> <li>• Methode Champenoise</li> <li>• transfer systems</li> <li>• Charmat</li> <li>• carbonation</li> </ul> </li> <li>• fortified wine production techniques</li> </ul>
<p>Faults in wine</p>	<p>Wine faults include:</p> <ul style="list-style-type: none"> <li>• common wine faults</li> <li>• origin of wine faults</li> <li>• effect of wine faults on wine</li> <li>• sensory description of wine faults</li> <li>• bottle age versus wine faults</li> </ul>
<p>Site characteristics and viticultural practices</p>	<ul style="list-style-type: none"> <li>• Site characteristics include:             <ul style="list-style-type: none"> <li>• climate</li> <li>• aspect</li> <li>• topography</li> <li>• soil</li> </ul> </li> <li>• Vineyard practices relevant to wine quality include:             <ul style="list-style-type: none"> <li>• trellis types</li> <li>• pruning; timing and methods</li> <li>• bunch thinning</li> <li>• shoot thinning</li> <li>• de-suckering</li> <li>• shoot positioning</li> <li>• leaf plucking</li> <li>• canopy management</li> <li>• irrigation</li> <li>• pest and disease control</li> </ul> </li> </ul>

## **Unit Sector(s)**

Production Horticulture

## AHCPLY201A Collect store and handle eggs from breeder flocks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assessing, grading, cleaning, storing and fumigating fertile eggs and defines the standard required to: collect eggs and monitor quality; wash eggs and sort by grade and shell quality; assemble, stack, and label eggs and place in correct trays as required by organisation procedures; fumigate eggs and maintain correct temperature and humidity in storage; clean and disinfect egg handling equipment and areas.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the collection, storage and handling of eggs from breeder flocks and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to handle eggs	<p>1.1. Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.2. Suitable personal protective equipment is selected, used and maintained.</p> <p>1.3. Egg machinery is operated according to manufacturers instructions.</p> <p>1.4. All required information recorded and reported accurately and promptly in accordance with organisational requirements.</p> <p>1.5. Egg collection times and frequency required by the enterprise are noted.</p>
2. Prepare eggs	<p>2.1. Eggs are collected and quality monitored.</p> <p>2.2. Eggs are collected according to workplace requirements.</p> <p>2.3. Eggs are washed using approved equipment.</p> <p>2.4. All lifting and bending is done according to safe working practices and using the available safety and lifting equipment.</p> <p>2.5. Records of all collections are completed clearly and accurately to monitor production levels.</p>
3. Assess and grade eggs	<p>3.1. Eggs are sorted according to industry standards and organisation quality assurance program.</p> <p>3.2. Eggs graded into appropriate weight according to enterprise practices.</p> <p>3.3. Handling problems are recognised and reported to the supervisor according to organisation procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Pack and store eggs	<p>4.1.Eggs are placed in correct trays and assembled, stacked, and labelled as required by organisation procedures.</p> <p>4.2.Labels are clear and accurate and contain all information required by the industry and organisation.</p> <p>4.3.Eggs are transferred to storage in order of age, grade or dispatch.</p> <p>4.4.Cool room and equipment is cleaned, sanitised and checked for efficient operation if appropriate.</p> <p>4.5.Eggs are fumigated according to approved industry practice.</p> <p>4.6.Temperature and humidity are recorded to ensure optimum storage conditions are maintained.</p> <p>4.7.Where appropriate packing, labelling and cleaning problems are recognised and reported to the supervisor according to organisation procedures.</p>
5. Clean and disinfect equipment	<p>5.1.All machines and equipment used are cleaned hygienically and disinfected or sanitised according to organisations quality assurance program and health regulations.</p> <p>5.2.All chemicals used in the cleaning process are handled safely and measured according to occupational health and safety requirements and organisation procedures.</p> <p>5.3.Egg handling areas and structures are cleaned hygienically and disinfected or sanitised according to organisations quality assurance program and health regulations.</p> <p>5.4.Samples are taken and prepared for testing as required by organisation procedures and analysing body.</p> <p>5.5.All waste containers, fluids and run-off are disposed of, or managed, according to organisation environmental management requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit.

**Required skills**

- identify hazards and implement safe work procedures
- observe small differences in shell quality and relate this to specific instructions for grading
- perform routine hygiene maintenance activities as required by the employer or unit manager and more frequently on demand
- record readings and observations using workplace systems and procedures
- observe, identify and react appropriately to environmental implications and occupational health&safety hazards
- calculate figures for stocktakes and quantities of eggs in storage at any specific time
- maintain premises in a hygienic condition both structurally and operationally
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- egg hygiene
- hygiene in egg cool rooms
- the need to maximise hygiene practices and awareness
- importance of temperature and humidity with egg storage
- environmental controls and codes of practice applicable to the enterprise
- relevant procedures relating to waste and environment management and animal health and welfare
- egg grading and sizes
- hazard analysis and quality assurance
- sanitisers and activity, and measurement
- the need to maximise hygiene practices and awareness
- OHS requirements
- environmental impacts and procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• collect eggs and monitor quality</li> <li>• wash eggs and sort by grade and shell quality</li> <li>• assemble, stack, and label eggs and place in correct trays as required by organisation procedures</li> <li>• fumigate eggs and maintain correct temperature and humidity in storage</li> <li>• clean and disinfect egg handling equipment and areas.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
Breeder flocks may include:	<ul style="list-style-type: none"> <li>• all poultry species and breeds produced in all types of breeder systems.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Poultry
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCPLY202A Maintain health and welfare of poultry

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring poultry health and welfare and defines the standard required to: recognise symptoms of ill health, common diseases, parasite infestations, or physical abnormalities and remove non viable poultry; administer vaccines and medications and maintain records; collect samples for analysis; monitor bird housing conditions for temperature and humidity; minimise the risk of infection through the effective use of hygiene and quarantine procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the maintenance of the health and welfare of poultry following set routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor and assess poultry health and welfare	<p>1.1. Biosecurity protocols and quarantine procedures are maintained at all times to prevent the entry of disease.</p> <p>1.2. Regular checks are taken to assess poultry health and welfare according to the requirements of the organisation.</p> <p>1.3. Symptoms of ill health, common diseases, parasite infestations, or physical abnormalities are recognised and reported.</p> <p>1.4. Identify cull birds using criteria established by the enterprise or industry quality assurance program.</p> <p>1.5. Flock/herd health status is recorded in accordance with organisation procedures.</p>
2. Provide an optimal environment for poultry	<p>2.1. Bird housing conditions are monitored to ensure that protection is provided from external factors identified by the welfare code of practice and farm welfare Quality Assurance (QA) procedures.</p> <p>2.2. Temperature control equipment and humidity control equipment where installed is correctly monitored, maintained and operated to ensure optimal temperatures for poultry.</p> <p>2.3. Equipment and housing is installed in accordance with established organisation quality assurance programs.</p> <p>2.4. Welfare of poultry is continually monitored and non-compliance with animal welfare codes are reported promptly and dealt with by management.</p> <p>2.5. Information which is relevant to the welfare and</p>

ELEMENT	PERFORMANCE CRITERIA
	health of stock is recorded according to organisation practice.
3. Administer vaccines or alternative therapies	<p>3.1. Vaccines, veterinary chemicals, or other therapeutic medicines appropriate to the operation are stored and labelled in controlled or refrigerated conditions or in freezers.</p> <p>3.2. Killed and live vaccines or other compounds are stored to maintain maximum efficacy of the product.</p> <p>3.3. Routine prevention procedures for disease or parasite infestation are safely carried out.</p> <p>3.4. Quantities of medicines are accurately measured for administration according to clear organisation instruction and manufacturer's instructions.</p> <p>3.5. Vaccination or medication is carried out under instruction as required according to organisation procedures.</p> <p>3.6. Administration or medicines are recorded.</p>
4. Collect samples for analysis	<p>4.1. Swabs are taken from surfaces and work areas on a regular basis and prepared for laboratory testing as required by organisation and industry standards.</p> <p>4.2. Swabs and samples are clearly and accurately labelled and prepared for dispatch to the laboratory as directed by veterinary staff, organisation practice and the Biosecurity Code.</p>
5. Remove non-viable poultry	<p>5.1. Culling and removal is undertaken according to organisational procedures and industry quality assurance program.</p> <p>5.2. Sick poultry are treated or culled by neck dislocation or gassing safely and the practice must comply with industry standards of health and hygiene and the industry quality assurance program.</p> <p>5.3. Post-mortem assistance is provided where necessary according to organisation practice.</p>
6. Keep and maintain record	<p>6.1. Disease information is reported to the unit manager so that prevention strategies can be planned and implemented.</p> <p>6.2. All records made, kept and maintained are clear, accurate, and follow the guidelines laid down by industry and the organisation.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions
- maintain biosecurity protocols and quarantine procedures
- accurately assess bird numbers and hatch
- complete worksheets clearly and accurately
- detect possibility of disease through parameters such as behaviour, length of time required to eat food
- recognise clinical symptoms (normal vs abnormal)
- survey workplace for hygiene and occupational health and safety issues
- tag poultry of varying ages
- use computing technology to create, maintain and amend workplace records
- observe, identify and react appropriately to environmental implications and occupational health and safety hazards
- observe the welfare of poultry and take action in accordance with organisational procedures, codes of welfare and industry quality assurance programs
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- symptoms of ill-health in poultry
- relevant codes of animal welfare
- the range of diseases affecting the class and age of poultry
- vaccination programs, vaccines and mode of action in use in the organisation
- withholding periods for use of antibiotics
- zoonotic diseases and mode of transmission
- environmental controls and codes of practice applicable to the enterprise
- the organisations poultry production and management plans. Sound management practices and processes to minimise noise, odours and debris from the poultry operations
- relevant legislation and regulations relating to waste and environment management and animal health and welfare
- relevant occupational health and safety legislation, regulations and codes of

**REQUIRED SKILLS AND KNOWLEDGE**

practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- recognise symptoms of ill health, common diseases, parasite infestations, or physical abnormalities and remove non viable poultry
- administer vaccines and medications and maintain records
- collect samples for analysis
- monitor bird housing conditions for temperature and humidity
- minimise the risk of infection through the effective use of hygiene and quarantine procedures.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

**RANGE STATEMENT**

Animals may include:

- all breeds and types of poultry applicable to the production of poultry in a range of housing environments.

**Unit Sector(s)****Unit sector**

Poultry

**Co-requisite units****Co-requisite units**


**Competency field****Competency field**

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## AHCPLY203A Set up shed for placement of day-old chickens

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing the shed for day-old chickens and then placing them in the correct sheds, pens or cages and defines the standard required to: check alarms, time switches and lighting systems are working effectively prior to placement of the hatchlings; put bird wire and rodent barriers in place; handle and move birds in line with animal welfare codes of practice; place birds evenly throughout shed; maintain hygiene and quarantine procedures; dispose of left over fluids, waste and debris from the operation; maintain temperature and air quality.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes involved in setting up a shed for the placement of day old chickens conducted within routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to work in poultry shed	<p>1.1. Work to be undertaken is interpreted from work program where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the production process.</p> <p>1.3. Suitable personal protective equipment is selected, used and maintained.</p> <p>1.4. Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.</p>
2. Check and maintain shed and equipment	<p>2.1. Level of shed cleanliness is checked and where required, shed is cleaned to meet enterprise standards.</p> <p>2.2. Shed repair and maintenance are carried out to maximise pest and vermin exclusion and control.</p> <p>2.3. Bird wire and rodent barriers are maintained in good order to minimise the risk of disease introduction.</p> <p>2.4. Shed equipment and machinery are checked and appropriate action taken as required according to establishment practice.</p> <p>2.5. Lights, time switches and all other shed equipment are operated and checked for proper function as required by lighting and flock programs.</p>



ELEMENT	PERFORMANCE CRITERIA
	2.6. Quarantine procedures are in place to prevent entry of pathogens on personnel and equipment.
3. Prepare shed	3.1. Litter is correctly ordered to provide adequate quantity for new chickens. 3.2. Litter is spread or paper is laid evenly on shed floor or brooder cages to depth specified by establishment and appropriate for the class of poultry. 3.3. Watering, feeding, ventilation and fogging systems are cleaned, reinstalled and tested for operation. 3.4. Lighting levels for day old chickens are selected and adjusted as required. 3.5. Alarm systems and the time switches are tested to ensure timely warning of system malfunctions. 3.6. Brooders are tested for correct operation and thermostat control. Brooder curtains are installed if required. 3.7. Time clocks are adjusted. 3.8. Specific extra requirements of day old chickens are carried out in readiness for brooding operations.
4. Place chickens	4.1. Chickens are placed from chick boxes into correct sheds, pens or cages with a minimum of stress. 4.2. Chickens are checked after a short period to observe behaviour.
5. Complete hygiene and activities	5.1. Equipment is cleaned in accordance with manufacturers' specifications, organisational procedures and regulations. 5.2. All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately. 5.3. All required records and documentation are completed accurately and promptly in accordance with organisational requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• identify hazards and follow safety directions</li> <li>• prepare and clean sheds</li> <li>• put bird wire and barriers in place</li> <li>• maintain biosecurity and hygiene protocols</li> <li>• read thermometers and adjust ventilation</li> <li>• use literacy skills to follow sequenced written instructions and record information accurately and legibly</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• environmental controls and codes of practice applicable to the enterprise</li> <li>• bird behaviours in the first few hours of life</li> <li>• brooder shed set up and environmental parameters</li> <li>• biosecurity and hygiene</li> <li>• animal welfare.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• check alarms, time switches and lighting systems are working effectively prior to placement of the</li> </ul>

<b>EVIDENCE GUIDE</b>	
	hatchlings <ul style="list-style-type: none"> <li>• put bird wire and rodent barriers in place</li> <li>• handle and move birds in line with animal welfare codes of practice</li> <li>• place birds evenly throughout shed</li> <li>• maintain hygiene and quarantine procedures</li> <li>• dispose of left over fluids, waste and debris from the operation</li> <li>• maintain temperature and air quality.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Day-old chickens may include:	<ul style="list-style-type: none"> <li>• all poultry species and breeds produced in an intensive environment.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Poultry
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### Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCPLY204A Collect and pack eggs for human consumption

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assessing, grading and storing eggs and defines the standard required to: clean and sanitise the equipment used for handling the eggs; collect and handle eggs in commercial quantities in a hygienic fashion; assess and grade eggs for storage or packing; pack and store eggs according to enterprise procedures; check eggs are fit for human consumption and meet shelf life requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes of collecting and handling eggs for human consumption and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collect eggs	<p>1.1.Eggs are collected using either hand or mechanical means.</p> <p>1.2.Eggs are placed in egg trays with the pointed end down.</p> <p>1.3.All lifting and bending is done according to safe working practices and using the available safety and lifting equipment.</p> <p>1.4.Records of all collections are completed clearly and accurately to monitor production levels.</p> <p>1.5.Vertebate and invertebrate pests are controlled in egg grading and storage areas.</p>
2. Assess and grade eggs	<p>2.1.Equipment to be used is calibrated according to manufacturer's instructions.</p> <p>2.2.Eggs are sorted according to industry standards and organisation quality assurance program.</p> <p>2.3.Eggs are candled using appropriate equipment in a light proof area.</p> <p>2.4.Eggs are graded into appropriate weight and quality grades according to industry standards.</p> <p>2.5.Cage marked and dirty, cracked or weak shelled eggs removed.</p> <p>2.6.Grading, cleaning, and packing machine problems and abnormal noises are recognised and reported to the supervisor according to organisation procedures.</p> <p>2.7.Grading records are completed clearly and accurately according to organisation requirements.</p> <p>2.8.Eggs are washed using equipment approved by</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>appropriate industry Quality Assurance (QA) program.</p> <p>2.9.Eggs are oiled when required according to legislative requirements and organisational practice.</p>
3. Pack and store eggs	<p>3.1.Eggs are placed in correct cartons or trays and assembled, packed, and labelled.</p> <p>3.2.All labelling is clear and accurate and contains all information required by the industry and organisation.</p> <p>3.3.Cool room and equipment is cleaned, sanitised and checked for efficient operation.</p> <p>3.4.Cool room operates with strict temperature and humidity ranges.</p> <p>3.5.Records are maintained of cool room temperature, and if required, the humidity.</p> <p>3.6.Eggs are transferred to storage and positioned in order of age, grade or dispatch.</p>
4. Pack and store egg	<p>4.1.All machines, equipment, and egg handling areas used are cleaned hygienically and disinfected or sanitised according to organisations quality assurance program and health regulations.</p> <p>4.2.All chemicals used in the cleaning process are handled safely and measured according to occupational health and safety requirements and organisation procedure.</p> <p>4.3.Samples are taken and prepared for testing as required by organisation procedures and analysing body.</p> <p>4.4.All waste containers, fluids and run-off are disposed of, or managed, according to organisation environmental management requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

## REQUIRED SKILLS AND KNOWLEDGE

- identify hazards and apply safe work practices
- operate an egg wash machine
- perform routine hygiene maintenance activities as required by the employer or unit manager and more frequently on demand
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- egg grading and sizes
- hazard analysis and quality assurance
- sanitisers and activity, and measurement
- the need to maximise hygiene practices and awareness
- Occupational Health and Safety (OHS), food safety and environment legislative and enterprise requirements
- the national Code of Practice for Shell Egg Production, Grading, Packing and Distribution Production of Egg Products.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- clean and sanitise the equipment used for handling the eggs



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• collect and handle eggs in commercial quantities in a hygienic fashion</li> <li>• assess and grade eggs for storage or packing</li> <li>• pack and store eggs according to enterprise procedures</li> <li>• check eggs are fit for human consumption and meet shelf life requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Eggs may include:	<ul style="list-style-type: none"> <li>• all eggs from any commercial egg producing enterprise.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Poultry
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCPLY301A Artificially inseminate birds

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of artificially inseminating birds and defines the standard required to: prepare for artificial insemination; sterilise equipment and prepare hygienic worksite prior to insemination procedures; prepare semen and inseminate birds; handle birds humanely and safely; clean up work areas and equipment; record data.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under minimal supervision, with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for insemination of birds	<p>1.1. Timing of insemination process is scheduled to ensure availability of resource and personnel requirements.</p> <p>1.2. Hygiene factors are identified and appropriate procedures followed.</p> <p>1.3. Semen supplies are accessed from appropriate and reliable sources and stored appropriately.</p> <p>1.4. Birds are prepared to maximise success of insemination program.</p> <p>1.5. Suitable personal protective equipment and clothing is selected, used and maintained according to OHS and enterprise requirements.</p>
2. Inseminate birds	<p>2.1. Semen is prepared according to accepted industry and enterprise practices.</p> <p>2.2. Insemination equipment is sterile and clean, and applied according to industry code of practice.</p> <p>2.3. Intended recipient is correctly identified.</p> <p>2.4. Intended recipient is restrained and prepared for insemination to optimise results according to recognised handling techniques that minimise stress.</p> <p>2.5. Insemination is carried out in sterile conditions and according to appropriate hygiene procedures.</p> <p>2.6. Data on insemination process is accurate and recorded according to enterprise requirements.</p>
3. Clean work area and equipment	<p>3.1. Waste is disposed of according to recommended hygiene standards and environmental policy.</p> <p>3.2. Work area is cleaned to industry standards and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>returned to operating order.</p> <p>3.3. Restraints are cleaned and returned to safe and operational order.</p> <p>3.4. Birds are safely returned to designated area according to enterprise requirements and instructions.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- sterilise equipment and prepare hygienic worksite prior to insemination procedures employ safe work practices and comply with animal welfare
- clean up work site and safely dispose of waste
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- working knowledge of enterprise bird production plan
- basic bird breeding principles
- bird health and abnormalities
- semen thawing techniques
- preparation requirements for artificial insemination of birds
- bird behavioural characteristics
- handling techniques, restraint methods and when to use them
- enterprise and industry identification system for birds
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS and bird welfare
- legislative and regulatory controls with regard to artificial insemination

**REQUIRED SKILLS AND KNOWLEDGE**

- enterprise and industry policies with regard to artificial insemination and recording and reporting routines.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare for artificial insemination
- sterilise equipment and prepare hygienic worksite prior to insemination procedures
- prepare semen and inseminate birds
- handle birds humanely and safely
- clean up work areas and equipment and record data.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Birds may include:

- the artificial insemination of:
  - chickens

**RANGE STATEMENT**

	<ul style="list-style-type: none"><li>• turkeys</li><li>• other commercially produced birds.</li></ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Poultry
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPLY302A Brood poultry

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of brooding all poultry species and breeds produced in an intensive environment and defines the standard required to: handle hatchlings and brooding chickens and ensure access to feed and water according to codes of welfare; monitor ventilation, temperature and humidity of the shed environment; provide litter and replace as required; expand the brooding area to provide optimal stocking density as required; use immunisation techniques and diet to optimise the immune system; remove dead or culled young birds; keep records as required.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires some judgement and discretion, and would be carried out with minimal supervision within enterprise guidelines and within specified timeframes.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for brooding	<p>1.1. Work to be undertaken is interpreted from work program where necessary, and confirmed with management/supervisor.</p> <p>1.2. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the production process.</p> <p>1.3. Tools and equipment required for the work to be undertaken are selected, checked, and serviced if necessary.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.5. Suitable personal protective equipment is selected, used and maintained.</p>
2. Carry out brooding operations	<p>2.1. Temperatures are monitored and recorded accurately according to supervisor's instructions.</p> <p>2.2. Day old chickens are placed in the shed according to workplace instructions and handled with care.</p> <p>2.3. Shed temperatures are adjusted in accordance with supervisor or manager instructions and the observed activity of the birds.</p> <p>2.4. Observed changes are recorded and reported.</p> <p>2.5. Dead or culled young birds are removed and disposed of according to establishment practice and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>code of welfare, and recorded in appropriate record.</p> <p>2.6. Brooding area is extended as young birds grow, if required and according to instructions, to provide an optimal stocking density and avoid crowding.</p> <p>2.7. Black-out training of young birds/hatchlings is regularly carried out according to establishment practice.</p>
3. Shed operation	<p>3.1. All debris and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to organisation work procedures.</p> <p>3.2. Tools, machinery and equipment are cleaned, maintained and stored according to organisation work procedures.</p> <p>3.3. A clean and safe area is maintained throughout and on completion of work.</p> <p>3.4. Work outcomes are recorded or reported to the supervisor according to organisation work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- recognise feed types
- observe, identify and react appropriately to environmental implications and OHS
- perform routine hygiene maintenance activities as required by the employer or unit manager and more frequently on demand
- monitor and record temperature, times, humidity and bird numbers
- handle brooding chickens and hatchlings with strict accordance to the codes of welfare
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening,

## REQUIRED SKILLS AND KNOWLEDGE

clarifying information and consulting with supervisors as required

- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- the relationship between bird behaviour and brooding temperature
- the effect of litter quality and depth on chicken activity and or productivity
- the impact that feed, water and floor space has on uniformity and subsequent flock performance
- how live respiratory vaccines impact on bird behaviour and how to manage this
- the need to maximise hygiene practices and awareness
- environmental controls and codes of practice applicable to the enterprise
- the organisation's livestock production and management plans
- sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant procedures relating to waste and environment management and animal health and welfare
- relevant OHS legislation, regulations and codes of practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- handle hatchlings and brooding chickens and ensure access to feed and water according to codes of welfare
- monitor ventilation, temperature and humidity of the shed environment
- provide litter and replace as required

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• expand the brooding area to provide optimal stocking density as required</li> <li>• use immunisation techniques and diet to optimise the immune system</li> <li>• remove dead or culled young birds</li> <li>• keep records as required.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Poultry may include:	<ul style="list-style-type: none"> <li>• all poultry species and breeds run under intensive (shedded) conditions.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Poultry
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCPLY303A Identify and sex birds

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions involved in identifying and sexing all poultry species and breeds produced in an intensive environment and defines the standard required to: identify and sort chickens to organisational requirements; handle chickens according to the code of welfare; sex chickens using recognised techniques and count sexed birds; keep records of operations.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking. Responsibility for some roles and coordination within a team may be required. The work undertaken is usually within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to sex birds	<p>1.1. Work to be undertaken is interpreted from a work program where necessary, and confirmed with management.</p> <p>1.2. Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the production process.</p> <p>1.3. Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.5. Suitable personal protective equipment is selected, used and maintained.</p>
2. Identify and sex chickens birds	<p>2.1. Criteria for identification are sought and clarified from the production program and supervisor or management instructions.</p> <p>2.2. Procedures to control and sort chickens are conducted with due care.</p> <p>2.3. Identification method is carried out according to the given criteria and the marking requirements of the organization.</p> <p>2.4. Birds are handled with care strictly according to the code of welfare.</p> <p>2.5. Birds are sexed, held for beak trimming if appropriate, separated and placed according to organisational work procedures and instructions.</p> <p>2.6. Existing and potential hazards in the workplace are</p>

ELEMENT	PERFORMANCE CRITERIA
	recognised, risk assessed and controlled in line with OHS requirements.
3. Complete hygiene and administration activities	3.1. All debris and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to organisation work procedures. 3.2. Tools and equipment are cleaned, maintained and stored according to organisation work procedures. 3.3. A clean and safe area is maintained throughout and on completion of work. 3.4. Work outcomes are recorded or reported to the supervisor according to organisation work procedures. 3.5. Unit records are completed as required and reported to the hatchery manager.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- operate marking equipment
- identify the key features used to sex chickens using a variety of techniques
- perform routine hygiene maintenance activities as required by the employer or unit manager and more frequently on demand
- observe, identify and react appropriately to environmental implications and OHS hazards
- count sexed birds
- share information and observations with fellow workers and supervisors
- read and interpret written instructions prepared by the organisation, industry bodies, and/or manufacturers
- complete sexing at a rate acceptable to the industry and the organisation
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as



**REQUIRED SKILLS AND KNOWLEDGE**

specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required

- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- hygienic maintenance and use of machinery
- the key indicators of gender in a range of birds
- welfare implications of poor beak trimming
- avian reproductive anatomy
- the need to maximise hygiene practices and awareness
- environmental controls and codes of practice applicable to the enterprise
- the organisation's livestock production and management plans
- sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- relevant OHS legislation, regulations and codes of practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify and sort chickens to organisational requirements
- handle chickens according to the code of welfare
- sex chickens using recognised techniques
- count sexed birds and keep records of operations.

**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Birds may include:

- all poultry species and breeds produced in an intensive environment.

**Unit Sector(s)**

<b>Unit sector</b>	Poultry
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPLY304A Incubate eggs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of receiving and storing eggs, preparing eggs for hatching and monitoring the incubation of eggs and defines the standard required to: store and handle fertile eggs; provide a standardised repeatable environment (temperature, humidity and airflow) to incubate eggs; obtain a high hatch percentage; monitor and operate setter and hatcher and carry out contingency measures if necessary; fumigate setter and hatcher using Personal Protective Equipment (PPE) and exclusion procedures; remove and dispose of waste materials and chemicals according to environmental and disease management procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking. Responsibility for some roles and coordination within a team may be required. Preparing and monitoring incubation is usually within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Receive eggs into hatchery	<p>1.1.Occupational health&amp;safety hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.2.Suitable personal protective equipment is selected, used and maintained.</p> <p>1.3.Delivery vehicle is monitored to ensure door remains sealed.</p> <p>1.4.Eggs are unloaded at hatchery and quality monitored.</p> <p>1.5.All required information recorded accurately and promptly in accordance with organisational requirements.</p>
2. Store eggs	<p>2.1.Eggs are stored as instructed with regard to position, temperature, humidity and period of storage according to industry standards.</p> <p>2.2.Eggs are transferred from delivery dollies/trolleys to setter dollies/trolleys.</p> <p>2.3.Eggs are attached to the turning machine to ensure maximum viability is maintained.</p> <p>2.4.All lifting and bending is done according to safe working practices and using the available safety and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>lifting equipment.</p> <p>2.5.Egg stock is managed to minimise egg age on setting.</p> <p>2.6.Temperature, humidity and airflow are monitored to maintain required settings.</p>
3. Prepare to incubate eggs	<p>3.1.Work to be undertaken is interpreted from work program where necessary, and confirmed with management.</p> <p>3.2.Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the production process.</p> <p>3.3.Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.</p>
4. Monitor and operate setter	<p>4.1.Setter readings are accurately taken and recorded.</p> <p>4.2.Alarms are recognised and specified sequence of operations carried out during a breakdown as set out by the employer.</p> <p>4.3.Setter is operated, repaired and maintained according to establishment practice.</p> <p>4.4.Temperature probes are calibrated with known standards.</p>
5. Transfer eggs to hatcher	<p>5.1.Dollies moved to the egg handling/transfer area safely and in the sequence required by the organisation.</p> <p>5.2.Temperature, humidity and airflow are checked to ensure specified equipment operation and adjustment.</p> <p>5.3.Where required by the organisation, fumigant is measured and placed according to label instructions and safe work practices.</p> <p>5.4.Hatcher is fumigated and gases exhausted according to manufacturers instructions.</p> <p>5.5.Eggs are transferred to hatching trays in sequence according to organisation procedures.</p>
6. Fumigate setter or hatcher	<p>6.1.Need for fumigation is determined from supervisors instructions, production/hygiene management plan, or management practice.</p> <p>6.2.Occupational Health and Safety (OHS) hazards are identified, risks assessed and suitable controls are implemented.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>6.3. Fumigant and apparatus are prepared according to manufacturer's instructions and in line with established safe working procedures.</p> <p>6.4. Setter or hatcher is sealed and fumigated to ensure maximum exposure of the fumigant to disease-causing organisms.</p> <p>6.5. Shed is aired to ensure evacuation of toxicants prior to re-entry of staff, re-installation of equipment, and placement of eggs.</p>
7. Monitor and operate hatcher	<p>7.1. Manual readings are accurately taken and recorded.</p> <p>7.2. Adjustments to temperature, humidity and airflow are carried out when instructed according to establishment standards.</p> <p>7.3. Alarms are recognised and a correct sequence of operations carried out during a breakdown as set out by employer.</p>
8. Complete hygiene and administration activities	<p>8.1. Waste material is removed from the incubation area and disposed of in an environmentally aware and safe manner according to organisational work procedures.</p> <p>8.2. Tools, equipment and machinery are cleaned, maintained and stored according to organisational work procedures.</p> <p>8.3. A clean and safe area is maintained throughout and upon completion of work according to organisational work procedures.</p> <p>8.4. Work outcomes are recorded or reported to the supervisor according to organisational work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- monitor setters and hatchers for constant performance

## REQUIRED SKILLS AND KNOWLEDGE

- to maintain operational standards
- maintain airflows, construction standards
- replace fan motors
- fix alarms and investigate causes
- calibrate temperature and humidity probes
- operate and interpret data from multi channel recorders
- complete manual monitoring sheets
- perform routine hygiene maintenance activities as required by the employer or unit manager and more frequently on demand
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- airflow and aerodynamics of machines in hatchery
- servicing requirements
- the need to maximise hygiene practices and awareness
- environmental controls and codes of practice applicable to the organisation
- sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- relevant OHS legislation, regulations and codes of practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this



<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• store and handle fertile eggs</li> <li>• provide a standardised repeatable environment (temperature, humidity and airflow) to incubate eggs</li> <li>• obtain a high hatch percentage</li> <li>• monitor and operate setter and hatcher and carry out contingency measures if necessary</li> <li>• fumigate setter and hatcher, using PPE and exclusion procedures</li> <li>• remove and dispose of waste materials and chemicals according to environmental and disease management procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Incubating eggs may include:	<ul style="list-style-type: none"> <li>• all poultry species and breeds produced in an intensive environment.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Poultry
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCPLY305A Beak trim chickens

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of beak trimming chickens and defines the standard required to: ensure biosecurity requirements are met if contractors are used; set up equipment correctly so that accurate trims are achieved; minimise stress on the birds by careful handling; cut beak to correct length and cauterise bleeding if necessary; monitor debeaked birds; record details.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required. Beak trimming of chickens is usually performed within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to beak trim birds	<p>1.1.Entry biosecurity procedures, as specified by the farm and beak trimming team, are followed.</p> <p>1.2.Beak trimming instructions are sought and confirmed with farm or team management.</p> <p>1.3.Discussions are held with other workers to ensure smooth operation of the beak trimming process.</p> <p>1.4.Equipment and tools - including personal protective equipment - suitable for beak trimming are selected, checked, and maintained according to Occupational Health and Safety (OHS) requirements.</p> <p>1.5.Equipment is set up according to the age of bird stock to be trimmed and bird behaviour.</p> <p>1.6.Safety hazards are identified, risk assessed and suitable controls implemented.</p> <p>1.7.A clean and safe area is prepared for trimming.</p>
2. Carryout trimming of beaks	<p>2.1.Birds are handled according to relevant codes of practice to facilitate accurate beak trimming.</p> <p>2.2.Beak shape, length and hardness are assessed regularly.</p> <p>2.3.Birds are beak trimmed according to work procedures.</p> <p>2.4.Industry standards for accuracy are achieved.</p> <p>2.5.Length of beak trimmed is in accordance with industry guidelines.</p> <p>2.6.Birds with bleeding beaks are re-cauterised.</p> <p>2.7.Bird welfare is assessed regularly.</p> <p>2.8.Birds are culled according to instructions.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Complete beak trimming procedure	3.1.The welfare of beak-trimmed birds is checked and adjustments made where necessary. 3.2.Upper beak length is measured on samples of 100 birds. 3.3.Relevant information is recorded and reported according to farm and team requirements. 3.4.Exit biosecurity procedures are completed in line with farm and team procedures. 3.5.Equipment and tools are cleaned, sanitised and maintained according to team procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work procedures
- prepare to beak trim birds
- carry out trimming of beaks
- complete beak trimming procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- biosecurity procedures for poultry production
- bird handling and restraint techniques
- trimming methods and procedures
- animal welfare code of practice
- enterprise standard operating procedures
- tools and equipment used in trimming

**REQUIRED SKILLS AND KNOWLEDGE**

- techniques to treat bleeding and injured birds including euthanasing methods
- OHS requirements for this work.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- ensure biosecurity requirements are met if contractors are used
- set up equipment correctly so that accurate trims are achieved
- minimise stress on the birds by careful handling
- cut beak to correct length and cauterise bleeding if necessary
- monitor debeaked birds
- record details.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Chickens may include:

- all poultry species and breeds used for meat or egg production.

**Unit Sector(s)**

<b>Unit sector</b>	Poultry
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPLY306A Clean and fumigate intensive production sheds

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of cleaning and fumigating sheds used for the intensive production of livestock and defines the standard required to: implement biosecurity procedures; operate high pressure washing equipment; treat all surfaces inside and outside the shed so that they are visually clean; apply sanitisers to cleaned surfaces; ensure minimum risk of contamination from previous flock/herd.
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### Application of the Unit

<b>Application of the unit</b>	This unit is necessary to provide a hygienic and disease free environment for each new batch of livestock. It is likely to be under limited supervision from others, with checking only related to overall progress. It is usually done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services and actions, and the achievement of outcomes within time constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to clean shed	<p>1.1. Requirements for the work to be undertaken are interpreted and confirmed with supervisor.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified, risks assessed and suitable controls are implemented.</p> <p>1.3. Suitable personal protective equipment is selected, used and maintained.</p> <p>1.4. The environmental implications of cleaning the shed are identified, likely outcomes assessed and, if necessary, responsible action is taken.</p> <p>1.5. Equipment is raised, dismantled or removed from the shed without damage for cleaning.</p> <p>1.6. Feed and watering equipment is raised or removed from shed, cleaned and sanitised to remove contamination.</p> <p>1.7. Electrical switchboards and other equipment are covered or sealed to prevent entry of water.</p> <p>1.8. Biosecurity protocols and procedures are complied with in cleaning and fumigation.</p>
2. Clean shed and	2.1. OHS hazards are identified, risks assessed and

ELEMENT	PERFORMANCE CRITERIA
surrounds	<p>suitable controls are implemented.</p> <p>2.2.Machinery is available, serviced and prepared for operation according to established operating practice, and operated inside and outside the shed.</p> <p>2.3.Litter is removed and disposed of according to establishment hygiene practice and using the available on-farm resources, and the floors are thoroughly swept.</p> <p>2.4.Filters are serviced and drinker lines and tanks are flushed.</p> <p>2.5.Silos are emptied and cleaned, as required by hygiene and production programs.</p> <p>2.6.Chemicals, detergents and disinfectants are mixed according to instructions.</p> <p>2.7.Chemical agents are safely handled and applied in compliance with OHS standards and in line with property quality assurance program.</p> <p>2.8.Electrical equipment is dry-cleaned.</p> <p>2.9.Run-off from cleaning activity is managed according to the organisations effluent and waste management procedures.</p> <p>2.10. Checks are made to ensure that all cleaning and hygiene processes are completed to standard.</p>
3. Fumigate shed	<p>3.1.Need for fumigation is determined from supervisors instructions, production/hygiene management plan, or management practice.</p> <p>3.2.OHS hazards are identified, risks assessed and suitable controls are implemented.</p> <p>3.3.Fumigant and apparatus are prepared according to manufacturer's instructions and in line with established safe working procedures.</p> <p>3.4.Shed is sealed and fumigated to ensure maximum exposure of the fumigant to disease-causing organisms.</p> <p>3.5.Shed is aired to ensure evacuation of toxicants prior to re-entry of staff and re-installation of equipment.</p>
4. Complete hygiene and administration tasks	<p>4.1.Equipment is cleaned in accordance with manufacturer's specifications, organisational procedures and regulations.</p> <p>4.2.Attachments and other ancillary equipment are cleaned and stored to minimise damage and to maximise hygiene according to manufacturer's</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>specifications, organisational procedures and regulations.</p> <p>4.3. Insecticides are applied, as required by the organisation and the harvest strategy.</p> <p>4.4. All required records and documentation are completed accurately and promptly in accordance with organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- operate high pressure washing equipment
- carry out cleaning and fumigation
- observe, identify and react appropriately to environmental implications and OHS hazards
- make shed environment secure from accidental entry of personnel until fumigants have dispersed
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types of sheds and production systems
- relevant OHS legislation, regulations and codes of practice
- environmental impacts and controls of cleaning and fumigating sheds
- chemical spillage management and safety equipment and clothing.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• Implement biosecurity procedures</li> <li>• operate high pressure washing equipment</li> <li>• treat all surfaces inside and outside the shed are so that they are visually clean</li> <li>• apply sanitisers to cleaned surfaces</li> <li>• ensure minimum risk of contamination from previous flock/herd.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Cleaning and fumigation may include:</p>	<ul style="list-style-type: none"> <li>• the cleaning and fumigation of sheds for pork and poultry production.</li> </ul>

## Unit Sector(s)

Unit sector	Poultry
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCPLY401A Supervise free-range poultry operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising free-range poultry operations and defines the standard required to: implement a Hazard Analysis program to cover bio-security, animal welfare and food safety codes of practice; recognise abnormal behaviour and common diseases such as coccidiosis, Marek's disease, infectious bronchitis, chronic respiratory disease; implement a feeding strategy for free range poultry; protect birds from predators; collect, record and assess data and information required to meet animal management and food safety requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervisors of free-range poultry enterprise whose job role includes scheduling activities and operations for a free-range poultry organisation providing some supervision of staff, and to co-ordinating the delivery of product with sellers or distributors.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan free-range poultry operation	<p>1.1. Accommodation construction is selected that complies with food safety, animal welfare and bio-security codes of practice, environmental practice and cost benefit.</p> <p>1.2. Number of birds per unit of space for grazing/pasture is in line with industry and animal welfare codes of practice.</p> <p>1.3. Number of birds per unit of space in the shed is in line with industry and animal welfare codes of practice.</p> <p>1.4. Method of managing poultry in a free-range environment is selected.</p> <p>1.5. Feeding strategy is based on animal health and welfare, industry Quality Assurance (QA) standards and codes of practice, cost benefit analysis, and production requirements.</p> <p>1.6. Method of managing and monitoring bird health and disease is determined in line with industry QA standards and bio-security code of practice.</p> <p>1.7. Strategies for protecting poultry from predators are devised suitable to the birds under production and the constraints of the property in line with the animal welfare and bio-security codes of practice.</p> <p>1.8. Strategies for managing pasture are prepared and schedules for monitoring them are devised in</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with standard industry pasture management practices.</p> <p>1.9. Enterprise plan for production is developed and documented in line with industry QA program, state and Commonwealth legislation, codes of practice.</p> <p>1.10. An enterprise environmental plan is prepared to meet enterprise, industry and regulatory requirements.</p> <p>1.11. Occupational Health and Safety (OHS) hazards are identified, assessed, and risk management implemented.</p> <p>1.12. Any approvals that are required for the operations are identified, sought and obtained.</p> <p>1.13. Measurable indicators, specifications and targets are determined, based on the production/management plan.</p> <p>1.14. The plan and its performance indicators are clearly articulated and documented.</p>
<p>2. Determine scheduling and key responsibilities</p>	<p>2.1. Accommodation construction is selected that complies with food safety, animal welfare and bio-security codes of practice, environmental practice and cost benefit.</p> <p>2.2. Number of birds per unit of space for grazing/pasture is in line with industry and animal welfare codes of practice.</p> <p>2.3. Number of birds per unit of space in the shed is in line with industry and animal welfare codes of practice.</p> <p>2.4. Method of managing poultry in a free-range environment is selected.</p> <p>2.5. Feeding strategy is based on animal health and welfare, industry QA standards and codes of practice, cost benefit analysis, and production requirements.</p> <p>2.6. Method of managing and monitoring bird health and disease is determined in line with industry QA standards and bio-security code of practice.</p> <p>2.7. Strategies for protecting poultry from predators are devised suitable to the birds under production and the constraints of the property in line with the animal welfare and bio-security codes of practice.</p> <p>2.8. Strategies for managing pasture are prepared and schedules for monitoring them are devised in accordance with standard industry pasture</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>management practices.</p> <p>2.9. Enterprise plan for production is developed and documented in line with industry QA program, state and Commonwealth legislation, codes of practice.</p> <p>2.10. An enterprise environmental plan is prepared to meet enterprise, industry and regulatory requirements.</p> <p>2.11. OHS hazards are identified, assessed, and risk management implemented.</p> <p>2.12. Any approvals that are required for the operations are identified, sought and obtained.</p> <p>2.13. Measurable indicators, specifications and targets are determined, based on the production/management plan.</p> <p>2.14. The plan and its performance indicators are clearly articulated and documented.</p>
3. Monitor free-range poultry operation	<p>3.1. Monitoring points outlined in the implementation plan are met.</p> <p>3.2. Checks are made to ensure that OHS requirements are being observed and followed.</p> <p>3.3. Checks are made to ensure that animal health and welfare requirements are being observed and followed.</p> <p>3.4. Checks are made to ensure that site environmental requirements are being observed and followed.</p> <p>3.5. Checks are made to ensure that food safety requirements are being observed and followed.</p> <p>3.6. Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress.</p> <p>3.7. Checks are made to ensure that the documentation required by the organisation, or other regulating bodies, is completed clearly and accurately.</p> <p>3.8. Where any corrective action or amendment to the plan is required, the action is initiated and taken.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- identify hazards and implement safe systems of work for the enterprise
- identify the conditions which affect poultry management and development
- recognise common diseases, of poultry such as coccidiosis, Marek's disease, infectious bronchitis, chronic respiratory disease
- recognise normal bird behaviour
- collect, record and assess data and information required according to specific criteria
- complete data, quality control and other documentation clearly and accurately
- read and act on written information including plans, maps, plans and reports
- read and interpret laboratory reports informing of health status
- interpret soil tests
- construct hazards tables and prepare other reporting requirements
- explain, and deliver instructions about, the plans and scheduling of the operations to both staff and contractors
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- environmental controls and codes of practice
- poultry diseases including zoonoses
- animal welfare code of practice and industry standards
- biosecurity code of practice and industry standards
- food safety code of practice and industry standards.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• implement a Hazard Analysis program to cover bio-security, animal welfare and food safety codes of practice</li> <li>• recognise abnormal behaviour and common diseases such as coccidiosis, Marek's disease, infectious bronchitis, chronic respiratory disease</li> <li>• implement a feeding strategy for free range poultry</li> <li>• protect birds from predators</li> <li>• collect, record and assess data and information required to meet animal management and food safety requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Poultry may include:	<ul style="list-style-type: none"> <li>• free range chickens</li> <li>• ducks</li> <li>• geese</li> <li>• quail</li> <li>• turkeys</li> <li>• pheasants</li> <li>• guinea fowl.</li> </ul>
Free range environments may be	<ul style="list-style-type: none"> <li>• produce eggs</li> <li>• produce meat</li> </ul>

**RANGE STATEMENT**

used to:

- produce feathers as by-product
- down as by-product
- manure as by-product.

**Unit Sector(s)**

<b>Unit sector</b>	Poultry
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPMG201A Treat weeds

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of treating weeds and defines the standard required to: identify significant weed species for the enterprise; apply a range of weed treatment control options; recognise and control risks to environment (including spray drift and chemical spillage); clean and store equipment correctly; monitor treatment site; record weed treatment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervised workers in agriculture, horticulture and land management who carry out the process of treating weeds and is carried out following specific work instructions.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to treat weeds	<p>1.1. Weeds which impact on commercial crops, gardens and turf, and natural areas are recognised by common name.</p> <p>1.2. Details of the weed occurrence are recorded and reported to the supervisor.</p> <p>1.3. Treatment methods are selected in consultation with the supervisor.</p> <p>1.4. Equipment is selected and prepared for use according to enterprise guidelines and manufacturers specifications.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p>
2. Treat weeds	<p>2.1. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>2.2. Treatments are prepared according to supervisor's instructions and manufacturer's guidelines.</p> <p>2.3. Treatments are applied in such a way that non-target damage is minimised.</p> <p>2.4. Treatments are applied according to OHS and environmental regulatory requirements.</p>
3. Carry out post treatment operation	<p>3.1. Equipment is shut down and cleaned with full consideration of environmental impacts and OHS requirements.</p> <p>3.2. Treatment waste is disposed of causing minimal environmental damage.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- read and interpret chemical labels, Material Safety Data Sheets (MSDSs), manufacturer's specifications for setting up equipment
- use and maintain PPE
- prepare to treat weeds
- apply weed treatments
- carry out post treatment operations
- maintain spray records
- recognise caution or hazard signs and symbols
- interpret tasks or information from labels, manuals or written instructions
- record information accurately or verbally report information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- recognition of common weeds for a particular enterprise/situation
- weed growth characteristics
- different types of control measures, treatments and their principles
- modes of action of different chemicals
- equipment capability and limitations
- legislation relation to the use of chemicals for weed control
- OHS responsibilities of employers and employees
- OHS legislative requirements and associated hazardous substances regulations and Codes of Practice
- correct wearing/fit of personal protective equipment
- environmental considerations when using chemicals for weed control.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify significant weed species for the enterprise</li> <li>• apply a range of weed treatment control options</li> <li>• recognise and control risks to environment (including spray drift and chemical spillage)</li> <li>• clean and store equipment correctly</li> <li>• monitor treatment site</li> <li>• record weed treatment.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Weeds may include:	<ul style="list-style-type: none"> <li>• all plants that are classified as weeds.</li> </ul>
Treat weeds may include:	<ul style="list-style-type: none"> <li>• control by cultural, biological and chemical methods.</li> </ul>



### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPMG202A Treat plant pests, diseases and disorders

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of treating plant pests, diseases and disorders and defines the standard required to: identify significant plant pests, diseases and disorders for the enterprise; apply a range of control or treatment options; recognise and control risks to environment (including spray drift and chemical spillage); clean and store equipment correctly; observe the treatment site and record plant treatments.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervised workers in plant or pasture-based industries and is carried out following strict work instructions and under supervision.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to treat plant pests, diseases and disorders	<p>1.1.Plant pests, diseases and disorders are recognised by common name.</p> <p>1.2.Details of the plant pest, disease and disorder occurrence are recorded and reported to the supervisor.</p> <p>1.3.Treatment methods are selected in consultation with the supervisor.</p> <p>1.4.Equipment is selected and prepared for use according to enterprise guidelines and manufacturer's specifications.</p> <p>1.5.Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p>
2. Apply treatments to plant pests, diseases and disorders	<p>2.1.Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>2.2.Treatments are prepared according to supervisor's instructions and manufacturers guidelines.</p> <p>2.3.Treatments are applied in such a way that non-target damage is minimised.</p> <p>2.4.Treatments are applied according to OHS and regulatory requirements.</p>
3. Carry out post treatment operation	<p>3.1.Equipment is shut down and cleaned with full consideration of environmental impacts.</p> <p>3.2.Treatment waste is disposed of causing minimal environmental damage.</p> <p>3.3.Records are maintained according to enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- read and interpret chemical labels, Material Safety Data Sheets (MSDSs), manufacturer's specifications for setting up equipment
- recognise a range of plant pests, diseases and disorders
- monitor and record the severity of the plant pest or disease problem
- prepare to treat plant pests and diseases
- apply plant pest, disease and disorder treatments
- carry out post treatment operations
- use and maintain PPE appropriate to task
- maintain spray and other treatment records
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- recognition of common plant pests, diseases and disorders for a particular enterprise/situation
- different types of control measures and their principles
- modes of action of different chemicals
- legislation relation to the use of chemicals for plant pest, disease and disorder control
- OHS legislative and enterprise requirements and Codes of Practice
- correct use and maintenance of PPE.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify significant plant pests, diseases and disorders for the enterprise</li> <li>• apply a range of control or treatment options</li> <li>• recognise and control risks to environment (including spray drift and chemical spillage)</li> <li>• clean and store equipment correctly</li> <li>• observe the treatment site</li> <li>• record plant treatments.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Plant pests, diseases and disorders may include:	<ul style="list-style-type: none"> <li>• those which impact on commercial crops, pastures, amenity areas, gardens and turf, and natural areas.</li> </ul>
Plant pests may include:	<ul style="list-style-type: none"> <li>• chewing, sucking and boring invertebrates</li> <li>• nematodes</li> <li>• fungi</li> <li>• viruses</li> <li>• bacteria.</li> </ul>

<b>RANGE STATEMENT</b>	
Plant disorders may include:	<ul style="list-style-type: none"> <li>• toxic soil, air and water.</li> </ul>
Plant pests, diseases and disorders does not include:	<ul style="list-style-type: none"> <li>• vertebrate pests</li> <li>• nutrient deficiencies</li> <li>• extreme environmental conditions.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Pest management
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPMG301A Control weeds

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the control of weeds and defines the standard required to: identify a range of weeds and beneficial organisms; plan and coordinate weed control activities; prepare and calibrate equipment; conduct a site hazard identification and risk control assessment for weed control; apply a range of weed control methods and maintain records; monitor, record and report the effectiveness of controls.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in agriculture, horticulture or land management-based enterprises who are required to carry out the control of weed infestations using cultural, biological and chemical methods to provide effective, economical control of weeds while minimising damage to the environment.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess weed infestation	1.1. Identify the scope and size of the weed infestation that adversely impacts on the landscape. 1.2. Identify weeds and record details of the weeds and beneficial organisms. 1.3. Identify tolerable levels of infestation according to client, market, environmental and IPM requirements. 1.4. Determine if plant health or growth requirements are compromised by level of infestation. 1.5. Seek professional advice if required in the assessment of the weed infestation.
2. Plan control measures	2.1. Determine suitable control options according to Integrated Pest Management principles and industry practice. 2.2. Identify the hazards, assess and control risks to others and the environment. 2.3. Identify appropriate tools, equipment and machinery for the planned control measure. 2.4. Select appropriate Personal Protective Equipment (PPE) in accordance with Occupational Health and Safety (OHS) requirements. 2.5. Prepare a control plan for the control measure/strategy.
3. Implement control	3.1. Implement control measures in accordance with IPM



ELEMENT	PERFORMANCE CRITERIA
measures	principles, industry practice and control plan. 3.2.Ensure that control measures minimise non-target damage. 3.3.Maintain records of the control measure/s applied.
4. Monitor control measures	4.1.Monitor control measures to identify signs of adverse impact on humans, animals, non-target plants or environment. 4.2.Assess effectiveness of control measures in accordance with IPM guidelines and/or available industry standards. 4.3.Record assessment of control measures and report to client or organisation.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify a range of weeds and beneficial organisms
- identify threshold level of weeds for treatment
- conduct a site hazard identification and risk control assessment
- prepare a control plan
- use appropriate cultural, biological or chemical controls
- minimise damage to non-target species
- complete records of control treatments
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- economic, aesthetic and environmental threshold for a range of weeds
- IPM principles and strategies
- lifecycle and biology of weeds
- hazard identification and risk assessment methodologies

**REQUIRED SKILLS AND KNOWLEDGE**

- types of control measures (cultural, biological, chemical) commonly used in industry/sector
- types of equipment including personal protective equipment appropriate to the control measure
- risk factors including human, animal health and environmental associated with a range of control measures/options
- OHS requirements pertaining to the use of cultural, biological, chemical agents.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify a range of weeds and beneficial organisms
- plan and coordinate weed control activities
- prepare and calibrate equipment
- conduct a site hazard identification and risk control assessment for weed control
- apply a range of weed control methods and maintain records
- monitor, record and report the effectiveness of controls.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Weeds may include:	<ul style="list-style-type: none"> <li>the range of significant and noxious weeds of agricultural and horticultural crops, pastures and native vegetation.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Pest management
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCPMG302A Control plant pests, diseases and disorders

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of controlling plant pests, diseases and disorders taking into consideration Integrated Pest Management (IPM) options and defines the standard required to: identify a range of pests, diseases and disorders, and beneficial organisms; assess damage or threat to plants; select pest and disease controls and timing of operations; prepare and calibrate equipment; apply a range of pest and disease control methods and keep records; monitor the effectiveness of controls.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in plant-based enterprises or activities and is likely to be under limited supervision from others with checking only related to overall progress. Responsibility for and limited organisation of the work of others may be involved.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess pests and disease infestation	1.1.Scope and size of the infestation is assessed. 1.2.Plants pests, diseases and disorders and beneficial organisms are identified and reported or recorded in field notes. 1.3.Levels of pest infestations tolerated by the client, market or environment are identified from the IPM strategy.
2. Plan the implementation of control measures	2.1.Control measures suitable for the infestation are selected from IPM strategy. 2.2.Tools, equipment and machinery are selected for each work activity according to enterprise work procedures. 2.3.Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented. 2.4.Personal Protective Equipment (PPE) is selected, used and maintained according to procedures. 2.5.Control measures selected need to be in full consideration of OHS and environmental implications.
3. Implement control measures	3.1.Enterprise work team, contractors and IPM product suppliers are coordinated in a sequential, timely and effective manner in consultation with the supervisor. 3.2.Control measures are implemented according to the

ELEMENT	PERFORMANCE CRITERIA
	IPM standards or industry Code of Practice. 3.3.A clean and safe work area is maintained throughout and on completion of each activity. 3.4.Records are maintained as required by legislation and enterprise guidelines.
4. Monitor control methods	4.1.Control methods are monitored to identify side effects to other plants, animals or external environment. 4.2.Effectiveness of control methods are assessed in reference to specified industry, OHS and enterprise standards. 4.3.Adjustments to IPM control methods are implemented where necessary to meet enterprise specifications.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- recognise a range of pests, diseases and beneficial organisms within a particular enterprise
- communicate with work team members, supervisors, contractors and consultants
- understand IPM symbols and information
- interpret and apply an IPM- based program
- utilise proforma reporting, analysis and work procedure documents
- interpret and apply plant pest and disease spatial and logistical specifications
- interpret and apply test results, and calculate the quantities and application rates of control materials
- coordinate work groups, contractors and own activities to sequentially and effectively complete activities in a timely and cost effective manner
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- pests and disease recognition
- economic, aesthetic or environmental thresholds for a range of plant pests, diseases

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<p>and disorders</p> <ul style="list-style-type: none"> <li>• chemical, biological and cultural control methods and treatments available to the enterprise within the parameters of an IPM program</li> <li>• range and use of tools, equipment and machinery available to the enterprise for implementing the control measures</li> <li>• range of site monitoring and analysis techniques that may be used to implement and IPM program</li> <li>• choice of plant pest and disease methods with site limitations, environmental implications, end market and production or environmental objectives for the site</li> <li>• IPM standards or industry Code of Practice</li> <li>• occupational health and safety responsibilities for employees and employers</li> <li>• correct use and maintenance of personal protective equipment.</li> <li>• OHS and environmental legislative requirements including hazardous substances regulations.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify a range of pests, diseases and disorders, and beneficial organisms</li> <li>• assess damage or threat to plants</li> <li>• select pest and disease controls and timing of operations</li> <li>• prepare and calibrate equipment</li> <li>• apply a range of pest and disease control methods and keep records</li> <li>• monitor the effectiveness of controls.</li> </ul>

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pests, diseases and disorders may include:	<ul style="list-style-type: none"> <li>the range of pests, diseases and disorders of plants managed or controlled by using a range of integrated measures of management and control.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCPMG303A Maintain biological cultures

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of maintaining biological control agents for weed control prior to release in an experimental or field situation and defines the standard required to: prepare and propagate bioagent media; obtain bioagent cultures; maintain and monitor cultures; harvest and store cultures.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit relates to maintaining biological cultures under limited supervision from others with checking only related to overall progress.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare and propagate bioagent media	<p>1.1. Bioagent media to suit the host and target species are identified, selected and accessed consistent with enterprise procedures or integrated weed management strategy where applicable.</p> <p>1.2. Required media are prepared in line with established procedures and laboratory policy.</p>
2. Obtain bioagent cultures	<p>2.1. Cultures are procured from established sources and microclimate maintained in transport to the laboratory.</p> <p>2.2. Cultures are transferred to growing environment in strict compliance with laboratory policy.</p>
3. Maintain and monitor cultures	<p>3.1. Cultures are regularly checked as an integral part of work routines.</p> <p>3.2. Optimum environmental conditions are maintained to maximise culture growth and condition.</p> <p>3.3. Observations are recorded and abnormalities are reported to the appropriate authority.</p>
4. Harvest and store cultures	<p>4.1. Routine monitoring of culture growth identifies the need for harvest and agent release.</p> <p>4.2. Harvesting program is determined in line with program requirements.</p> <p>4.3. Harvest operations are completed and cultures are transferred to storage in accordance with laboratory policy.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify Occupational Health and Safety (OHS) hazards and implement safe work practices
- prepare and propagate bioagent media
- obtain bioagent cultures
- maintain and monitor cultures
- harvest and store cultures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the range of media available for culture maintenance
- culturing and media preparation techniques
- laboratory and glasshouse procedures
- available biological control agents and their use
- the broad range of pest species that are to be targeted
- biosecurity and quarantine requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• prepare and propagate bioagent media</li> <li>• obtain bioagent cultures</li> <li>• maintain and monitor cultures</li> <li>• harvest and store cultures.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Biological control agents may include:	<ul style="list-style-type: none"> <li>• control agents for weed control, their maintenance and culture.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCPMG304A Release biological agents

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of releasing biological control agents for weed or pest animal control in an experimental or field situation and defines the standard required to: source suitable biological control agents for target plant species; identify the site and release methodology; documentation of release is kept and effected landholders informed; biological agent releases are monitored and follow up planned.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to releasing biological agents which is likely to be under limited supervision from others with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish the scope of agent release	<p>1.1.Target plant species are located and identified consistent with integrated pest management strategy where applicable.</p> <p>1.2.Incidence and density of the target population are estimated and recorded according to enterprise procedures where appropriate.</p> <p>1.3.Suitable biological control agents are identified and sourced consistent with enterprise procedures and/or integrate pest management strategy.</p>
2. Identify the site and release methodology	<p>2.1.Release site is identified in line with target species and integrated pest management strategy.</p> <p>2.2.Release methodology is established and scheduled in line with established agency advice or enterprise practice.</p>
3. Carry out on-site tasks	<p>3.1.Permits and landholder co-operation are established to facilitate release program.</p> <p>3.2.Release is carried out within enterprise or industry guidelines regarding weather or other conditions.</p> <p>3.3.Release is completed as scheduled according to release methodology and details are recorded in laboratory and field records following enterprise procedure or industry standard.</p>
4. Monitor and report on biological agent releases	<p>4.1.Biological agent release site is monitored to evaluate effectiveness and spread to target species consistent with the integrated pest management strategy where appropriate.</p> <p>4.2.Regular reports are provided to landholder and</p>



ELEMENT	PERFORMANCE CRITERIA
	regulatory authorities. 4.3. Records are completed as required by agency requirements. 4.4. Biological agent releases are scheduled according to agent and target biology consistent with the integrated pest management strategy.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- establish the scope of agent release
- establish the scope of agent release
- work effectively in a team situation in the lab or field
- identify relevant pest species
- identify the site and release methodology
- operate relevant vehicles and plant
- carry out on-site tasks
- observe effectively and report accurately
- monitor and report on biological agent releases
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- insect, animal and/or plant identification principles
- use of identification keys
- pest physiology and growth
- relevant legislative requirements

**REQUIRED SKILLS AND KNOWLEDGE**

- safe handling techniques
- environmental legislation and risks of releasing biological agents.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- source suitable biological control agents for target plant species
- suitable biological control agents are sourced for target plant species
- identify the site and release methodology
- documentation of release is kept and effected landholders informed
- biological agent releases are monitored and follow up planned.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Biological control agents may include:	<ul style="list-style-type: none"> <li>control agents for insects, fungi, plants, and pest animals.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Pest management
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPMG401A Define the pest problem in a local area

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers defining the pest problem in a local area and defines the standard required to: determine the lifecycle, distribution and loss of production caused by the pest; document the economic losses and environmental risks and impacts of the pest; develop control measures based on a combination of strategies to control the pest at its most vulnerable stage with minimal environmental impact; establish the costs and benefits of implementing the selected control strategies; select management options to eradicate or manage the pest across a local region; and negotiate an action plan to implement the management options across the local area.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to control officers who define the pest problem in a local area.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Define the land use process for the local area affected by the target pest problem	1.1.Consultation with local land users and other relevant stakeholders in the affected area is documented. 1.2.Desired land management and/or production outcomes are identified. 1.3.Performance criteria for measuring local land management and/or production outcomes are determined. 1.4.Critical activities required to achieve the desired outcomes are identified. 1.5.Local land management and/or production process is mapped against the annual planning cycle. 1.6.Local land management and/or production process budget is determined.
2. Analyse the pest problem in the local area	2.1.Target pest population distribution within the affected local area is determined in consultation with stakeholders. 2.2.Target pest population data supplied by stakeholders is validated. 2.3.Other relevant data on target pest population are obtained. 2.4.Factors which influence the target pest population and distribution within the local area are described. 2.5.Pest life cycle is documented.

ELEMENT	PERFORMANCE CRITERIA
3. Determine critical control points for management of the pest problem	3.1.Periods of greatest risk in the local land management and/or production process are identified in consultation with stakeholders. 3.2.Periods of target pest vulnerability within the life cycle are identified. 3.3.Local land management and/or production process map and target pest life cycle map are consolidated. 3.4.Critical points for controlling pest populations and/or changing land management or production practices within the annual planning cycle are determined in consultation with other stakeholders.
4. Document and collate the impacts of the pest	4.1.Economic losses resulting from the pest presence are measured or estimated in consultation with stakeholders. 4.2.Environmental impacts from the pest presence are measured or estimated in consultation with stakeholders. 4.3.Potential risks relating to exotic disease are defined. 4.4.Pest problem is documented according to industry and enterprise standards and guidelines.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- define the land use process for the local area affected by the target pest problem
- analyse the pest problem in the local area
- determine critical control points for management of the pest problem
- analyse local problems
- plan strategically for local context
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>clarification, negotiating solutions and responding to a range of views</p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• pest biology</li> <li>• land management processes</li> <li>• production processes</li> <li>• relevant legislative and regulatory requirements</li> <li>• Occupational Health and Safety (OHS) and environmental protection legislation.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the lifecycle, distribution and loss of production caused by the pest</li> <li>• document the economic losses and environmental risks and impacts of the pest</li> <li>• develop control measures based on a combination of strategies to control the pest at its most vulnerable stage with minimal environmental impact</li> <li>• establish the costs and benefits of implementing the selected control strategies</li> <li>• select management options to eradicate or manage the pest across a local region</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>negotiate an action plan to implement the management options across the local area.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pest problems may include:	<ul style="list-style-type: none"> <li>the range of weeds, vertebrate and invertebrate pests.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCPMG402A Develop a pest management action plan within a local area

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers developing a pest management action plan within a local area and defines the standard required to: determine the lifecycle, distribution and loss of production caused by the pest; document the economic losses and environmental risks and impacts of the pest; develop control measures based on a combination of strategies to control the pest at its most vulnerable stage with minimal environmental impact; establish the costs and benefits of implementing the selected control strategies; select management options to eradicate or manage the pest across a local region; negotiate an action plan to implement the management options across an area or region.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to regional pest management officers and is likely to be undertaken independently, with reference to specialist advice.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine land management/production objectives	<p>1.1.Land users and other stakeholders are consulted regarding local objectives.</p> <p>1.2.Objectives address major land uses and production activities in the local area affected by the impacts of the target pests.</p> <p>1.3.Objectives relate to the problem definition and the reduction in the pest impacts and associated losses.</p> <p>1.4.Objectives comply with national, state and regional legislation and regulations.</p> <p>1.5.Objectives support strategies for land and pest management.</p>
2. Estimate costs and advantages for management units	<p>2.1.The diversity of land management and production values that the target pests affect within the local area is defined.</p> <p>2.2.The likely costs of preferred options for control of pest populations and/or changes to land management or production activities associated with each value are estimated.</p> <p>2.3.The likely costs are compared with the impacts and losses caused by the target pests.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4.The management units most affected, both actually and potentially, by the target pests are defined and prioritised.
3. Define the performance level for each land management/production objective	3.1.Performance levels are defined in accordance with sustainable land use principles to address target pests population levels, economic impacts and environmental impacts. 3.2.Performance levels are realistic and measurable.
4. Select management options for the target pests	4.1.Options for controlling pest populations and/or changing land management or production practices are assessed in terms of economic factors, technical difficulty, practical feasibility, social and/or environmental acceptability. 4.2.A range of management options are assessed in terms of current and future financial support, when control activities are to be implemented, level of target pests population reduction required, and the most suitable control methods and techniques. 4.3.A management option is selected in accordance with sustainable land use principles, economic feasibility, environmental acceptability, Integrated Pest Management (IPM) principles, and statutory requirements for pest control.
5. Negotiate possible actions with relevant stakeholder	5.1.The action is based on the definition of the problem using data from measurement of abundance and impacts. 5.2.The action clearly documents the pest problem, the objectives, the stakeholders, the prioritised management units, the performance criteria, and the most suitable management options.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- determine land use objectives

## REQUIRED SKILLS AND KNOWLEDGE

- estimate costs and advantages for areas affected by the target pest/s
- define performance levels for pest management for each land use
- select management control options for the target pest/s
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- relevant local, regional, state and national strategies for pest management including those for individual species
- motivational effects of stakeholder involvement
- community facilitation processes
- local land management process
- relevant legislative and regulatory requirements including statutory requirements for pest control
- environmental protection legislation
- principles of IPM
- pest control methods and techniques
- defining local land management and production values
- determining cost benefit analysis of management options
- sustainable land use principles
- Occupational Health and Safety (OHS), environmental and pesticides legislation, codes of practice and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the lifecycle, distribution and loss of production caused by the pest</li> <li>• document the economic losses and environmental risks and impacts of the pest</li> <li>• develop control measures based on a combination of strategies to control the pest at its most vulnerable stage with minimal environmental impact</li> <li>• establish the costs and benefits of implementing the selected control strategies</li> <li>• select management options to eradicate or manage the pest across a local region</li> <li>• negotiate an action plan to implement the management options across an area or region.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Action plans may include:	<ul style="list-style-type: none"> <li>• those relating to a range of weeds and vertebrate and invertebrate pests.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPMG403A Develop monitoring procedures for the local pest management strategy

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing monitoring procedures for the local pest management strategy and defines the standard required to: determine the lifecycle, distribution and loss of production caused by the pest; document the economic losses and environmental risks and impacts of the pest; develop control measures based on a combination of strategies to control the pest at its most vulnerable stage with minimal environmental impact; establish the costs and benefits of implementing the selected control strategies; select management options to eradicate or manage the pest across a local region; negotiate an action plan to implement the management options across an area or region.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to regional pest management officers and is likely to be undertaken independently, with reference to specialist advice.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop data recording documents for monitoring the pest strategy	1.1.Data obtained by local land users is assessed for relevance and usefulness in the monitoring system. 1.2.Data required to monitor economic impacts of pests is determined. 1.3.Data required to monitor environmental impacts of pests is determined. 1.4.Data required to monitor pest abundance is determined. 1.5.Data required to monitor pest strategy operating costs is determined. 1.6.Documents for recording data are developed.
2. Develop monitoring schedule	2.1.Monitoring schedules are developed in accordance with the pest management strategy.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse local problems
- plan strategically for local context
- report on and document analytical and strategic activities
- prepare monitoring schedules
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- pest biology
- land management processes
- production processes
- relevant legislative and regulatory requirements
- environmental protection legislation
- monitoring procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the lifecycle, distribution and loss of production caused by the pest</li> <li>• document the economic losses and environmental risks and impacts of the pest</li> <li>• develop control measures based on a combination of strategies to control the pest at its most vulnerable stage with minimal environmental impact</li> <li>• establish the costs and benefits of implementing the selected control strategies</li> <li>• select management options to eradicate or manage the pest across a local region</li> <li>• negotiate an action plan to implement the management options across an area or region.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Relevant legislation and local regulations may include:</p>	<ul style="list-style-type: none"> <li>• environmental protection</li> <li>• vertebrate pests</li> <li>• noxious weeds</li> <li>• use of firearms (including licensing requirements and exemptions)</li> <li>• humane treatment of animals</li> <li>• activities in nature reserves and heritage areas</li> <li>• poisons and veterinary substances</li> <li>• farm chemicals</li> <li>• identification and reporting of suspected outbreaks of exotic disease</li> <li>• Occupational Health and Safety (OHS)</li> </ul>

<b>RANGE STATEMENT</b>	
	regulations and common law principles relating to property, stock, duty of care and due diligence.

**Unit Sector(s)**

<b>Unit sector</b>	Pest management
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPMG404A Coordinate the local pest management strategy

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers coordinating the local pest management strategy and defines the standard required to: prepare monitoring schedules and develop data recording documents for monitoring the pest strategy; develop milestones for the pest program based on pest lifecycles and local land management and production activity cycles; determine specific objectives for the pest management strategy; identify activities required to achieve specific objectives; estimate resources required to complete the required activities; develop an action plan to guide implementation of the strategy.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to regional pest management officers and is likely to be undertaken independently with reference to specialist advice if needed.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine the time period and milestones for the implementation of the local pest management strategy	1.1. Local stakeholders are consulted regarding time period and milestones. 1.2. The time period complies with the objectives in the local management strategy. 1.3. The time period is realistic to allow achievement of the objectives while taking account of target pest's life cycle and behaviour patterns, and local land management and production activity cycles. 1.4. Milestones are aligned to critical control points in the target pest's life cycle and behaviour patterns, and the local and management and production activity cycles. 1.5. Milestones identify a key, measurable point in the time period.
2. Determine specific objectives for the local pest management strategy	2.1. Objectives to be achieved at each milestone are defined in consultation with local land users. 2.2. Performance criteria for objectives at each milestone are determined. 2.3. Objectives and performance criteria are measurable.
3. Identify activities required to achieve specific objectives	3.1. Activities required to achieve objectives by proposed deadlines are listed in consultation with local land users. 3.2. Activities are selected and scheduled to comply with the pest management strategy, in consideration of

ELEMENT	PERFORMANCE CRITERIA
	<p>community attitudes and in accordance with relevant statutory and regulatory requirements.</p> <p>3.3. Monitoring and measurement activities are selected and scheduled to comply with the pest management strategy and in accordance with relevant statutory and regulatory requirements.</p>
<p>4. Estimate resources required to complete the required activities</p>	<p>4.1. Personnel required to carry out activities are estimated.</p> <p>4.2. Plant and machinery required to carry out activities are estimated.</p> <p>4.3. Materials required to carry out activities are estimated.</p> <p>4.4. Personnel, plant, machinery and materials are sourced and costed in consultation with other stakeholders.</p>
<p>5. Develop an action plan to guide implementation of the strategic plan</p>	<p>5.1. The action plan documents the time period, milestones, objectives, activities, required resources and budget to implement the strategy.</p> <p>5.2. Potential contingencies are addressed in the action plan.</p> <p>5.3. Agreement to the action plan and commitment by other stakeholders is documented.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- determine the time period and milestones for the implementation of the local pest management strategy
- determine specific objectives for the local pest management strategy
- identify activities required to achieve specific objectives
- develop an action plan to guide implementation of the strategic plan
- manage time
- monitor budgets
- use literacy skills to read, interpret and follow organisational policies and

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<p>procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks</p> <ul style="list-style-type: none"> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• land management and production processes</li> <li>• relevant legislative and regulatory requirements</li> <li>• pest control methods and techniques</li> <li>• social and environmental issues.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare monitoring schedules and develop data recording documents for monitoring the pest strategy</li> <li>• develop milestones for the pest program based on pest lifecycles and local land management and production activity cycles</li> <li>• determine specific objectives for the pest management strategy</li> <li>• identify activities required to achieve specific</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<p>objectives</p> <ul style="list-style-type: none"> <li>• estimate resources required to complete the required activities</li> <li>• develop an action plan to guide implementation of the strategy.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Methods and techniques may include:</p>	<ul style="list-style-type: none"> <li>• changing land management or production processes and practices, e.g:                             <ul style="list-style-type: none"> <li>• changing lambing times</li> <li>• changing sowing times</li> <li>• changing crops</li> </ul> </li> <li>• modifying habitat</li> <li>• pasture management and vertebrate pest population control:                             <ul style="list-style-type: none"> <li>• shooting</li> <li>• poisoning</li> <li>• trapping</li> <li>• mustering</li> <li>• relocation</li> <li>• fumigation</li> <li>• sedation</li> <li>• exclusion fencing</li> <li>• biological controls</li> <li>• harvesting</li> <li>• tagging</li> </ul> </li> <li>• weed control:                             <ul style="list-style-type: none"> <li>• poisoning</li> <li>• biological controls.</li> </ul> </li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPMG405A Implement pest management action plans

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers implementing pest management actions plans and defines the standard required to: schedule activities with milestones aligned to the target pests and the local land management and production cycles; estimate equipment, pesticides and labour required to complete the work; brief and supervise employees or contractors and consult with stakeholders; coordinate contingency management activities to minimise the damage caused by accidents or spillage; report progress in relation to the pest management action plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to pest management planning at a local level and is likely to be undertaken independently, with reference to specialist advice.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Schedule pest management activities	<p>1.1. Activities identified in the action plan are scheduled within the monthly, weekly or daily work plans.</p> <p>1.2. Work time is allocated to complete the activities in accordance with the requirements of the action plan, and within realistic expectations.</p> <p>1.3. Employees or contracted personnel with relevant skills and competency are allocated for the completion of required activities.</p> <p>1.4. Plant, machinery, equipment and materials required to complete required activities are procured for the time the activities are to be carried out.</p> <p>1.5. Relevant stakeholders are consulted regarding the scheduling of activities.</p> <p>1.6. Relevant Occupational Health and Safety (OHS) standards and other Federal, State and local legislation &amp; regulations are applied in the allocation and procurement of human and physical resources.</p> <p>1.7. Milestones are aligned to critical control points in the target pests' life cycle, behaviour patterns and the local land management and production activity cycles.</p> <p>1.8. Measurable performance criteria for objectives at each milestone are determined.</p> <p>1.9. Activities required to achieve objectives by proposed deadlines are listed in consultation with local land users.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>1.10. Activities are selected and scheduled to comply with the pest management strategy, in consideration of community attitudes, and in accordance with relevant statutory and regulatory requirements.</p> <p>1.11. Monitoring and measurement activities are selected and scheduled to comply with the vertebrate pest management strategy and in accordance with relevant statutory and regulatory requirements.</p>
2. Estimate resources required to complete the required activities	<p>2.1. Personnel required to carry out activities are estimated.</p> <p>2.2. Plant and machinery required to carry out activities are estimated.</p> <p>2.3. Materials required to carry out activities are estimated.</p> <p>2.4. Personnel, plant, machinery and materials are sourced and costed in consultation with other stakeholders.</p>
3. Brief employees or contracted personnel regarding the pest management activities	<p>3.1. Employees or contracted personnel are informed of the requirements of the pest management plan and action plan.</p> <p>3.2. Employees or contracted personnel are informed of land owner/manager expectations and reporting and recording requirements.</p> <p>3.3. Employees or contracted personnel are advised of OHS standards and other statutory and regulatory requirements to be applied in carrying out the required activities.</p>
4. Supervise employees or contracted personnel in carrying out the pest management activities	<p>4.1. Plant, machinery and equipment are checked for serviceability in accordance with manufacturer's specifications and statutory and regulatory requirements.</p> <p>4.2. Materials are checked for compliance with OHS standards and other statutory and regulatory requirements.</p> <p>4.3. Personal protective equipment and clothing used or worn by employees or contracted personnel are checked for compliance with OHS standards and other statutory and regulatory requirements.</p> <p>4.4. Procedures and skills applied by employees and contracted personnel are monitored for compliance with OHS standards and other statutory and regulatory requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	4.5. Feedback, advice and coaching are provided to employees and contracted personnel as required to improve or correct procedures and skills.
5. Coordinate contingency management activities	5.1. First aid procedures are initiated and coordinated in response to accident or injury to employees or contracted personnel. 5.2. Relevant authorities are notified and arrangements made in the event of the need for rescue of injured employees or contracted personnel. 5.3. Activities that are not carried out due to accidents, injury, other incidents or unfavourable conditions are rescheduled within the monthly, weekly or daily work plans.
6. Report progress in relation to pest management action plan	6.2 Reports and records are compiled and documented in accordance with employer or organisational requirements and statutory and regulatory requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan and manage resources and time
- organise the work of others
- identify hazards and control risks
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• OHS, environmental and pesticides legislation, codes of practice and enterprise procedures</li> <li>• pest control methods and techniques</li> <li>• integrated pest management</li> <li>• pest biology</li> <li>• social and environmental issues</li> <li>• contingency management principles</li> <li>• first aid and rescue procedures</li> <li>• ecological systems</li> <li>• sustainable production systems.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• schedule activities with milestones aligned to the target pests and the local land management and production cycles</li> <li>• estimate equipment, pesticides and labour required to complete the work</li> <li>• brief and supervise employees or contractors and consult with stakeholders</li> <li>• coordinate contingency management activities to minimise the damage caused by accidents or spillage</li> <li>• report progress in relation to the pest management action plan.</li> </ul>
<b>Context of and specific resources for</b>	Competency requires the application of work practices

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pest may include:	<ul style="list-style-type: none"> <li>weeds and vertebrate pests.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPMG406A Investigate a reported pest treatment failure

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers investigating a reported pest treatment failure and defines the standard required to: compare the results of pest treatment with the predicted response in published work; ensure the control product has been used in accordance with manufacturer's directions, and is either registered for the purpose or used under permit; check conditions at application against records and manufacturers directions; refer pest failure to manufacturer.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to regional pest management officers and is likely to be undertaken independently, with reference to specialist advice
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess treatment failure	<p>1.1.Pre treatment pest infestation levels are ascertained from monitoring program records where available.</p> <p>1.2.Post treatment population is ascertained from monitoring records and/or inspection.</p> <p>1.3.Expected pest population after treatment is determined from available information.</p> <p>1.4.Significance of difference between expected and monitored population analysed consistent with enterprise guidelines where appropriate.</p> <p>1.5.Treatment used and application technique ascertained from records and assessed against manufacturer's instructions.</p>
2. Investigate and report on causes of failure	<p>2.1.Conditions impacting on effectiveness of treatment prevailing at time of treatment are ascertained from enterprise records where available.</p> <p>2.2.Known conditions at application are analysed against manufacturers' recommendations.</p> <p>2.3.Level of control required by project specifications or permit is compared against results.</p> <p>2.4.Report containing all relevant information known on application of treatment, operators' qualifications and results is produced following enterprise procedure.</p> <p>2.5.Remaining product and report are returned to supplier or manufacturers agent for investigation if treatment appears to have been within guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse statistics on pest populations
- assess treatment failure
- investigate and report on causes of failure
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- pest treatment techniques
- surveying population of pests
- treatment characteristics and modes of action
- basic statistical analysis
- report preparation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• compare the results of pest treatment with the predicted response in published work</li> <li>• ensure the control product has been used in accordance with manufacturers directions, and is either registered for the purpose or used under permit</li> <li>• check conditions at application against records and manufacturers directions</li> <li>• refer pest failure to manufacturer.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Investigation may include:	<ul style="list-style-type: none"> <li>• pest treatment failures in a range of weeds and vertebrate pests.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPMG407A Monitor and evaluate the local pest management action plan

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring and evaluating the local area pest management action plan and defines the standard required to: collate data from the action plan; calculate and compare the cost and benefits of the implemented action plan with the budget; draw conclusions on the effectiveness and efficiency of the pest management program based on data; make recommendations to improve the development and implementation of the local pest management action plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to regional pest management officers and is likely to be undertaken independently with reference to specialist advice if needed.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collate all available data	1.1.Data on pests' abundance are collated. 1.2.Date on economic impacts of pests is collated. 1.3.Data on environmental impacts of pests are collated. 1.4.Data on pest management action plan operating costs are collated.
2. Assess data against objectives and performance criteria	2.1.Actual results are compared with objectives and performance criteria for the action plan. 2.2.Actual costs are compared with budget for the strategy. 2.3.Cost and benefits of the action plan are documented.
3. Compile report of strategy evaluation	3.1.Report is compiled following enterprise procedures. 3.2.Indicators of good performance of the action plan are isolated and discussed. 3.3.Causes of poor performance are examined. 3.4.Conclusions about the pest management action plan in relation to changes in pest abundance and impacts are clearly stated. 3.5.Conclusions are supported by the data.
4. Recommend modifications	4.1.Conclusions are supported by the data. 4.2.Recommendations provided to supervisor or other authority in format that complies with enterprise guidelines.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collate available data
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- local land management process
- local production process
- relevant legislative and regulatory requirements
- environmental protection legislation
- weed control methods and techniques
- social and environmental issues
- statutory requirements for weed control.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this



<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• collate data from the action plan</li> <li>• calculate and compare the cost and benefits of the implemented action plan with the budget</li> <li>• draw conclusions on the effectiveness and efficiency of the pest management program based on data</li> <li>• make recommendations to improve the development and implementation of the local pest management action plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Monitoring and evaluation may include:	<ul style="list-style-type: none"> <li>• the control of vertebrate pests and pest plants in a local area.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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# AHCPMG408A Assess and monitor weed, pest and/or disease control programs

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers assessing and monitor week, pest and/or disease control programs and covers the process of planning for the control of weed, pests and/or disease and defines the standard required to: assess the level of weed, pest and/or disease infestation; implement weed, pest and/or disease strategies based on Integrated Pest Management (IPM) principles; monitor the effectiveness of weed, pest and/or disease strategies; maintain records of the weed, pest and/or disease program.
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## Application of the Unit

<b>Application of the unit</b>	This unit is likely to be undertaken without supervision, with only general guidance sought from others.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for implementation	<p>1.1. Documents within the organisation that detail the requirements of the IPM program are identified and obtained.</p> <p>1.2. The frequency of assessment, the size of any sample area, the available budgets for operations, and the target species for assessment are identified from the organisations weed, pest and/or disease control plans.</p> <p>1.3. The method(s) of assessment/measurement and of control for each target species is identified from the organisations weed, pest and/or disease control plans.</p> <p>1.4. The resources required for the assessment and control operations are assessed and calculated from the area to be assessed, the available timelines, the available resources, and the methods of control required.</p> <p>1.5. Measurable indicators, specifications and targets are determined, based on the target species and the potential impacts on growth.</p> <p>1.6. A plan to implement the IPM program is developed, and clearly describes its scheduling, resources, responsibilities, target species, specific location(s) and performance targets for both the assessment and the control phases.</p> <p>1.7. Discussions are held with operational personnel and immediate management to discuss the implementation plan.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>1.8. Any approvals that are required for the control operations are identified, sought and obtained.</p> <p>1.9. The implementation plan is clearly articulated and documented, as required, by the organisations policies and procedures.</p>
2. Assess weed, pest and/or disease infestations	<p>2.1. People, materials and equipment required for the assessment are coordinated and scheduled according to the prepared plan.</p> <p>2.2. The procedures and tools to be used, the kind of records that are to be taken, and any potential hazards that might be faced are clearly communicated to operational personnel.</p> <p>2.3. Observations are made and data collected according to the requirements of the implementation plan.</p> <p>2.4. The size and scope of any infestations, and the potential impact on plant growth are assessed and calculated.</p> <p>2.5. Treatments for the infestation are selected from the options detailed in the IPM plan.</p>
3. Implement weed, pest and/or disease control strategies	<p>3.1. People, materials and equipment required for the implementation of the selected control strategies are coordinated and scheduled according to the prepared plan.</p> <p>3.2. All control operations are undertaken in a manner which ensures that potential negative environmental impacts are minimised or eliminated, including the proper disposal of containers and drums.</p> <p>3.3. Occupational Health and Safety (OHS) hazards are identified, assessed, and responsible action taken throughout the control operations.</p> <p>3.4. The procedures and tools to be used, the kind of records that are to be taken, and any potential hazards that might be faced are clearly communicated to operational personnel, and confirmation of the clear communication is sought.</p> <p>3.5. Any documentation that is required to be kept by either the organisation or OHS guidelines is completed clearly and accurately.</p> <p>3.6. Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress.</p> <p>3.7. Advice is given to operational staff and any contractors during the control operations when</p>

ELEMENT	PERFORMANCE CRITERIA
	requested, or when the need is identified.
4. Monitor weed, pest and/or disease control operations	4.1. Monitoring points outlined in the implementation plan are adhered to. 4.2. Checks are made to ensure that the OHS requirements are being observed and followed. 4.3. Checks are made to ensure that the site environmental requirements are being observed and followed. 4.4. Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress. 4.5. Checks are made to ensure that the documentation required by the organisation, or other regulating bodies, is completed clearly and accurately during the progress of the control operations. 4.6. Where any corrective action or amendment to the implementation plan is required the action is initiated and taken.
5. Complete weed, pest and/or disease control operation	5.1. All waste materials and substances are removed from site and stored or disposed of responsibly. 5.2. Documentation is collated and stored according to the requirements of the organization. 5.3. Recommendations for future control operations are prepared based on the conduct of the operation, the data collected, and the discussions had during the operation. 5.4. Where it is required, a report on the conduct of the assessment and control operations is made including the key aspects of the operation.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- interpret monitored information on pest and weed numbers, density and control

## REQUIRED SKILLS AND KNOWLEDGE

- plan and schedule weed, pest and/or disease control including amending plans during the operations
- recognise poor growth and lack of vigour caused by nutrient deficiency
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- pest and weed species, including their life cycles and reproduction/multiplication capability
- integrated pest and weed management techniques
- the effects on plants of weeds, pests and/or diseases, including competitive effects on plant growth; threshold levels; and the effects of alternative methods of control
- environmental controls and codes of practice applicable to the enterprise
- plant physiology
- OHS, contractor engagement, chemical use and application, and environmental legislation, codes of practice and enterprise procedures
- environmental controls and codes of practice applicable to the business and to the weed, pest and/or disease control operations
- sound management practices and processes to minimise noise, odours, and debris from weed, pest and/or disease control operations.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess the level of weed, pest and/or disease infestation</li> <li>• implement weed, pest and/or disease strategies based on IPM principles</li> <li>• monitor the effectiveness of weed, pest and/or disease strategies</li> <li>• maintain records of the weed, pest and/or disease program.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Targeted pests may include:</p>	<ul style="list-style-type: none"> <li>• insects</li> <li>• weeds</li> <li>• pathogens</li> <li>• vertebrates</li> <li>• nematodes and molluscs</li> <li>• weeds may be those which are:                             <ul style="list-style-type: none"> <li>• annual</li> <li>• perennial</li> <li>• broad leaf</li> <li>• narrow leaf</li> <li>• grasses</li> </ul> </li> <li>• invertebrate pests may include:                             <ul style="list-style-type: none"> <li>• thrips</li> </ul> </li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• mites</li> <li>• nematodes</li> <li>• locusts or caterpillars</li> <li>• vertebrate pests might include:                             <ul style="list-style-type: none"> <li>• rabbits</li> <li>• rats</li> <li>• mice</li> <li>• macropods</li> <li>• birds</li> </ul> </li> <li>• diseases may include:                             <ul style="list-style-type: none"> <li>• foliar pathogens</li> <li>• soil borne pathogens.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Pest management
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPMG501A Coordinate the pest management strategy in a regional or broader context

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers coordinating the pest management strategy in a regional or broader context and defines the standard required to: carry out pest monitoring; determine the time period and milestones for the implementation of the pest management strategy; set specific objectives for the pest management strategy; identify activities required to achieve specific objectives; estimate resources required to complete the required activities; develop an action plan to guide implementation of the strategic plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies pest control officers and managers for work carried out independently within organisational guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine the time period and milestones for the implementation of the pest management strategy	<p>1.1.Stakeholders are consulted regarding time period and milestones.</p> <p>1.2.Time period and milestones are documented according to enterprise guidelines.</p> <p>1.3.The time period complies with the objectives in the management strategy.</p> <p>1.4.The time period is realistic to allow achievement of the objectives while taking account of target pests life cycle and behaviour patterns, and land management and production activity cycles.</p> <p>1.5.Milestones are aligned to critical control points in the target pest's life cycle, and the land management and production activity cycles.</p> <p>1.6.Milestones identify a key, measurable point in the time period.</p>
2. Determine specific objectives for the pest management strategy	<p>2.1.Objectives to be achieved at each milestone are defined in consultation with other relevant stakeholders.</p> <p>2.2.Performance criteria for objectives at each milestone are documented.</p> <p>2.3.Objectives and performance criteria are measurable.</p>
3. Identify activities required to achieve specific objectives	<p>3.1.Activities required to achieve objectives by proposed deadlines are determined and documented in consultation with other stakeholders.</p> <p>3.2.Activities are selected and scheduled to comply with</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>the pest management strategy, in consideration of community attitudes, and in accordance with relevant statutory and regulatory requirements.</p> <p>3.3. Monitoring and measurement activities are selected and scheduled to comply with the pest management strategy, and in accordance with relevant statutory and regulatory requirements.</p>
<p>4. Estimate resources required to complete the required activities</p>	<p>4.1. Estimates of personnel required to carry out activities are documented.</p> <p>4.2. Plant and machinery required to carry out activities are estimated.</p> <p>4.3. Materials required to carry out activities are estimated.</p> <p>4.4. Personnel, plant, machinery and materials are sourced and costed in consultation with other stakeholders.</p>
<p>5. Develop an action plan to guide implementation of the strategic plan</p>	<p>5.1. The action plan documents the time period, milestones, objectives, activities, required resources and budget to implement the strategy.</p> <p>5.2. Potential contingencies are addressed in the action plan.</p> <p>5.3. Agreement to the action plan and commitment by other stakeholders is documented.</p>

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
<p>This section describes the skills and knowledge required for this unit.</p>
<p><b>Required skills</b></p>
<ul style="list-style-type: none"> <li>• determine the time period and milestones for the implementation of the pest management strategy</li> <li>• determine specific objectives for the pest management strategy</li> <li>• identify activities required to achieve specific objectives</li> <li>• develop an action plan to guide implementation of the strategic plan</li> <li>• use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports</li> </ul>

## REQUIRED SKILLS AND KNOWLEDGE

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- land management and production processes
- relevant legislative and regulatory requirements
- pest control methods and techniques
- social and environmental issues
- exotic diseases
- human resource management principles
- budgetary management
- pest biology
- project planning and management processes
- development of objectives and timelines.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out pest monitoring
- determine the time period and milestones for the implementation of the pest management strategy
- set specific objectives for the pest management strategy

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• identify activities required to achieve specific objectives</li> <li>• estimate resources required to complete the required activities</li> <li>• develop an action plan to guide implementation of the strategic plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pests to be targeted may include:	<ul style="list-style-type: none"> <li>• insects</li> <li>• weeds</li> <li>• pathogens</li> <li>• vertebrates</li> <li>• nematodes</li> <li>• molluscs.</li> </ul>
Pest management strategies may include:	<ul style="list-style-type: none"> <li>• changing land management or production processes and practices e.g.:                             <ul style="list-style-type: none"> <li>• changing lambing times</li> <li>• changing sowing times</li> <li>• changing crops</li> </ul> </li> <li>• modifying habitat</li> <li>• pasture management</li> <li>• pest population control e.g.:                             <ul style="list-style-type: none"> <li>• shooting</li> <li>• poisoning</li> <li>• trapping</li> <li>• mustering</li> <li>• relocation</li> <li>• fumigation</li> <li>• sedation</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• exclusion fencing</li> <li>• biological controls</li> <li>• harvesting</li> <li>• tagging</li> <li>• weed control including:                             <ul style="list-style-type: none"> <li>• chemical</li> <li>• biological control</li> <li>• mechanical removal.</li> </ul> </li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPMG502A Define the pest problem in a regional or broader context

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved with defining the pest problem in a regional or broader context and defines the standard required to: define the land management and/or production process for the area affected by the target pest problem; analyse the pest problem; determine critical control points in the life cycle for management of the pest problem; assess the economic and environmental impacts of the pest.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies pest control officers and managers for work carried out independently within organisational guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define the land management and/or production process for the area affected by the target pest problem	<p>1.1. Consultation with other land users, regional land management bodies and other relevant stakeholders in the affected area is documented.</p> <p>1.2. Desired land management and/or production outcomes are identified.</p> <p>1.3. Performance criteria for measuring land management and/or production outcomes are determined.</p> <p>1.4. Critical activities required to achieve the desired outcomes are identified.</p> <p>1.5. Land management and/or production process is mapped against the annual planning cycle.</p> <p>1.6. Land management and/or production process budget is determined.</p>
2. Analyse the pest problem	<p>2.1. Target pest(s) distribution within the affected area is determined in consultation with other stakeholders.</p> <p>2.2. Target pest distribution data supplied by stakeholders is validated.</p> <p>2.3. Factors that influence the target pest(s) population and distribution within the affected area are described.</p> <p>2.4. Pest life cycle is mapped.</p>
3. Determine critical control points for management of the	<p>3.1. Periods of greatest risk in the land management and/or production process are identified in consultation with other stakeholders.</p>

ELEMENT	PERFORMANCE CRITERIA
pest problem	3.2.Periods of target pest vulnerability within its life cycle are identified. 3.3.Land management and/or production process map and target pest life cycle map are consolidated. 3.4.Critical points for controlling pest populations and/or changing land management or production practices within the annual planning cycle are determined in consultation with other stakeholders.
4. Analyse the impacts of the pest	4.1.Economic losses resulting from the pest presence are measured or estimated in consultation with other stakeholders. 4.2.Environmental impacts from the pest presence are measured or estimated in consultation with other stakeholders. 4.3.Potential risks relating to disease or toxicity are defined.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analyse problems
- plan strategically
- define the land management and/or production process for the area affected by the target pest problem
- analyse the pest problem
- determine critical control points for management of the pest problem
- analyse the impacts of the pest
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• land use processes, ecological systems and production systems</li> <li>• relevant legislative and regulatory requirements</li> <li>• environmental protection legislation</li> <li>• plant and animal identification</li> <li>• ecological systems and production systems</li> <li>• pest biology</li> <li>• survey techniques</li> <li>• target pest distribution and characteristics</li> <li>• statutory requirements for pest control</li> <li>• environmental and OHS legislation, codes of practice and enterprise procedures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• define the land management and/or production process for the area affected by the target pest problem</li> <li>• analyse the pest problem</li> <li>• determine critical control points in the life cycle for management of the pest problem</li> <li>• assess the economic and environmental impacts of the pest.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources</p>

<b>EVIDENCE GUIDE</b>	
	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pests to be targeted may include:	<ul style="list-style-type: none"> <li>• insects</li> <li>• weeds</li> <li>• pathogens</li> <li>• vertebrates</li> <li>• nematodes</li> <li>• molluscs.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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# AHCPMG503A Develop a strategy for the management of target pests

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a strategy for the management of target pests and defines the standard required to: determine land management/production objectives; estimate costs and advantages for the management units most affected by the target pests; define and prioritise the management units most affected, both actually and potentially, by the target pests; define the performance criteria for each land management/production objective; select management options for the target pests; negotiate strategies with relevant stakeholders in the affected area.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies pest control officers and managers for work carried out independently within organisational guidelines.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine land management/production objectives	<p>1.1. Other land users, regional land management bodies, landcare committees and relevant stakeholders are consulted regarding regional and local objectives.</p> <p>1.2. Outcomes of consultation incorporating regional and local objectives are recorded according to enterprise guidelines.</p> <p>1.3. Objectives address major land uses and production activities affected by the impacts of the target pests.</p> <p>1.4. Objectives relate to the problem definition and the reduction in the pest impacts and associated losses.</p> <p>1.5. Objectives comply with national, State and regional strategies for land and pest management.</p>
2. Estimate costs and advantages for the management units most affected by the target pests	<p>2.1. The diversity of land management and production values that the target pests affect within the affected region or area is defined.</p> <p>2.2. The likely costs of preferred options for control of pest populations and/or changes to land management or production activities associated with each value are documented.</p> <p>2.3. The likely costs of control are compared with the impacts and losses caused by the target pests.</p> <p>2.4. The management units most affected, both actually</p>

ELEMENT	PERFORMANCE CRITERIA
	and potentially, by the target pests are defined and prioritised.
3. Define the performance criteria for each land management/production objective	<p>3.1. Performance criteria are defined in accordance with sustainable land use principles to address target pests population levels, economic impacts and environmental impacts.</p> <p>3.2. Performance criteria are realistic and measurable.</p>
4. Select management options for the target pests	<p>4.1. Options for controlling pest populations and/or changing land management or production practices are assessed and documented in terms of economic factors, technical difficulty, practical feasibility, social and/or environmental acceptability.</p> <p>4.2. A range of management options are assessed in terms of current and future financial support, when control activities are to be implemented, level of target pests population reduction required, and the most suitable control methods and techniques.</p> <p>4.3. A management option is selected in accordance with sustainable land use principles, economic feasibility, integrated pest management principles, environmental acceptability, and statutory requirements for pest control.</p>
5. Negotiate strategies with relevant stakeholders in the affected area	<p>5.1. The strategy is based on the definition of the problem using data from measurement of abundance and impacts.</p> <p>5.2. The strategy clearly documents the pest problem, the objectives, the prioritised management units, the performance criteria, and the most suitable management options.</p> <p>5.3. Strategies are agreed and confirmed through relevant stakeholder consultation and negotiation.</p> <p>5.4. Strategies are published and distributed to relevant stakeholders, organisations and interest groups.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.



## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- estimate costs and advantages
- plan
- report and document strategies
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- relevant legislative and regulatory requirements
- environmental protection legislation
- pest control methods and techniques
- social and environmental issues
- statutory requirements for pest control
- land use processes, ecological systems and production systems
- pest management options and strategies
- plant and animal identification
- pest biology
- Occupational Health and Safety (OHS) and environmental legislation, codes of practice and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine land management/production objectives</li> <li>• estimate costs and advantages for the management units most affected by the target pests</li> <li>• define and prioritise the management units most affected, both actually and potentially, by the target pests are</li> <li>• define the performance criteria for each land management/production objective</li> <li>• select management options for the target pests</li> <li>• negotiate strategies with relevant stakeholders in the affected area.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Pests to be targeted may include:</p>	<ul style="list-style-type: none"> <li>• insects</li> <li>• weeds</li> <li>• pathogens</li> <li>• vertebrates</li> <li>• nematodes</li> <li>• molluscs.</li> </ul>
<p>Pest management strategies may include:</p>	<ul style="list-style-type: none"> <li>• changing land management or production processes and practices e.g.,:                             <ul style="list-style-type: none"> <li>• changing lambing times</li> <li>• changing sowing times</li> <li>• changing crops</li> </ul> </li> <li>• modifying habitat</li> <li>• pasture management</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• pest population control, e.g.:                             <ul style="list-style-type: none"> <li>• shooting</li> <li>• poisoning</li> <li>• trapping</li> <li>• mustering</li> <li>• relocation</li> <li>• fumigation</li> <li>• sedation</li> <li>• exclusion fencing</li> <li>• biological controls</li> <li>• harvesting</li> <li>• tagging</li> </ul> </li> <li>• weed control including:                             <ul style="list-style-type: none"> <li>• chemical</li> <li>• biological control</li> <li>• mechanical removal.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Pest management
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPMG504A Develop a system for monitoring the pest management strategy

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved with developing a system for monitoring the pest management strategy and defines the standard required to: identify parameters to monitor the effectiveness of the strategy; source benchmarks against which to compare performance; develop a monitoring program and procedures for pest management; define the pest management strategy and intended outcomes.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies pest control officers and managers for work carried out independently within organisational guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research and identify pest strategy monitoring requirements	1.1. Attitudes and management practices of other land users, regional land management bodies and other relevant stakeholders are assessed for relevance and usefulness in the monitoring system. 1.2. Procedures for monitoring and recording economic impacts of pests are developed. 1.3. Procedures for monitoring and recording environmental impacts of pests are developed. 1.4. Procedures for monitoring and recording pest abundance are developed.
2. Document a monitoring program	2.1. Monitoring procedures are documented and accessible to relevant personnel. 2.2. Recording systems are documented and accessible to relevant personnel. 2.3. Monitoring program includes schedule for monitoring activities aligned to milestones in the pest management strategy. 2.4. Reporting procedures are defined.

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
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**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit.

**Required skills**

- research and identify pest strategy monitoring requirements
- document monitoring programs
- analyse problems
- plan strategically
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- land management processes
- production processes
- procedures for monitoring and recording
- pest biology
- relevant legislative and regulatory requirements
- environmental protection legislation
- Occupational Health and Safety (OHS) legislation, codes of practice and enterprise procedures
- weed control statutory requirements.

**Evidence Guide**

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

<b>EVIDENCE GUIDE</b>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify parameters to monitor the effectiveness of the strategy</li> <li>• source benchmarks against which to compare performance</li> <li>• develop a monitoring program and procedures for pest management</li> <li>• define the pest management strategy and intended outcomes.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Pests to be targeted may include:</p>	<ul style="list-style-type: none"> <li>• insects</li> <li>• weeds</li> <li>• pathogens</li> <li>• vertebrates</li> <li>• nematodes</li> <li>• molluscs.</li> </ul>
<p>Pest management strategies may include:</p>	<ul style="list-style-type: none"> <li>• changing land management or production processes and practices e.g.:                         <ul style="list-style-type: none"> <li>• changing lambing times</li> <li>• changing sowing times</li> <li>• changing crops</li> </ul> </li> <li>• modifying habitat</li> <li>• pasture management and pest population control e.g.:</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• shooting</li> <li>• poisoning</li> <li>• trapping</li> <li>• mustering</li> <li>• relocation</li> <li>• fumigation</li> <li>• sedation</li> <li>• exclusion fencing</li> <li>• biological controls</li> <li>• harvesting</li> <li>• tagging</li> <li>• weed control including:                             <ul style="list-style-type: none"> <li>• chemical</li> <li>• biological control</li> <li>• mechanical removal.</li> </ul> </li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPMG505A Evaluate the pest management strategy

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the evaluation of the pest management strategy and defines the standard required to: collate data on pest abundance, economic and environmental impacts of pests, and control costs; assess data against objectives and performance criteria; determine the costs and benefits of the management strategy; identify indicators of successful and unsuccessful impacts on pest abundance and damage; recommend modifications to the pest management strategy.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies pest control officers and managers for work carried out independently within organisational guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collate all available data	1.1.Data on pest abundance are collated. 1.2.Data on economic impacts of pests are collated. 1.3.Data on environmental impacts of pests are collated. 1.4.Data on pest strategy operating costs are collated.
2. Assess data against objectives and performance criteria	2.1.Actual results are compared with objectives and performance criteria for the strategy. 2.2.Actual costs are compared with budget for the strategy. 2.3.Cost and benefits of the strategy are analysed and documented.
3. Compile report of strategy evaluation	3.1.Report includes discussion of results of data analysis. 3.2.Indicators of good performance of the strategy are isolated and discussed. 3.3.Indicators of poor performance of the strategy are isolated. 3.4.Causes of poor performance are examined. 3.5.Conclusions about pest management strategy in relation to changes in pest abundance and impacts are clearly stated. 3.6.Conclusions are supported by the data.
4. Recommend modifications to pest management strategy	4.1.Recommendations and relevant issues are documented in a report according to enterprise guidelines. 4.2.Recommendations to modify or eliminate causes of poor performance, or to enhance current performance

ELEMENT	PERFORMANCE CRITERIA
	<p>are made.</p> <p>4.3.Recommendations to enhance the strategy to continue to reduce impacts on land management and/or production processes are made.</p>

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
<p>This section describes the skills and knowledge required for this unit.</p>
<p><b>Required skills</b></p>
<ul style="list-style-type: none"> <li>• estimate costs and advantages</li> <li>• collate available data</li> <li>• assess data against objectives and performance criteria</li> <li>• recommend modifications to the pest management strategy</li> <li>• use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views</li> <li>• use numeracy skills to estimate, calculate and record complex workplace measures</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p>
<ul style="list-style-type: none"> <li>• land management process</li> <li>• production process</li> <li>• relevant legislative and regulatory requirements</li> <li>• environmental protection legislation</li> <li>• pest control methods and techniques</li> <li>• social and environmental issues</li> <li>• statutory requirements for pest control</li> <li>• legislative requirements and enterprise procedures for pesticide risk management</li> <li>• Occupational Health and Safety (OHS) and environmental protection legislation, codes of practice and enterprise procedures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• collate data on pest abundance, economic and environmental impacts of pests, and control costs</li> <li>• assess data against objectives and performance criteria</li> <li>• determine the costs and benefits of the management strategy</li> <li>• identify indicators of successful and unsuccessful impacts on pest abundance and damage</li> <li>• recommend modifications to the pest management strategy.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pest management strategies may include:	<ul style="list-style-type: none"> <li>• changing land management or production processes and practices e.g.:</li> <li>• changing lambing times</li> <li>• changing sowing times</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• changing crops</li> <li>• modifying habitat</li> <li>• pasture management and pest population control e.g.:                             <ul style="list-style-type: none"> <li>• shooting</li> <li>• poisoning</li> <li>• trapping</li> <li>• mustering</li> <li>• relocation</li> <li>• fumigation</li> <li>• sedation</li> <li>• exclusion fencing</li> <li>• biological controls</li> <li>• harvesting</li> <li>• tagging</li> </ul> </li> <li>• weed control including:                             <ul style="list-style-type: none"> <li>• chemical</li> <li>• biological control</li> <li>• mechanical removal.</li> </ul> </li> </ul>
Pests to be targeted may include:	<ul style="list-style-type: none"> <li>• insects</li> <li>• weeds</li> <li>• pathogens</li> <li>• vertebrates</li> <li>• nematodes</li> <li>• molluscs.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Pest management
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**Co-requisite units**

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPMG506A Manage the implementation of legislation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the management of the implementation of legislation and defines the standard required to: establish ownership and contact parties where legislation is contravened for control of pests; serve notices for failing to comply with relevant legislation and regulations; provide pest management advice to landholders; follow guidelines to collect evidence for court proceedings.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to officers who administer legislation and involves the provision of both support and advice to landholders to ensure compliance within enterprise guidelines or legislative requirements.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish procedures to identify infestations and location	<p>1.1. Monitoring program identifies infestations in contravention of existing legislation.</p> <p>1.2. Procedures to establish land ownership and responsibilities of all parties are established in line with State legislation.</p> <p>1.3. Procedures to contact landowners and notify of infestation and control requirements are prepared consistent with enterprise and regulatory guidelines.</p> <p>1.4. Policies detailing right of entry in communicating with landowners are explained clearly to relevant workers.</p> <p>1.5. Record keeping documents are in line with agency policies.</p>
2. Administer the implementation of ruling legislation	<p>2.1. Procedures for the serving of notices complying with relevant legislation and regulations and agency policy are prepared and implemented.</p> <p>2.2. Guidelines on the collection of evidence and reporting of findings are prepared and implemented in accordance with legislation or legal advice where appropriate.</p> <p>2.3. Pest management advice is provided to landholders consistent with enterprise guidelines and legislative requirements.</p> <p>2.4. Enterprise policy providing assistance and advice to landholders in the implementation of pest management programs is established.</p> <p>2.5. Evidence and findings are collated for presentation in court or to legal representatives following</p>

ELEMENT	PERFORMANCE CRITERIA
	enterprise policy.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- establish procedures to identify infestations and location
- administer the implementation of ruling legislation
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant commonwealth, state and local legislation and regulations
- pest control treatments relating to pests dealt with under legislation and regulation
- integrated pest management principles
- legislation relating to gathering and presentation of evidence
- conflict resolution
- group skills relating to presentation of advice
- record keeping systems
- time management for self and others
- protection of the environment
- use of pest control agents
- ecological and production systems
- policy and procedure development
- presenting evidence in court.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish ownership and contact parties where legislation is contravened for control of pests</li> <li>• serve notices for failing to comply with relevant legislation and regulations</li> <li>• provide pest management advice to landholders</li> <li>• follow guidelines to collect evidence for court proceedings.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Legislation covered in this standard may include:</p>	<ul style="list-style-type: none"> <li>• State Noxious Weeds Acts</li> <li>• Clean Water Acts</li> <li>• Local Authority regulations</li> <li>• Occupational Health and Safety (OHS).</li> <li>• the standard covers pest situations for weeds and vertebrate pests of crops, pastures, rangelands, native vegetation and waterways.</li> </ul>
<p>Practices include:</p>	<ul style="list-style-type: none"> <li>• those relating to pest management and pesticide use.</li> </ul>

<b>RANGE STATEMENT</b>	
Responsibilities include:	<ul style="list-style-type: none"> <li>the process of administering legislation and the provision of both support and advice to landholders to ensure compliance within enterprise guidelines or legislative requirements.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Pest management
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCPMG601A Develop a plant pest survey strategy

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a plant pest survey strategy and specifies the outcomes required to develop a strategy for plant pest surveys. It specifies elements for determining the presence, distribution and/or prevalence of a plant pest or for confirming that the pest is not detectable. This work may be conducted as part of an emergency response to an incursion or as part of routine surveillance, and will be conducted in line with established standards and protocols.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to personnel who have been appointed or engaged to undertake a role within a plant pest incursion. This unit may also apply to personnel involved with planning responses to emergency animal diseases and aquatic animal diseases.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Obtain and analyse biological information for survey design	1.1. Biological and dispersal characteristics of pest are identified. 1.2. Impact of climate on reproduction rate and predicted distribution of pest are determined. 1.3. Geographical distribution of the host(s) is identified. 1.4. Information is analysed to determine priority areas to be surveyed.
2. Develop survey methodology	2.1. Particular type of survey to be designed is determined according to phase of incursion. 2.2. Appropriate biometric design that will satisfy confidence limits is selected in consultation with technical experts and according to relevant standards and protocols. 2.3. Field data collection methodology is determined. 2.4. Quality assurance standards that will apply to survey are identified and incorporated in survey methodology and documentation. 2.5. Appropriate diagnostic tests are selected for use in confirming pest presence in samples to be collected. 2.6. Instructions for survey teams are developed.
3. Determine the resources required	3.1. Resources required for survey activities are determined in conjunction with technical experts and are documented.

ELEMENT	PERFORMANCE CRITERIA
4. Obtain approval for the survey design	4.1. Survey design is documented according to protocols and standards. 4.2. Survey design is submitted to appropriate authorities for approval.
5. Determine post-survey review processes	5.1. Review processes are determined to evaluate conduct and effectiveness of survey program.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- high level interpretation of information to determine distribution of pests in relation to biology, climate and vegetation
- working with other technical experts
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- detailed knowledge of a range of biological survey methods
- detailed knowledge of application of biometric principles to biological survey design
- detailed knowledge of biology of groups of pests and pathogens relevant to survey
- detailed knowledge of types and distribution of hosts relevant to survey
- knowledge of plant and animal industries and potential impact of incursions
- legislation and regulations defining and affecting management of incursions
- Australian Emergency Plant Pest Response Plan (PLANTPLAN).



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The critical requirements for this unit of competency as a whole are listed below:</p> <ul style="list-style-type: none"> <li>assessment must confirm one's ability to develop and document a plant pest survey strategy according to prevailing standards and protocols.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to develop a plant pest survey strategy.</p> <p>The candidate must also have access to a functioning control centre, or a control centre established for a plant pest response simulation exercise.</p>
<b>Method of assessment</b>	<p>Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in an emergency disease or plant pest response simulation exercise or in responses to an emergency disease or plant pest incursion.</p>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to plan and oversee an emergency disease or plant pest control program must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. For example, this could include work within control centres established for other emergency diseases or plant pest incursions.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Biological and dispersal characteristics may include:	<ul style="list-style-type: none"> <li>• intrinsic characteristics of pest</li> <li>• active flight</li> <li>• soil borne</li> <li>• water borne</li> <li>• wind borne</li> <li>• biological (mechanical) vectors that carry the pest such as:                             <ul style="list-style-type: none"> <li>• fruit, seed and plant material</li> <li>• insects, invertebrates and vertebrates</li> </ul> </li> <li>• non-biological means such as equipment, machinery, vehicles and clothing.</li> </ul>
Types of survey required may include:	<ul style="list-style-type: none"> <li>• area free</li> <li>• delimiting</li> <li>• distribution</li> <li>• prevalence.</li> </ul>
Standards and protocols that may apply include:	<ul style="list-style-type: none"> <li>• PLANTPLAN</li> <li>• Australian Veterinary Emergency Plan (AUSVETPLAN)</li> <li>• commonwealth, state and territory legislation defining legal powers in a disease emergency</li> <li>• damage minimisation policies</li> <li>• environmental policies</li> <li>• occupational health and safety requirements and policies</li> <li>• pest free area guidelines</li> <li>• standard operating procedures.</li> </ul>
Diagnostic tests selected may include:	<ul style="list-style-type: none"> <li>• biochemical tests</li> <li>• Enzyme-Linked Immunosorbent Assay (ELISA)</li> <li>• microscopy</li> <li>• Polymerase Chain Reaction (PCR).</li> </ul>
Instructions for survey teams may cover:	<ul style="list-style-type: none"> <li>• actions to take when suspect material is found</li> <li>• biosecurity measures for team and property owners</li> <li>• communication protocols for teams when briefing property owners, including</li> </ul>

<b>RANGE STATEMENT</b>	
	confidentiality requirements <ul style="list-style-type: none"> <li>• farm, district and regional requirements</li> <li>• sampling intensity</li> <li>• sampling protocols</li> <li>• specifying survey sites.</li> </ul>
Resources required may include:	<ul style="list-style-type: none"> <li>• equipment</li> <li>• illustrated guides</li> <li>• information technology and communications equipment</li> <li>• maps - topographical and aerial</li> <li>• personnel and their needs, including physical needs such as transport, accommodation and other requirements such as supervision and training</li> <li>• vehicles appropriate to area, site and terrain, including:                             <ul style="list-style-type: none"> <li>• four-wheel drive</li> <li>• all terrain vehicle (ATV)</li> <li>• forklift</li> <li>• helicopter.</li> </ul> </li> </ul>
Technical experts to consult may include:	<ul style="list-style-type: none"> <li>• those with appropriate diagnostic and biometric expertise.</li> </ul>
Appropriate authorities may include:	<ul style="list-style-type: none"> <li>• chief plant health manager</li> <li>• consultative committee on emergency plant pests</li> <li>• planning manager</li> <li>• survey manager.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPMG602A Develop a plant pest destruction strategy

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers developing a plant pest destruction strategy and specifies the outcomes required to develop a strategy for the destruction of plant pests for the purposes of eradication. The plant pest destruction strategy forms part of the Australian Emergency Plant Pest Response Plan (PLANTPLAN).</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to personnel who have been appointed or engaged to undertake a role within a plant pest incursion. The unit may also apply to personnel involved with planning responses to emergency animal diseases and aquatic animal diseases.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Obtain and analyse information for inclusion in the plant pest destruction strategy	<p>1.1.Characteristics of plant pest that may determine best method of destruction are identified.</p> <p>1.2.Characteristics of host plants and/or plant products are identified.</p> <p>1.3.Possible destruction treatments are identified and estimated costs are obtained.</p>
2. Determine destruction methodology	<p>2.1.Pre-treatments that will limit organism's risk of escape are identified.</p> <p>2.2.Affected areas, including buffer areas, are identified.</p> <p>2.3.Occupational health and safety and environmental standards that will apply to all phases of destruction strategy are identified, incorporated into destruction methodology and documented.</p> <p>2.4.Most cost-effective, safe and effective method of destruction is selected as appropriate for circumstances.</p> <p>2.5.Contingencies for prevailing weather conditions are developed.</p> <p>2.6.Instructions for destruction teams are developed, including specific checklists on performance of operations.</p> <p>2.7.Need for approvals associated with destruction activities is identified and documented.</p> <p>2.8.Biosecurity issues are identified and contingency plans are prepared.</p>
3. Determine the required resources	<p>3.1.Resources required for implementation of destruction strategy are determined in conjunction</p>

ELEMENT	PERFORMANCE CRITERIA
	with technical experts and are documented.
4. Develop communication procedures	4.1. In conjunction with communications manager, procedures and protocols for communicating with contractors, emergency services, property owner/manager, government, media and other stakeholders are developed. 4.2. Plant pest destruction strategy is communicated to appropriate authorities.
5. Determine post-destruction processes	5.1. Review processes to evaluate effectiveness of plant pest destruction treatments are determined. 5.2. Surveillance needed to demonstrate pest-free areas is determined. 5.3. Review processes to evaluate effectiveness of plant pest destruction strategy are determined.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- costing alternative destruction treatments
- developing a budget
- planning biological strategies
- researching and analysing information
- supervising others working in a special purpose team
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• approvals required for such things as burning</li> <li>• communication procedures and protocols</li> <li>• crop destruction methods</li> <li>• equipment needed for plant pest destruction</li> <li>• government processes</li> <li>• group of organisms relevant to strategy being developed</li> <li>• legislation and regulations defining and affecting destruction of plant pests</li> <li>• logistics requirements</li> <li>• rates and methods of application of selected biocides</li> <li>• relevant guidelines, including PLANTPLAN.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The critical requirements for this unit of competency as a whole are listed below:</p> <ul style="list-style-type: none"> <li>• assessment must confirm one's ability to:                             <ul style="list-style-type: none"> <li>• plan pre-treatment, destruction and site clean-up</li> <li>• communicate plans to destruction teams, contractors and emergency services.</li> </ul> </li> </ul>
<b>Context of and specific resources for assessment</b>	<p>For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to develop a plant pest destruction strategy.</p> <p>The candidate must also have access to a functioning control centre, or a control centre established for a plant pest response simulation exercise.</p>
<b>Method of assessment</b>	<p>Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in a real or simulated plant pest incursion</p>



<b>EVIDENCE GUIDE</b>	
	response.
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p> <p>The skills and knowledge required to develop a plant pest destruction strategy must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. For example, this could include work within urban, farming, forestry and natural environments.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Characteristics of plant pest to be analysed may include:	<ul style="list-style-type: none"> <li>• likely efficacy of treatment considering the susceptibility of pest and life form of organism, such as resistant spore forms in soil</li> <li>• means of organism dispersal, escape points and associated risks</li> <li>• position of pest in/on host organism:                             <ul style="list-style-type: none"> <li>• on or inside plants:                                     <ul style="list-style-type: none"> <li>• leaves</li> <li>• stems</li> <li>• fruit</li> <li>• seeds</li> <li>• roots</li> <li>• tuber bulbs</li> </ul> </li> <li>• in the soil:</li> </ul> </li> <li>• risks of survival post-treatment.</li> </ul>
Characteristics of host plants and/or plant products to be analysed may include:	<ul style="list-style-type: none"> <li>• analysis of morphological characteristics such as:                             <ul style="list-style-type: none"> <li>• cellulose or lignified</li> <li>• perennial or annual</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• size</li> <li>• extent of root system</li> <li>• presence of fruits or other materials that may be difficult to treat by usual destruction methods</li> <li>• identity, area, location and other important characteristics of host plants/plant products such as ownership.</li> </ul>
Pre-treatments may include:	<ul style="list-style-type: none"> <li>• application of pesticides to close down escape routes of organism, such as:                             <ul style="list-style-type: none"> <li>• spores</li> <li>• winged insects.</li> </ul> </li> </ul>
Approvals may be required for activities such as:	<ul style="list-style-type: none"> <li>• burial and/or disposal of affected plants and plant products</li> <li>• chemical use</li> <li>• destruction of vegetation on public land</li> <li>• environmental approvals</li> <li>• excessive noise</li> <li>• fires.</li> </ul>
Resources required for plant pest destruction treatments may include:	<ul style="list-style-type: none"> <li>• contractors</li> <li>• destruction teams</li> <li>• emergency services to control site access</li> <li>• equipment for affected host organism removal and transportation</li> <li>• equipment for site clean-up</li> <li>• equipment for application of treatments and biocides.</li> </ul>
Communication strategies with stakeholders may involve a range of methods such as:	<ul style="list-style-type: none"> <li>• liaison with technical experts</li> <li>• reporting to appropriate authorities</li> <li>• reporting to media.</li> </ul>
Appropriate authorities may include:	<ul style="list-style-type: none"> <li>• chief plant health manager</li> <li>• consultative committee on emergency plant pests</li> <li>• planning manager</li> <li>• survey manager.</li> </ul>
Review of effectiveness of plant pest destruction treatments may involve:	<ul style="list-style-type: none"> <li>• checks of biosecurity of routes for off-site disposal of affected material</li> <li>• integrity of disposal and burial areas</li> <li>• site inspection for signs of infected material and unacceptable debris.</li> </ul>

<b>RANGE STATEMENT</b>	
Review of effectiveness of plant pest destruction strategy may need to consider:	<ul style="list-style-type: none"> <li>• best timing for review</li> <li>• checks required on possible points of weakness of destruction program</li> <li>• detailed analysis of effectiveness</li> <li>• resources required for review.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pest management
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCPRK201A Care for health and welfare of pigs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of caring for health and welfare of pigs in an intensive environment and defines the standard required to: monitor pig health and welfare and remove sick animals; ensure shed environment is within required temperature range; maintain hygiene and quarantine procedures; administer medications as and when necessary and maintain clear and accurate records about the work undertaken.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers tasked with maintaining the health and welfare of pigs in an intensive production environment. Work will usually follow set routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor and assess pig health and welfare	<p>1.1.Regular checks are taken to assess pig health and welfare according to the requirements of the organisation.</p> <p>1.2.Symptoms of ill health and common diseases or parasite infestations are recognised and reported.</p> <p>1.3.Pig health and welfare status is recorded in accordance with enterprise procedures.</p> <p>1.4.Where signs indicate an unusual disease immediate advice is sought from supervisors, veterinarian and appropriate authorities.</p>
2. Provide an optimal environment for pigs	<p>2.1.Optimal environment is correctly and safely provided for pigs according to organisation practice, the code of welfare and relevant regulations</p> <p>2.2.Temperature control equipment is correctly monitored, and operated to ensure optimal temperatures for pigs.</p> <p>2.3.Welfare of pigs is monitored and abnormalities are reported promptly.</p> <p>2.4.Information which is relevant, complete, legible and accurate is recorded on shed conditions, according to enterprise procedures.</p>
3. Establish and maintain shed hygiene	<p>3.1.Organisational Occupational Health and Safety (OHS) procedures, practices, policies and precautions are observed and followed, including the use of personal protective equipment.</p> <p>3.2.Cleanliness and hygiene are maintained by selecting and using appropriate methods according to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>organisation practice.</p> <p>3.3. Quarantine procedures are maintained as instructed to minimise the risks of disease introduction to the shed.</p> <p>3.4. Thorough personal hygiene practices are maintained in all activities associated with handling pigs, including reducing risks from zoonotic diseases.</p> <p>3.5. Rooms, machines and surfaces are cleaned to industry standards.</p> <p>3.6. All waste and debris is placed in allocated containers and disposed of according to organisation hygiene standards.</p>
4. Administer medication to pigs	<p>4.1. Vaccines and veterinary chemicals appropriate to the operation are stored or frozen and labelled in controlled or refrigerated conditions.</p> <p>4.2. Routine prevention procedures for disease or parasite infestation are safely carried out.</p> <p>4.3. Quantities of medication are accurately measured for administration according to clear organisation instruction and manufacturer's instructions.</p> <p>4.4. Vaccination is carried out under instruction as required according to organisation procedures.</p> <p>4.5. Vaccinated and non-vaccinated pigs are identified in shed records.</p>
5. Remove non-viable pigs	<p>5.1. Sick pigs are safely treated and dead pig are removed and disposed of according to industry standards of health and hygiene and the quality assurance program.</p> <p>5.2. Disease incidence, pig losses, and treatments are recorded accurately according to organisation practice and relevant regulations.</p> <p>5.3. Unhealthy/non-viable pigs are recognised, reported and dealt with according to organisation policy and quality assurance program.</p> <p>5.4. Post-mortem assistance is provided where necessary according to organisation practice.</p>
6. Keep and maintain records	<p>6.1. Disease incidence, pig losses, and treatments are recorded accurately according to organisation practice and relevant regulations.</p> <p>6.2. Disease information is reported to the unit manager so that prevention strategies can be planned and implemented.</p>

ELEMENT	PERFORMANCE CRITERIA
	6.3. All records made, kept and maintained are clear, accurate, and follow the guidelines laid down by industry and the organisation.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work practices
- accurately assess pig numbers
- complete worksheets clearly and accurately
- detect possibility of disease through pig behaviour and appetite
- recognise clinical symptoms (normal vs. abnormal)
- recognise symptoms of fear, aggression and stress
- survey workplace for hygiene and occupational health and safety issues
- observe, identify and react appropriately to environmental implications and occupational health and safety hazards
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- symptoms of ill-health in pigs
- the range of diseases affecting the class and age of pigs
- vaccination programs, vaccines and mode of action in use in the organisation
- zoonotic diseases and mode of transmission
- how to handle pigs
- signs of fear/aggression in pig
- signs of stress in pigs
- safe handling of sick and dead pigs
- euthanasia of pigs.

**REQUIRED SKILLS AND KNOWLEDGE**

- portability of water
- quality of feed
- environmental controls and codes of practice applicable to the enterprise
- relevant OHS and animal welfare legislation, codes of practice and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Competence in maintaining health of pig in an intensive production environment requires evidence that pig remain at optimum health and that outbreaks of disease are minimised through the effective use of hygiene and quarantine procedures.

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor pig health and welfare and remove sick animals
- ensure shed environment is within required temperature range
- maintain hygiene and quarantine procedures
- administer medications as and when necessary
- maintain clear and accurate records about the work undertaken.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pigs may include:	<ul style="list-style-type: none"> <li>all commercial breeds and types of pigs.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pork production
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPRK202A Care for weaner and grower pigs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of caring for weaner and grower pigs under supervision and defines the standard required to: prepare accommodation for weaners and growers; wean a litter; arrange weaners in groups and move into pens; apply health treatments; follow and maintain site quarantine procedures; monitor growth and condition of weaner and grower pigs.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in pork production enterprises operating under routine supervision within organisational guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare accommodation for weaners	<p>1.1. Appropriate accommodation is cleaned, disinfected and prepared for all classes of weaned pigs according to enterprise practice and instructions.</p> <p>1.2. Housing environment and conditions are checked and adjusted as required to ensure appropriate ventilation, temperature and humidity.</p> <p>1.3. Feeders and drinkers are filled or prepared according to supervisor's instructions.</p> <p>1.4. Problems with accommodation and/or environmental controls are noted and reported to the supervisor for appropriate action.</p> <p>1.5. All work is conducted safely and according to enterprise requirements, Occupational Health and Safety (OHS), industry and animal welfare regulations.</p>
2. Wean litter and form viable group	<p>2.1. Litter is weaned according to established schedules, enterprise practice and codes of welfare.</p> <p>2.2. Pigs are grouped from different litters to form viable groups based on body weight and sex at stocking densities to achieve optimal productivity.</p> <p>2.3. Behaviour and condition of weaners are regularly monitored and appropriate actions taken.</p> <p>2.4. Weaners are provided with water and appropriate feed according to the established feed schedule to meet nutritional and growth requirements.</p> <p>2.5. Weaner mortalities are recorded and/or reported to the supervisor and deceased stock is removed according to enterprise policy.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.6.Preventative treatments are administered according to schedules and the supervisor's instructions.
3. Prepare accommodation for growers	3.1.Accommodation is prepared and cleaned for new grower stock according to enterprise procedures. 3.2.Environment is controlled and monitored in line with established procedures. 3.3.Feeders and drinkers are filled or prepared according to instructions. 3.4.Problems with accommodation and/or environmental controls are noted and reported to the supervisor for appropriate action.
4. Monitor growers and finishers	4.1.Pig condition and health are regularly monitored as an integral part of daily routines. 4.2.Feeders and drinkers are regularly checked as a part of daily routines. 4.3.Pig groups are moved as required in line with growth and condition. 4.4.Poor performing pigs are removed from groups and reassigned in line with enterprise policy. 4.5.Sick, injured or unhealthy pigs are isolated in a quarantine area or noted for euthanasia according to enterprise policy animal welfare procedures. 4.6.Health treatments are applied when required and according to the supervisor's instructions and enterprise policy. 4.7.Grower mortalities are recorded and/or reported to the supervisor and deceased stock is removed according to enterprise policy.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe operating procedures
- handle and move pigs safely
- prepare accommodation for weaners and growers

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• wean pigs</li> <li>• monitor pig health and welfare</li> <li>• maintain feeders and drinkers</li> <li>• follow and maintain site quarantine procedures</li> <li>• monitor and adjust environmental controls</li> <li>• undertake work as directed</li> <li>• handle materials and equipment</li> <li>• clean up on completion of work</li> <li>• use literacy skills to follow sequenced written instructions and record information accurately and legibly</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• safe work practices</li> <li>• risks to newly weaned piglets</li> <li>• nutrition, water and environmental needs of young pigs</li> <li>• typical diseases affecting young pigs and their treatment</li> <li>• animal welfare principles applying to intensive production</li> <li>• target growth rates of weaners and growers</li> <li>• dietary requirements of weaner and grower pigs</li> <li>• repair and maintenance of structures</li> <li>• OHS and environmental legislation and workplace requirements.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and</b></p>	<p>The evidence required to demonstrate competency in this</p>

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare accommodation for weaners and growers</li> <li>• wean a litter</li> <li>• arrange weaners in groups and move into pens</li> <li>• apply health treatments</li> <li>• follow and maintain site quarantine procedures</li> <li>• monitor growth and condition of weaner and grower pigs.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pigs may include:	<ul style="list-style-type: none"> <li>• all breeds and types of pigs used for commercial pork production.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Pork production
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPRK203A Move and handle pigs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of moving and handling pigs and defines the standard required to: control and direct pigs; restrain pigs; weigh and/or condition score pigs.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in pork enterprises who are responsible for moving and handling pigs and involves working under supervision within set routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Control and direct pigs	1.1.Pigs are moved and handled with minimum force, applying the principles and practices of animal welfare and according to industry practice. 1.2.Positive behaviours of pigs are maximised in the movement of stock and the mental and physical well being of pigs considered. 1.3.Pigs are monitored continually for behaviour and condition as they are handled. 1.4.Pigs are moved with confidence, safely and with minimal stress, either singly or in groups. 1.5.Pigs are moved and handled in such a way as to avoid injury to the handler.
2. Restrain pigs	2.1.Industry accepted restraints are used to safely and securely restrain pigs as required. 2.2.Restraint procedures are carried out with minimal stress and discomfort to the animal, and within the relevant code of welfare and establishment practice.
3. Weigh/condition score pigs	3.1.Pigs are weighed accurately on an individual and on a group basis. 3.2.Condition score of individual pigs is accurately estimated to industry standards. 3.3.Weights/condition scores of pigs are recorded accurately and clearly on an individual and group basis. 3.4.Pigs are identified by reading ear tag, ear notch or pen number.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- control and direct pigs
- restrain pigs
- weigh and condition score pigs
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- pig behaviour and characteristics which can be used to facilitate handling
- handling and restraining techniques
- enterprise quality assurance policies including standard operating procedures
- techniques for moving different classes of pig, (e.g. moving groups of weaners, moving sows and boars)
- Occupational Health and Safety (OHS) and animal welfare requirements for handling pigs.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include

<b>EVIDENCE GUIDE</b>	
	achievement of the following: <ul style="list-style-type: none"> <li>• control and direct pigs</li> <li>• restrain pigs</li> <li>• weigh and condition score pigs.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pigs may include:	<ul style="list-style-type: none"> <li>• all types and breeds of pigs.</li> </ul>
Piggeries may include:	<ul style="list-style-type: none"> <li>• intensive and free range piggeries.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Pork production
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCPRK301A Pregnancy test pigs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of testing pigs for pregnancy, and defines the standard required to: detect pregnancy through ultra sound; handle pigs in a manner that minimises the likelihood of stress; report on the health and welfare of the pigs.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to pregnancy testing pigs and is carried out independently under workplace direction.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for pregnancy diagnosis procedures	<p>1.1.Pregnancy testing preparations including the preparation of relevant documentation are completed according to organisation requirements and procedures.</p> <p>1.2.Pigs to be tested are identified according to the breeding or management program requirements.</p> <p>1.3.Physical and human resources for pregnancy testing are assembled according to organisation policy.</p> <p>1.4.Individual pigs are isolated for veterinary treatment or examination.</p> <p>1.5.All handling and testing of pigs is undertaken with strict adherence to the animal welfare code.</p>
2. Carry out manual pregnancy diagnosis procedures	<p>2.1.Individual pigs are handled in manner to minimise stress while testing and individual breeding records are checked.</p> <p>2.2.Personal protective equipment is fitted according to organisation policy.</p> <p>2.3.Occupational Health and Safety (OHS) hazards are continually identified, risks assessed and suitable controls implemented.</p> <p>2.4.Ultra sound equipment is applied for pregnancy diagnosis.</p> <p>2.5.Strict hygiene procedures are implemented between individual pigs in line with organisation and industry requirements.</p> <p>2.6.Records are kept and outcomes reported according to organisation requirements.</p> <p>2.7.Other indicators of pig health are observed and noted for input to herd health management.</p>
3. Carry out post pregnancy testing	<p>3.1.Pigs diagnosed as pregnant or not pregnant are accurately identified according to the requirements of</p>

ELEMENT	PERFORMANCE CRITERIA
clean up procedures	<p>the organisation.</p> <p>3.2.All pigs are consigned to their destination or returned to paddocks/pens in line with organisation needs.</p> <p>3.3.Debris and veterinary medicine containers from pregnancy testing operations are disposed of in full consideration of environmental considerations and controls.</p> <p>3.4.Regular monitoring of pigs post testing is carried out to ensure that no evidence of physical damage or injury is evident.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- handle pigs minimising the likelihood of stress
- report clearly, accurately and in a timely fashion on the health and welfare of the pigs
- accept advice and instruction
- work effectively and safely to accurately carry out manual pregnancy diagnosis with safety and nil damage to pigs or personnel.
- use ultra sound effectively to scan for pregnancy
- comply with animal welfare requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the reproductive physiology of the pig
- indications of pregnancy

**REQUIRED SKILLS AND KNOWLEDGE**

- the stages of parturition in pigs
- pig reproductive systems
- pig embryological development
- relevant zoonoses
- the use of pregnancy/non-pregnancy diagnostic tools and equipment
- recording and reporting systems used in conjunction with pregnancy diagnosis and pig breeding programs.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- detect pregnancy through several manually determined key indicators
- handle pigs in a manner that minimises the likelihood of stress
- report on the health and welfare of the pigs.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**



<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pigs may include:	<ul style="list-style-type: none"> <li>all types and breeds of pregnant sows to be pregnancy tested using ultra sound equipment.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Pork production
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCPRK302A Treat rectal prolapse in pigs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of treating rectal prolapse in pigs and defines the standard required to: respond to signs of rectal prolapse; treat rectal prolapse; report on rectal prolapse.
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### Application of the Unit

<b>Application of the unit</b>	The treating of rectal prolapse in pigs is carried out independently under workplace direction.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Respond to signs of rectal prolapse	1.1.Symptoms of rectal prolapse are identified. 1.2.Pig is removed from pen. 1.3.Treatment required to repair prolapse is determined based on severity of injury and enterprise standard operating procedures. 1.4.Outbreaks of rectal prolapse in a herd are notified to management according to enterprise standard operating procedures.
2. Treat rectal prolapse	2.1.Minor prolapses are replaced and retained as directed by veterinary advice. 2.2.Large prolapses are reduced by gentle hand pressure before suturing. 2.3.Badly torn prolapses are replaced and pig is moved to hospital pen. 2.4.Rectal strictures are recognised and treated according to enterprise standard operating procedures. 2.5.Antibiotics are administered to pigs with rectal prolapse where required by enterprise standard operating procedures.
3. Report on rectal prolapse	3.1.Incidents and treatments are reported to supervisor according to enterprise standard operating procedures. 3.2.Possible mechanisms for prolapse are reported to supervisor. 3.3.Modifications to pig management are undertaken to reduce incidence of rectal prolapse.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- apply animal welfare practices
- respond to signs of rectal prolapse
- treat rectal prolapse
- report on rectal prolapse
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- pig health and physiology
- symptoms of prolapse and associated problems
- treatments for rectal prolapse
- post treatment requirements
- enterprise standard operating procedures in respect to rectal prolapse
- animal welfare code of practices.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• respond to signs of rectal prolapse</li> <li>• treat rectal prolapse</li> <li>• report on rectal prolapse.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pigs may include:	<ul style="list-style-type: none"> <li>• all breeds and types of commercial pigs.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Pork production
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCPRK303A Artificially inseminate pigs

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of artificially inseminating pigs and defines the standard required to: prepare for insemination; time insemination to coincide with oestrus cycles; prepare equipment and worksites; correctly select and prepare semen for insemination; inseminate pigs; clean up and record data after insemination is complete.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Organise insemination process	<p>1.1. Hygiene factors are identified and appropriate procedures followed.</p> <p>1.2. Semen supplies and resources are accessed from enterprise stores.</p> <p>1.3. Artificial insemination program is followed according to enterprise standard operating procedures.</p>
2. Inseminate pigs	<p>2.1. Pigs are handled in a way that minimises stress.</p> <p>2.2. Pigs are prepared for artificial insemination.</p> <p>2.3. Suitable personal protective equipment is selected, used and maintained according to Occupational Health and Safety (OHS) and enterprise requirements.</p> <p>2.4. Pigs are inseminated at the correct stage of oestrus cycle.</p>
3. Clean work area and equipment	<p>3.1. Waste is disposed of according to recommended hygiene standards and environmental policy.</p> <p>3.2. Work area is cleaned to industry standards and returned to operating order.</p>
4. Document and record data	<p>4.1. Data on insemination process is accurate and recorded according to enterprise requirements.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- sterilise equipment and prepare hygienic worksite prior to insemination procedures
- observe pigs to detect correct insemination timing
- employ safe work practices
- clean up worksite and safely dispose of waste
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- basic animal health and physiology
- preparation requirements for artificial insemination of pigs
- pig behavioural characteristics
- enterprise and industry identification system for livestock
- personal protective equipment and when and how it should be used
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, environment and animal welfare
- enterprise policies with regard to artificial insemination and recording and reporting routines.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare for insemination</li> <li>• time insemination to coincide with oestrus cycles</li> <li>• prepare equipment and worksites</li> <li>• correctly select and prepare semen for insemination</li> <li>• inseminate pigs</li> <li>• clean up and record data after insemination is complete.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Enterprises may include:	<ul style="list-style-type: none"> <li>• both intensive and free range pig enterprises.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pork production
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCPRK304A Mate pigs and monitor dry sow performance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of conducting the mating of pigs and monitoring dry sow performance and defines the standard required to: identify appropriate mating plans and select appropriate dams and sires; monitor sows' condition; revise feeding strategies; detect oestrus cycles; monitor mating and take remedial action where needed; record data and report on the effectiveness of the mating program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in pork production enterprises that normally operate under limited supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify pig condition	<p>1.1. Condition of pigs is accurately determined and scores are recorded according to recognised industry practices.</p> <p>1.2. Pigs are ranked according to scores and nutritional requirements adjusted to facilitate optimum condition.</p> <p>1.3. Feeding strategies are appropriate to the pig environment and seasonal conditions.</p> <p>1.4. Judgements on pig conditions are based on verifiable information.</p>
2. Facilitate mating	<p>2.1. Oestrus inducement and detection procedures are carried out according to established industry practice.</p> <p>2.2. Mating areas are secure and provide for access during joining.</p> <p>2.3. Mating procedures and handling techniques that minimise stress and discomfort to livestock and meet Occupational Health and Safety (OHS) requirements are used.</p> <p>2.4. Mating is supervised and intervention when required is undertaken to maximise conception rates.</p>
3. Complete mating procedure	<p>3.1. Regular post-mating heat detection is carried out to check sows returning to oestrus as per enterprise requirements.</p> <p>3.2. Records of mating are recorded accurately, legibly and according to enterprise and industry requirements.</p>
4. Monitor sows to	<p>4.1. Nutritional needs of pregnant sows are identified and</p>

ELEMENT	PERFORMANCE CRITERIA
parturition	confirmed against the enterprise feeding plan. 4.2. Feed and feed supplements are determined and provided in accordance with the feeding plan and local conditions.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions
- accurately condition score dry sows
- supervise pig mating and assist as appropriate
- conduct return checks on sows
- administer preventative health treatments
- carry out post-mating heat detection
- read and interpret manufacturer's specifications, work and feeding plans, and material safety data sheets
- communicate abnormalities, workplace hazards and report and maintain animal records
- employ safe work practices
- communicate effectively with other team members, veterinarians and supervisors
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- sow conditioning
- oestrus cycles
- anatomy and physiology of male and female reproductive systems in pigs
- factors affecting conception
- pregnancy testing and oestrus detection procedures
- pig health and abnormalities, preventative health treatments, procedures and methods

## REQUIRED SKILLS AND KNOWLEDGE

- livestock movement and behavioural characteristics
- handling and assisted joining techniques
- hazards associated with handling animals and veterinarian medicines and chemicals
- physiological and behavioural signs of impending farrowing
- animal behaviour and nutritional requirements of sows
- feed and feed supplements for sows and when to provide them
- animal husbandry procedures
- enterprise and industry identification system for livestock
- personal protective equipment and when and how it should be used
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS and animal welfare
- enterprise and industry policies with regard to recording and reporting routines.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify appropriate mating plans and select appropriate dams and sires
- monitor sows condition
- revise feeding strategies
- detect oestrus cycles
- monitor mating and take remedial action where needed
- record data and report on the effectiveness of the mating program.

#### Context of and specific resources for

Competency requires the application of work practices

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Pigs may include:	<ul style="list-style-type: none"> <li>pigs of all breeds or types used for commercial pork production.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Pork production
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCPRK401A Implement a feeding strategy for pig production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers implementing a feeding strategy for pig production and defines the standard required to: effectively discuss feed and nutritional content with nutritionist and managers; assess adequacy of feed storage and distribution systems; identify a range of alternative available stockfeeds and suppliers; interpret laboratory result data to develop rations for different classes of pigs; operate and maintain a range of feeding equipment; complete the required records of feed use and pig performance.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to production unit supervisors who select the quantities of feed to be used and ensure that pigs receive adequate food on a regular and timely basis.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine feed rations and schedules	<p>1.1. Quantities of feed required for livestock are determined from the production program in conjunction with advice from other available information and expert advice.</p> <p>1.2. The results of any available laboratory testing are taken into consideration when determining the quantities and ration formulation of stockfeed to be used.</p> <p>1.3. Feeding is scheduled and responsibility for feeding allocated in line with the production program and other operations occurring within the shed.</p> <p>1.4. Method(s) of providing feed to livestock is identified from production plan and confirmed with supplier of ingredients and other expert advice.</p>
2. Supervise storage of feed	<p>2.1. Secure and hygienic storage of feed is organised to eliminate contamination and infestation.</p> <p>2.2. Storage location is selected to ensure safe access.</p> <p>2.3. Rotation of stock and replacements are organised to arrive at the appropriate time to ensure optimum freshness.</p> <p>2.4. Feed is organised to suit the needs of various classes and ages of livestock, the identified nutritional requirements, and the equipment available within the organisation.</p> <p>2.5. Samples of feed are taken, packaged and labelled, and forwarded to the laboratory for testing according</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>to the schedules described in the production program.</p> <p>2.6. Calibration of measuring equipment and calculation of quantities is supervised at regular intervals.</p> <p>2.7. Checks are made to ensure that suitable personal protective equipment is selected, used and maintained.</p> <p>2.8. Occupational Health and Safety (OHS) hazards are identified, assessed, and responsible action is taken throughout the preparation and feeding operations.</p>
3. Supervise feeding	<p>3.1. Rations are supplied to the livestock according to the production program and schedules devised.</p> <p>3.2. Potable water is available continuously to the livestock.</p> <p>3.3. The health and wellbeing of the livestock is monitored, and any reaction to a change in feed or schedules is noted and reported.</p> <p>3.4. Any change in production levels as a direct result of changes to feed types, ingredients or schedules is monitored and reported.</p> <p>3.5. Advice is given to operational staff during the feeding operation when requested, or when the need is observed. All waste materials and substances are removed from the site and stored, or disposed of responsibly.</p> <p>3.6. Documentation is collated and stored according to the requirements of the organisation.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and monitor safe work practices
- identify a range of alternative available stockfeeds and suppliers
- operate a range of feeding equipment
- assess adequacy of feed storage and distribution systems
- perform basic trouble shooting

**REQUIRED SKILLS AND KNOWLEDGE**

- recognise and rectify minor operational faults
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- control of common diseases and preventative measures including the placement of medications in feed
- growth and development in livestock
- feed delivery systems and equipment
- response to analysis of feed samples
- the organisations sampling requirements and techniques
- appropriate legislative requirements, manufacturers instructions and enterprise procedures/instructions
- silo operations and configuration, machinery and operating practices
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, and the use and control of machinery and equipment
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures
- least-cost diet formulation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and**

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>effectively discuss feed and nutritional content with nutritionist and managers</li> <li>assess adequacy of feed storage and distribution systems</li> <li>identify a range of alternative available stockfeeds and suppliers</li> <li>interpret laboratory result data to develop rations for different classes of pigs</li> <li>operate and maintain a range of feeding equipment</li> <li>complete the required records of feed use and pig performance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Feeding strategies may include:	<ul style="list-style-type: none"> <li>the range of feed ingredients and breeds and types of pigs in an intensive production system.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Pork production
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCSAW201A Conduct erosion and sediment control activities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of carrying out erosion and sediment control activities in both urban and rural environments and defines the standard required to: assess risks from erosion and sediment at a site; assemble structures to prevent erosion and control sediment at a site; carry out sediment control activities in accordance with legislation and stakeholder requirements; confirm that erosion and sediment control meets enterprise requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers at an operational level involved in earthworks construction and other land forming activities working under routine supervision with intermittent checking by supervisors.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Align work site practices with erosion and sediment control principles	<p>1.1.Erosion and sedimentation legislation is adhered to at the work site as a part of contract works.</p> <p>1.2.Procedures relating to erosion and sediment control are applied on the work site to align with industry standards.</p>
2. Implement erosion and sediment control principles in the workplace	<p>2.1.Breaches of erosion and sediment control legislation are noted and reported.</p> <p>2.2.Industry practices for erosion and sediment control are applied in the work place.</p>

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• identify hazards and follow safe operating procedures</li> <li>• identify erosion and sediment control structures/measures/practices</li> <li>• carry out routine work with control measures and structures</li> <li>• identify areas at risk of erosion</li> <li>• undertake activities in accordance with legislation/community expectation and</li> </ul>



## REQUIRED SKILLS AND KNOWLEDGE

project specifications

- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- cost to the community of erosion and sedimentation
- loss of habitat
- water quality
- loss of production/asset/amenity
- re-occurring maintenance/repair/monitoring
- agents/processes of erosion and sedimentation
- types of erosion and sediment control structures and techniques for constructing them
- basic catchments issues
- role of vegetation
- characteristics of soils with an emphasis on erodible soils.
- OHS and environmental legislative and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess risks from erosion and sediment at a site

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• assemble structures to prevent erosion and control sediment at a site</li> <li>• carry out sediment control activities in accordance with legislation and stakeholder requirements</li> <li>• confirm that erosion and sediment control meets enterprise requirements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Control activities may include:	<ul style="list-style-type: none"> <li>• grade stabilising structures</li> <li>• outlet protection structures</li> <li>• storm water detention measures</li> <li>• dust control</li> <li>• revegetation for the purpose of controlling erosion.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Soil and water conservation
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCSAW301A Construct conservation earthworks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the construction of conservation earthworks and defines the standard required to: determine job requirements from plans and specifications; assess machinery and equipment requirements; construct planned earthworks; apply final finishing techniques.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers who use specialised earthmoving techniques completed to fine tolerances. Construction is often carried out using a single earthmoving machine in varied conditions and terrains that requires the plant operator to develop skills that are unique to this sector. The use and operation of machinery and equipment used to construct these works is covered by separate units.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for construction	1.1. Confirm construction details and sequence. 1.2. Identify and locate worksite, site indicators and survey pegs. 1.3. Confirm work readiness of machinery and equipment. 1.4. Assess and minimise risks to others and the environment. 1.5. Select and use appropriate personal protective equipment. 1.6. Verify that equipment and attachments match terrain and program tasks.
2. Carry out work	2.1. Follow industry endorsed earthwork methods and patterns for specific machines. 2.2. Monitor and maintain optimum machinery loads in accordance with prevailing conditions. 2.3. Ensure that safe machinery operating techniques are deployed to match terrain, site conditions other operators and workers. 2.4. Ensure that excavation, transport, dumping and compaction of material is conducted in accordance with industry practice.
3. Apply finish techniques	3.1. Finish batters and surfaces in accordance with job requirements and industry practice. 3.2. Retain site features and vegetation in accordance with work plan/schedule.

ELEMENT	PERFORMANCE CRITERIA
	3.3. Clear site and remove debris in accordance with work plan/schedule. 3.4. Complete topsoiling of disturbed areas and surfaces in accordance with industry standards and plan/schedule.
4. Finalise work	4.1. Complete work records. 4.2. Clean and store Personal Protective Equipment (PPE) and application equipment in accordance with manufacturer's specification and Occupational Health and Safety (OHS) requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- prepare for construction
- carry out planned earthworks and minimise damage to natural areas
- apply finishing techniques
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- erosion and sediment control standards and principles
- erosion control and design principles
- natural area protection (particularly topsoil) and rehabilitation principles
- soils and soil formation
- principles of conservation earthwork construction including catchment management and soils

**REQUIRED SKILLS AND KNOWLEDGE**

- earthmoving principles
- levels and levelling
- natural area protection (including topsoil) and rehabilitation
- types and application of personal protective equipment
- legislation and regulations including Occupational Health and Safety (OHS) in relation to conservation earthwork construction
- risk factors including human health, environmental damage
- erosion and sedimentation control principles and practices
- environmental impacts and controls for constructing conservation earthworks
- OHS and environmental legislative and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine job requirements from plans and specifications
- assess machinery and equipment requirements
- construct planned earthworks
- apply final finishing techniques.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Earthworks may include:	<ul style="list-style-type: none"> <li>• the range of conservation earthworks on rural lands including:                             <ul style="list-style-type: none"> <li>• contour banks</li> <li>• waterways</li> <li>• dams</li> <li>• drainage structures</li> </ul> </li> <li>• This unit does not include construction of access tracks or seismic lines, maintenance of fire breaks or land clearing.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Soil and water conservation
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCSAW302A Implement erosion and sediment control measures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the construction/installation and maintenance of a range of measures specified on erosion and sediment control plans and defines the standard required to: select and prepare equipment; confirm the details of work; identify survey pegs and site indicators; construct earthworks in line with the plan; install erosion and sediment control products and materials; carry out repairs and maintenance procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers who are required to carry out the actions specified on erosion and sediment control plans.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for implementation and construction	1.1.Erosion and sediment control plan and schedule of works match site conditions. 1.2.Survey pegs and site indicators are identified on site. 1.3.Equipment and tools are matched to program works and terrain on site. 1.4.Work readiness of selected equipment and tools are verified in line with contractor policy. 1.5.Materials are selected to complete proposed works in line with construction schedule.
2. Carry out implementation and construction	2.1.Earthworks are constructed in accordance with details specified in the plan and to industry standards. 2.2.Erosion and sediment control products and materials are installed in accordance with manufacturer's recommendation and industry guidelines and plans.
3. Carry out repairs and maintenance procedures	3.1.Site works maintenance inspection schedule is applied to reinstate operating effectiveness of erosion and sediment control measures on site.

## Required Skills and Knowledge

**REQUIRED SKILLS AND KNOWLEDGE**

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- identify hazards and implement safe work procedures
- prepare for implementation and construction
- carry out implementation and construction
- carry out repairs and maintenance procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- materials cartage pollution control
- sequence of working and timing/duration
- Occupational Health and Safety (OHS) issues relating to the equipment and the site
- equipment used
- construct, install and maintain includes materials, quantity and where to source them on site
- construction/installation techniques for all measures on the plan
- limitations of structures including timing of maintenance, structure life cycle, specifications and standards
- environmental impacts and procedures for erosion and sediment control.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• select and prepare equipment</li> <li>• confirm the details of work</li> <li>• identify survey pegs and site indicators</li> <li>• construct earthworks in line with the plan</li> <li>• install erosion and sediment control products and materials</li> <li>• carry out repairs and maintenance procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Erosion control measures may include:	<ul style="list-style-type: none"> <li>• site management</li> <li>• land shaping</li> <li>• batter stabilisation</li> <li>• banks and channels</li> <li>• level spreader</li> <li>• revegetation</li> <li>• waterways</li> <li>• check dams</li> <li>• bank and channel linings</li> <li>• grade stabilising structures</li> <li>• outlet protection structures</li> <li>• stormwater detention measures</li> <li>• dust control</li> <li>• rural road&amp;track crossbank and crossfall.</li> </ul>
Sediment control measures may	<ul style="list-style-type: none"> <li>• sediment basins</li> </ul>

<b>RANGE STATEMENT</b>	
include:	<ul style="list-style-type: none"> <li>• sediment traps</li> <li>• sediment filters</li> <li>• excavated sediment traps</li> <li>• straw bale</li> <li>• stormwater inlet sediment traps</li> <li>• sediment fence</li> <li>• straw bale</li> <li>• geotextile fabric</li> <li>• vegetation strips.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Soil and water conservation
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCSAW401A Set out conservation earthworks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers setting out conservation earthworks and defines the standard required to: interpret the plan in consultation with landholder and surveyor; identify and mark out on the site the key plan points and any additional features identified on the site plan; measure and peg out the site from the earthworks specification and plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to soil conservation officers who set out low engineering standard structures using specialised pegging/marketing techniques on rural lands.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Interpret plans and specifications	<p>1.1. Overall plan is determined in consultation with landholder and surveyor.</p> <p>1.2. Earthworks specifications are established in consideration of desired outcome and prevailing conditions.</p> <p>1.3. Plan is accurately verified in line with job requirements.</p>
2. Relate plan to site	<p>2.1. Key plan points are located on site.</p> <p>2.2. Additional features identified on site plan.</p> <p>2.3. Site issues which affect survey and pegging are identified and recorded.</p>
3. Peg project	<p>3.1. Pegging sequence is established in consultation with the site surveyor.</p> <p>3.2. Site dimensions are measured in compliance with job specification.</p> <p>3.3. Peg locations are established using prescribed methods.</p> <p>3.4. Earthworks are pegged in line with project specification.</p> <p>3.5. All construction personnel are advised of pegging and the need for site integrity.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and ensure the safety of field operations on sites
- interpret plans and specifications
- relate plan to site
- peg project
- protect site
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- different types of survey equipment and staffs
- civil engineering and survey techniques
- erosion control and design principles
- principles of native topsoil conservation and protection
- levels and levelling
- earthmoving principles
- interpretation of plans and general and technical specifications
- Occupational Health and Safety (OHS) and environmental legislation, codes of practice and enterprise procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment



<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret the plan in consultation with landholder and surveyor</li> <li>• identify and mark out on the site the key plan points and any additional features identified on the site plan</li> <li>• measure and peg out the site from the earthworks specification and plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of earthworks may include:	<ul style="list-style-type: none"> <li>• farm dams</li> <li>• erosion control banks</li> <li>• waterways</li> <li>• access tracks</li> <li>• sediment traps</li> <li>• detention basins</li> <li>• flumes.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Soil and water conservation
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCSAW402A Supervise on-site implementation of conservation earthworks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising on-site implementation of conservation earthworks and defines the standard required to: implement measures that will achieve the optimum efficiency of the earthmoving operation; put into practice measures that construct structurally sound earthworks; control construction to achieve specifications; instigate measures that finish earthworks to specifications.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to soil conservation officers and expert plant operators who supervising on-site implementation of conservation earthworks.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan efficient implementation of works	<p>1.1.Plans and specifications are reviewed and related to the works site.</p> <p>1.2.Economics of operation are maximised through the deployment of trained personnel and equipment selection.</p> <p>1.3.Work sequences are planned and recorded in line with proposed work schedule.</p> <p>1.4.Materials are ordered to complete proposed works in line with construction schedule.</p> <p>1.5.Compliance with established regulatory planning and environmental legislation is maintained.</p>
2. Direct implementation of planned works	<p>2.1.Equipment and personnel deployment ensures structurally sound works in line with earthworks planned.</p> <p>2.2.Job specifications and regulatory requirements are achieved in accordance with the plan or necessary modification.</p> <p>2.3.Modified techniques are adopted to minimise the effect of site limitation in achieving job requirements.</p> <p>2.4.Safe machine operations are monitored to ensure they meet relevant Occupational Health and Safety (OHS) requirements.</p>
3. Monitor job specification	<p>3.1.Progressive job checking results in achieving job specifications, contracts and targets.</p> <p>3.2.Instructions to plant operators ensure high finishing standards to earthworks.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3.Modifications are made to job specifications in consultation with the landholder or works supervisor.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe systems of work
- plan efficient implementation of works
- protect natural areas from damage
- direct the implementation of planned works
- monitor job specifications
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- erosion and sediment control standards and principles
- natural areas topsoil protection and rehabilitation principles
- appropriate supervision techniques
- erosion control and design principles
- sediment control principles
- earthmoving principles
- principles for machine operation
- engagement of subcontractors/equipment, skills and expected outcomes
- work sequence knowledge
- equipment most suitable to the constructing of erosion and sediment control works
- quality assurance systems, processes and practices

**REQUIRED SKILLS AND KNOWLEDGE**

- staff deployment, supervision and training
- OHS and environmental legislation, codes of practice and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- implement measures that will achieve the optimum efficiency of the earthmoving operation.
- put into practice measures that construct structurally sound earthworks.
- control construction to achieve specifications
- instigate measures that finish earthworks to specifications.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Types of project may include:

- earthworks required as part of erosion control

<b>RANGE STATEMENT</b>	
	projects <ul style="list-style-type: none"> <li>• farm dam construction</li> <li>• access track construction.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Soil and water conservation
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCSAW501A Design control measures and structures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers work functions associated with the formal engineering design of erosion and sediment control measures and structures including farm dams on land disturbing projects in both urban and rural environments and defines the standard required to: identify measures to be designed; apply design procedures; prepare specification schedule; cost and provide recommendations; collaborate with planner.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out independently within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify measures to be designed	1.1. Plan or strategy is reviewed for technical accuracy and environmental impacts. 1.2. Adherence to regulations and legislation is confirmed and noted on works plans. 1.3. Design criteria are applied in line with industry standards.
2. Apply design procedures	2.1. Catchment characteristics are calculated to required accuracy in line with industry standards. 2.2. Methods to determine design specifications are in accordance with industry standards. 2.3. Measures are modified in response to applying design procedures and follow accepted industry practices.
3. Prepare specification schedule	3.1. Documentation provided aligns with the plan and follows industry standards. 3.2. Suitability of design specifications are confirmed to comply with the category of work.

## Required Skills and Knowledge

### **REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- identify measures to be designed
- apply design procedures
- prepare specification schedule
- cost and provide recommendations
- use computer design programs
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- relevant Occupational Health and Safety (OHS) environmental, planning and groundwater legislation.
- erosion control and design principles
- soils and soil formation
- levels and levelling
- earthmoving principles
- total catchment issues
- legal requirements - permits
- environmental issues
- managing peak water flows
- subsurface and surface drainage principles and systems
- awareness of the limitations of design aids provided for industry.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify measures to be designed</li> <li>• apply design procedures</li> <li>• prepare specification schedule</li> <li>• cost and provide recommendations</li> <li>• collaborate with planner.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Erosion control measures may include:	<ul style="list-style-type: none"> <li>• site management</li> <li>• land shaping</li> <li>• batter stabilisation</li> <li>• banks and channels</li> <li>• level spreader</li> <li>• revegetation</li> <li>• waterways</li> <li>• check dams</li> <li>• bank and channel linings</li> <li>• grade stabilising structures</li> <li>• outlet protection structures</li> <li>• stormwater detention measures</li> <li>• dust control</li> <li>• rural road&amp;track crossbank and crossfall.</li> </ul>
Sediment control measures may	<ul style="list-style-type: none"> <li>• sediment basins</li> </ul>

<b>RANGE STATEMENT</b>	
include:	<ul style="list-style-type: none"> <li>• sediment traps</li> <li>• sediment filters</li> <li>• excavated sediment traps</li> <li>• straw bale</li> <li>• stormwater inlet sediment traps</li> <li>• sediment fence</li> <li>• straw bale</li> <li>• geotextile fabric and vegetation strips.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Soil and water conservation
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCSAW502A Plan erosion and sediment control measures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the development of erosion and sediment control plans and defines the standard required to: establish suitability of development proposal; prepare reports on erosion and sediment control plans; check selection criteria for earthwork structures or measures against industry guidelines; develop erosion and sediment control strategy; prepare an erosion and sediment control plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to land managers in land disturbing projects for local government, urban, civil construction, forestry, extractive industry, rural, or natural resource management.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish suitability of development proposal	<p>1.1.Data concerning suitability of development site is compiled using industry methodology.</p> <p>1.2.Alterations or modifications to the development plan are noted and reported to developer or consent authority.</p> <p>1.3.Compliance is established with relevant regulatory planning authority or environmental legislation following industry procedures.</p> <p>1.4.Concurrence is established relating to suitability of development proposal and conforms to erosion and sediment control guidelines.</p>
2. Develop erosion and sediment control strategy	<p>2.1.Erosion control measures are developed consistent with industry principles and selection criteria.</p> <p>2.2.Sediment control measures are developed consistent with industry principles and selection criteria.</p> <p>2.3.Erosion and sediment control strategies are established and documented in co-operation with the developer and relevant consent authority.</p>
3. Prepare an erosion and sediment control plan	<p>3.1.Selection criteria for earthwork structures or measures are checked against industry guidelines.</p> <p>3.2.Design specifications for structures incorporated in plan details.</p> <p>3.3.Erosion and sediment control plan and documentation supporting the plan follow industry guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- establish suitability of development proposal
- prepare reports on erosion and sediment control plans
- develop erosion and sediment control strategy
- prepare an erosion and sediment control plan
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant environmental, planning and groundwater legislation
- planning process for erosion and sediment control
- erosion control and design principles
- soils and soil formation
- levels and levelling
- earthmoving principles
- total catchment issues
- legal requirements - permits
- environmental issues
- country code
- managing peak water flows
- subsurface and surface drainage principles and systems
- awareness of the limitations of design aids provided for industry.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish suitability of development proposal</li> <li>• prepare reports on erosion and sediment control plans</li> <li>• check selection criteria for earthwork structures or measures against industry guidelines</li> <li>• develop erosion and sediment control strategy</li> <li>• prepare an erosion and sediment control plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Earthworks may include:	<ul style="list-style-type: none"> <li>• the range of conservation earthworks on rural lands including: <ul style="list-style-type: none"> <li>• contour banks</li> <li>• waterways</li> <li>• dams</li> <li>• drainage structures.</li> </ul> </li> </ul>
Erosion control measures may include:	<ul style="list-style-type: none"> <li>• site management</li> <li>• land shaping</li> <li>• batter stabilisation</li> <li>• banks and channels</li> <li>• level spreader</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• revegetation</li> <li>• waterways</li> <li>• check dams</li> <li>• bank and channel linings</li> <li>• grade stabilising structures</li> <li>• outlet protection structures</li> <li>• stormwater detention measures</li> <li>• dust control</li> <li>• rural road&amp;track crossbank and crossfall.</li> </ul>
Sediment control measures may include:	<ul style="list-style-type: none"> <li>• sediment basins</li> <li>• sediment traps</li> <li>• sediment filters</li> <li>• excavated sediment traps</li> <li>• straw bale</li> <li>• stormwater inlet sediment traps</li> <li>• sediment fence</li> <li>• straw bale</li> <li>• geotextile fabric</li> <li>• vegetation strips.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Soil and water conservation
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCSAW503A Plan conservation earthworks

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the development of conservation works plans featuring erosion control for the protection of rural lands and defines the standard required to: establish client needs; carry out site investigations including surveying; develop a strategy to protect natural areas; establish the purpose and specifications of earthworks; prepare detailed project costing and works plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit is carried out independently in response to requests from land managers facing soil erosion and covers the development of conservation works plans featuring erosion control for the protection of rural lands.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish client needs	<p>1.1.The proposed land use is discussed and confirmed in writing with the landholder.</p> <p>1.2.The catchment characteristics are reviewed and discussed considering the proposed land use.</p> <p>1.3.Current impacting legislation and policies are explained to the landholder.</p> <p>1.4.Possible strategies are discussed with the landholder and the best option confirmed in writing.</p>
2. Develop the strategy to utilise earthworks	<p>2.1.Property ownership and boundary are confirmed by checking maps and titles.</p> <p>2.2.Profile of catchment is determined from survey and aerial photographs.</p> <p>2.3.Earthworks concept is developed consistent with industry principles and selection criteria.</p> <p>2.4.Final water disposal points are established in line with proposed strategy.</p> <p>2.5.Proposed location of structures are tested by survey and discussed with landholder.</p> <p>2.6.Preferred strategy is documented according to enterprise guidelines.</p>
3. Prepare a detailed works plan	<p>3.1.Plan is prepared according to enterprise guidelines and industry best practice.</p> <p>3.2.Selection criteria applied for earthwork structures or measures align with industry standards.</p> <p>3.3.Design of relevant structures are communicated with specific details to qualified designer.</p> <p>3.4.Relevant documentation is prepared and presented,</p>

ELEMENT	PERFORMANCE CRITERIA
	and is consistent with category of work and industry standards.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- establish client needs
- carry out site investigations including surveying
- develop a strategy to protect natural areas
- develop the strategy to utilise earthworks
- recommend appropriate construction equipment
- prepare detailed project costing
- prepare a detailed works plan
- negotiate agreed project outcome
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant environmental, planning and groundwater legislation
- relevant environmental, planning and earthwork construction standards and Codes of Practice
- earthwork structures
- erosion control and design principles
- natural areas (particularly topsoil) protection and rehabilitation principles
- soils and soil formation
- levels and levelling survey plans and titles
- earthmoving principles

## REQUIRED SKILLS AND KNOWLEDGE

- total catchment issues
- land use and land development strategies
- legal issues
- environmental issues
- country code
- managing peak water flows
- subsurface and surface drainage principles and systems
- limitations of design aids provided for industry.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- establish client needs
- carry out site investigations including surveying
- develop a strategy to protect natural areas
- establish the purpose and specifications of earthworks
- prepare detailed project costing and works plan.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Conservation works may include:

- earthworks constructions -
  - dams
  - bank and drain
  - waterways
  - land rehabilitation
  - water ponding schemes
- dams -
  - gully embankment
  - hillside
  - excavated
  - ring
  - turkey nest
  - spread bank
- banks.

## Unit Sector(s)

<b>Unit sector</b>	Soil and water conservation
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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# AHCSDP301A Undertake preparation of land for seed crop production

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Unit Descriptor

This Unit covers the process of preparing land for seed crop production and defines the standard required to: interpret production/planting plans; produce standards, quality specifications and work procedure documents; measure materials and site plan specifications; service, operate, adjust and calibrate cultivation equipment safely; and complete pre- and post-operational checks on tools, vehicles and equipment.

## Application of the Unit

This Unit applies to farm workers operating under limited supervision from others with checking only related to overall progress. Preparing land for seed crop production is usually done within established routines, methods and procedures. Some discretion and judgement are required in the selection of equipment and materials, organisation of work and services. The outcomes should be achieved within specified timelines.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Nil.

## Employability Skills Information

This Unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised

Unit of Competency. text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cultivation	<p>1.1 Requirements for the work to be undertaken are interpreted from the planting plan and confirmed with the manager.</p> <p>1.2 The method and order of cultivation is identified and interpreted from the planting plan.</p> <p>1.3 Occupational Health and Safety (OHS) hazards are identified; risks assessed and suitable controls implemented.</p> <p>1.4 Suitable personal protective equipment is selected, used and maintained.</p> <p>1.5 Environmental implications of cultivating the site are identified, likely outcomes assessed and, if necessary, responsible action taken.</p>
2. Prepare the cultivating equipment	<p>2.1 Vehicles, machinery and equipment required for cultivation are cleaned and inspected according to organisation guidelines and certified seed production procedures.</p> <p>2.2 Vehicles and equipment are serviced, adjusted for the conditions and worn parts are replaced to ensure reliability during cultivation.</p> <p>2.3 All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately.</p> <p>2.4 All maintenance and servicing is documented according to the requirements of the organisation's record keeping system.</p>
3. Cultivate soil	<p>3.1 Previous <i>crop</i> or land clearance debris is removed, incorporated or burnt according to the organisation's guidelines.</p> <p>3.2 The cultivation plan is followed and completed for each paddock.</p> <p>3.3 OHS hazards are identified, risks assessed and suitable controls implemented.</p> <p>3.4 Suitable personal protective equipment (PPE) is selected, used and maintained.</p> <p>3.5 Vehicles and equipment are operated in a safe, effective and efficient manner and at speeds to suit the conditions.</p>

- 3.6 The quality of cultivation is maximised by continually checking and adjusting the vehicles and equipment as necessary.
- 3.7 All timelines, resource and quality requirements of the planting plan are met.
4. Prepare site for planting
  - 4.1 The planting layout and soil profiles are completed as required by the planting plan.
  - 4.2 Weed and pest control measures are taken as required by the planting plan.
  - 4.3 Fertilisers, ameliorants, and/or other pre-planting treatments are applied as required by the planting plan.
  - 4.4 The environmental implications of site preparation are identified, likely outcomes assessed and, if necessary, responsible action is taken.
5. Complete land preparation operations
  - 5.1 Equipment is cleaned according to manufacturer specifications, organisational procedures and regulations.
  - 5.2 Vehicles and equipment are cleaned and stored to minimise damage according to manufacturer specifications, organisational procedures and regulations.
  - 5.3 All containers, leftover fluids, waste and debris from the cleaning and maintenance work are disposed of safely and appropriately.
  - 5.4 All required *records* and documentation are completed accurately and promptly according to organisational requirements.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- interpret production/planting plans, produce standards, quality specifications and work procedure documents
- measure materials and site plan specifications
- operate, adjust and calibrate cultivation equipment safely
- complete pre- and post-operational checks on tools, vehicles and equipment
- perform routine safety, service and maintenance procedures on tools, cultivator and equipment
- read and interpret manufacturer specifications, work and maintenance plans, and material safety data sheets (MSDS)

- interpret and apply task instructions
- communicate with work team and supervisor
- record and report faults, workplace hazards and accidents
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge includes:

#### Knowledge of:

- methods of cultivating a range of soil types
- environmental issues of cultivating soil for planting, such as drainage and irrigation systems, soil amelioration and waste disposal procedures
- a range of pre-planting treatments, their purpose and method of application
- operation and maintenance of planting equipment
- OHS guidelines, procedures and principles, including manual handling and exposure to hazardous substances
- procedures and standards for certified seed.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• interpret production/planting plans, produce standards, quality specifications and work procedure documents</li> <li>• measure materials and site plan specifications</li> <li>• service, operate, adjust and calibrate cultivation equipment safely</li> <li>• complete pre- and post-operational checks on tools, vehicles and equipment.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

	enterprise circumstances.
Method of assessment	This Unit should be assessed together with core units and other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Crops</i></b> may include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• temperate pastures</li> <li>• tropical pastures</li> <li>• vegetables and other horticultural seed crops.</li> </ul>
<b><i>Records</i></b> may include:	<ul style="list-style-type: none"> <li>• sowing date</li> <li>• application rate</li> <li>• seed line number</li> <li>• bag tags.</li> </ul>

## Unit Sector(s)

Seed Production

## AHCSDP302A Establish seed crops

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the process of establishing seed crops and defines the standard required to: prepare and service machinery and equipment; carry out tillage and apply pre-planting treatments; carry out sowing operation and fertiliser application; monitoring the environmental impacts of establishing the crop; clean, secure and store machinery and equipment; and, keep records of the sowing operation.

### Application of the Unit

This Unit applies to workers on cropping enterprises and involves the application of some judgement and discretion. Work is likely to be carried out under minimal supervision within enterprise guidelines.

### Licensing/Regulatory Information

Not applicable

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare machinery and equipment for use
  - 1.1 Machinery and equipment are selected and confirmed against the work plan and prepared to manufacturer specifications.
  - 1.2 Equipment is securely attached and calibrated for operation to manufacturer specifications.
  - 1.3 Existing and potential Occupational Health and Safety (OHS) hazards in the workplace are identified, risks assessed and controlled in line with enterprise requirements.
2. Prepare for seed *crop* establishment
  - 2.1 Soil and weather conditions are monitored for optimal seeding conditions.
  - 2.2 Soil conservation and sustainable land management practices and procedures are recognised and confirmed according to enterprise requirements.
  - 2.3 Seeding, fertiliser, and pest and weed control requirements are confirmed against the work plan and prepared to seed certification specifications.
  - 2.4 Contingency plans are prepared for unusual seasonal conditions.
3. Sow the *crop*
  - 3.1 Suitable personal protective equipment (PPE) is selected, used and maintained according to OHS requirements.
  - 3.2 Seeding and fertiliser applications are carried out in line with the work plan.
  - 3.4 Pest and weed control treatment is coordinated with seeding and fertiliser applications as required.
  - 3.5 Environmental implications associated with sowing operations are identified, impacts assessed and procedures adopted in line with enterprise requirements.
4. Complete seeding operations
  - 4.1 Seeding, machinery and equipment operation records are maintained according to enterprise requirements.
  - 4.2 Machinery and equipment damage, malfunctions or irregular performance are reported in line with enterprise requirements.
  - 4.3 Machinery and equipment is cleaned, secured and stored in line with manufacturer specifications and seed certification requirements.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- identify hazards and implement safe operating procedures
- sow seed and apply fertiliser at the required placement and rate
- identify types of weeds and insects harmful to crop establishment
- perform pre-operational and safety checks, servicing and maintenance on machinery and equipment
- calibrate, operate machinery and attach/detach equipment
- demonstrate emergency operating procedures in normal and adverse conditions
- recognise and report machinery damage, faults or malfunctions and perform minor repairs
- demonstrate safe, environmentally responsible and sustainable land management practices
- monitor and minimise impacts to the environment associated with sowing operations
- read and interpret manufacturer specifications, work and maintenance plans, and MSDS
- obtain relevant licences and permits
- clean, secure and store machinery and equipment
- interpret and apply task instructions
- communicate with work team and supervisor
- record and report equipment faults, workplace hazards and accidents
- assess and calculate the application of fertiliser/pesticide requirements and application rates
- calibrate equipment and calculate volumes, consumption and servicing requirements
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge includes:

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### Knowledge of:

- seed crop types, preparation of seeds, seeding methods and application techniques
- fertiliser types, rates of application and crop nutrient requirements
- effects of weather conditions (normal and adverse) on seeding and fertilising applications
- operating principles and operating methods for machinery and equipment
- pre-operational and safety checks, servicing and maintenance procedures for seeding machinery and equipment
- principles of weight distribution with regard to load shifting and vehicle movement
- sustainable land management and soil conservation techniques
- positive environmental practices, negative environmental impacts and minimisation measures associated with seeding operations



- procedures for cleaning, securing and storing machinery, equipment and materials
- enterprise policies with regard to seeding operations, and recording and reporting routines
- relevant state/territory legislation, regulations and codes of practice with regard to workplace OHS and the use and control of hazardous substances
- PPE and when and how it should be used
- relevant state/territory legislation and regulations with regard to licensing requirements and the use and control of machinery and equipment.
- record keeping for certified seed.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare and service machinery and equipment</li> <li>• carry out tillage and apply pre-planting treatments</li> <li>• carry out sowing operation and fertiliser application</li> <li>• monitoring the environmental impacts of establishing the crop</li> <li>• clean, secure and store machinery and equipment</li> <li>• keep records of the sowing operation.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>
<p>Method of assessment</p>	<p>This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.</p>

Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.
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## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Crops</i> may include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• temperate pastures</li> <li>• tropical pastures</li> <li>• vegetables and other horticultural seed crops.</li> </ul>
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## Unit Sector(s)

Seed Production

## AHCSDP303A Maintain seed crops

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the process of maintaining seed crops and defines the standard required to: monitor crops for levels of pests and diseases and moisture; implement pest and disease control strategies; monitor the health and maturity of the crop.

### Application of the Unit

This Unit applies to workers on cropping enterprises who operate under limited supervision from others with checking only related to overall progress. It is usually done within established routines, methods and procedures where some discretion and judgment is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Assess seed *crop* condition, growth and requirements
  - 1.1 Crops are monitored to assess their needs, and observations are recorded and reported.
  - 1.2 Pests and diseases are identified, monitored and reported at nominated threshold levels.
  - 1.3 Sites for regular measurement of soil moisture are established in consultation with directions.
  - 1.4 Soil probe is used to measure moisture levels and soil water percentage calculated.
2. Apply fertiliser and amendments
  - 2.1 Occupational Health and Safety (OHS) hazards are identified; risks assessed and suitable controls are implemented.
  - 2.2 Suitable personal protective equipment is selected, used and maintained.
  - 2.3 Specialist sprays are applied according to label directions and industry standards for growth stages, taking into account specialist advice if required.
  - 2.4 Chipping or spot spraying is carried out as required.
  - 2.5 Crop growth stages are assessed, recorded and reported.
  - 2.6 Water is applied according to the identified need and the directions of management.
  - 2.7 All applications are undertaken in the full consideration of adverse environmental impacts.
3. Monitor crop condition, growth and requirements
  - 3.1 Crop maturity is monitored and the possible need for further applications is reported to the manager.
  - 3.2 The health of the crop is continually monitored and deviation from expected growth and vigour is reported as required.
  - 3.3 Observations of crop ripening are reported for the timing of harvest to be determined by contractors and property manager.
4. Complete cleaning and hygiene operations
  - 4.1 Equipment is cleaned in accordance with manufacturer's specifications, organisational procedures and certified seed procedures.
  - 4.2 All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately.
  - 4.3 All required records and documentation are completed accurately and promptly in accordance with organisational requirements.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- detect differences and variations in crop growth
- report/communicate such differences to the supervisor/farm owner
- observe and report on health and growth of the crop
- monitor pests and disease in crops
- assess crop maturity
- apply sprays and fertilizers as directed
- measure soil moisture and relate data to crop requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge includes:

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### Knowledge of:

- appropriate legislative requirements, manufacturer's instructions and organisation procedures/instructions
- potential hazards associated with the operation of basic tools and equipment
- general machine maintenance procedures
- machinery operating principles and safe operating methods
- environmental impacts associated with the operation of machinery and equipment in a harvesting context
- organisation recording and reporting procedures
- symptoms of crop lacking health and vigour
- signs of pest and disease infestation (such as bacterial wilt in lucerne), moisture stress and nutrient deficiencies
- hygiene requirements for agricultural crops and equipment that comes into contact with the crop
- types and uses of herbicides, insecticides and other pesticides and alternative pest control methods (non-chemical)

- OHS and pesticides legislative and enterprise requirements
- contractor machinery cleanliness.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• monitor crops for levels of pests and diseases and moisture</li> <li>• implement pest and disease control strategies</li> <li>• monitor the health and maturity of the crop.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be

included.	
<i>Crops</i> may include:	<ul style="list-style-type: none"><li>• wheat and coarse grains</li><li>• cotton</li><li>• grain legumes</li><li>• oilseeds</li><li>• sugar</li><li>• temperate pastures</li><li>• tropical pastures</li><li>• vegetables and other horticultural seed crops.</li></ul>

## Unit Sector(s)

Seed Production

## AHCSDP304A Harvest seed crops

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the process of harvesting seed crops and defines the standard required to: complete pre and post operational checks on tools, harvesting machinery and equipment; perform routine safety; service and maintenance procedures on tools, harvesting machinery and equipment; sample crops to assess moisture content and maturity/ripeness of the crop; handle and manoeuvre harvesting equipment; monitor efficiency of harvesting equipment and make adjustments to height and other settings and transport; clean and store harvesting equipment.

### Application of the Unit

This Unit applies to workers on cropping enterprises or in harvesting contract teams and requires the ability to work as part of a team following set routines, methods and procedures. Some discretion and judgment is required in the maintenance and operation of equipment and machinery. The outcomes must be achieved at a rate that maintains the progress of the harvesting operation.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the                      Performance criteria describe the performance needed to



essential outcomes of a Unit of Competency.

demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

- |   |   |
|---|---|
| 1. Prepare to <i>harvest seed crops</i> | <p>1.1 Requirements for the work to be undertaken, method and order of harvesting is interpreted from the harvest strategy and confirmed with the supervisor.</p> <p>1.2 Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented for the harvesting operation.</p> <p>1.3 Personal protective equipment is selected, used and maintained.</p> <p>1.4 The environmental impacts of harvesting the crop are identified and action taken where required.</p> <p>1.5 Windrowing/swathing is completed to the standard required.</p> <p>1.6 Crop is sampled for moisture content to assess timing of harvest.</p> <p>1.7 The hygiene standards for the crop and the paddock are identified from the harvest strategy and/or the crop storage plan.</p> |
| 2. Prepare the harvesting equipment     | <p>2.1 <b><i>Harvesting machinery and other equipment</i></b> are cleaned of pests and other contaminants to maintain crop and paddock hygiene standards, as required by the harvest strategy.</p> <p>2.2 All machinery and equipment are serviced, assessed for reliability, adjusted for harvesting conditions and appropriate parts are replaced to ensure reliability during the harvest.</p> <p>2.3 All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and in line with environmental guidelines.</p> <p>2.4 All maintenance and servicing is documented according to the requirements of the organisation.</p>  |
| 3. Harvest crops                        | <p>3.1 The harvest strategy is followed and completed for each paddock.</p> <p>3.2 Personal protective equipment is selected, used and maintained for harvesting.</p> <p>3.3 Harvesting machinery and ancillary equipment is operated in a safe manner and at speeds to suit crop conditions.</p> <p>3.4 Cleanliness and purity of the harvested product is</p>   |

- maximised by maintaining the hygiene of all surfaces that come into contact with the crop.
- 3.5 The quality of product is optimised by continually checking and, where necessary, adjusting the harvester and ancillary equipment, including their height and other settings.
- 3.6 Fire prevention measures are taken as outlined and described in the harvest strategy.
4. Complete harvesting operations
- 4.1 Equipment is cleaned in accordance with manufacturer's specifications, organisational procedures and regulations.
- 4.2 Attachments and other ancillary equipment are cleaned and stored to minimise damage and to maximise hygiene according to manufacturer's specifications, organisational procedures and regulations.
- 4.3 Insecticides are applied as required by the organisation and the harvest strategy.
- 4.4 All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and according to environmental requirements.
- 4.5 Harvesting equipment is moved between sites and on public roads in compliance with legislation including hygiene requirements.
- 4.6 All required records and documentation are completed accurately and promptly in accordance with enterprise requirements.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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**Ability to:**

- handle and manoeuvre harvesting equipment
- operate crop harvesting machinery and equipment
- implement procedures for seed handling and hygiene
- identify hazards and implement OHS procedures for all harvest tasks
- complete pre- and post-operational checks on tools, harvesting machinery and equipment
- perform routine, service and maintenance procedures on tools, harvesting machinery and equipment
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge includes:

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**Knowledge of:**

- appropriate legislative requirements, manufacturer's instructions and organisation procedures/instructions
- pre-operational and safety checks, servicing and maintenance procedures for tools and equipment
- potential hazards and safe operating procedures for basic tools and equipment
- safe operating procedures and standards for harvesting and ancillary equipment
- seed quality and the impact of harvesting practices (such as on lucerne seed)
- general machine maintenance procedures
- machinery operating principles and operating methods
- environmental impacts associated with the operation of machinery and equipment in a harvesting context
- organisation recording and reporting procedures
- pests and signs of pest infestation in the crop
- hygiene procedures for harvesting machinery and equipment
- organisation moisture and hygiene requirements for the crop and equipment that comes into contact with the crop such as bins, augers, trucks and harvesters
- requirements for harvesting machinery and equipment transport
- fire prevention strategies
- certified seed procedures.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• complete pre and post operational checks on tools, harvesting machinery and equipment</li> <li>• perform routine safety, service and maintenance procedures on tools, harvesting machinery and equipment</li> <li>• sample crops to assess moisture content and maturity/ripeness of the crop</li> <li>• handle and manoeuvre harvesting equipment</li> <li>• monitor efficiency of harvesting equipment and make adjustments to height and other settings</li> <li>• transport, clean and store harvesting equipment.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>
Method of assessment	<p>This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.</p>
Guidance information for assessment	<p>To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may

be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

*Harvested crops* may include:

- wheat and coarse grains
- cotton
- grain legumes
- oilseeds
- temperate pastures
- tropical pastures
- vegetables and other horticultural seed crops.

*Harvesting machinery and equipment* may include:

- clover harvesters
- harvesters
- field bins
- augers
- trucks.

## Unit Sector(s)

Seed Production

## AHCSDP401A Plan a seed crop establishment program

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the planning of a seed crop establishment program and defines the standard required to: assess site factors; select suitable pasture species and cultivars; identify threats to pasture establishment including weeds, pests and diseases; determine resources and equipment for planting and post-planting care; prepare pasture establishment plans to meet livestock production plans and schedules.

### Application of the Unit

This Unit applies to farm enterprise managers.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

- |   |  |
|---|--|
| 1. Determine requirements of the seed <i>crop</i> establishment program | <p>1.1 Paddock history is considered for suitability for a seed crop.</p> <p>1.2 Species and cultivars that meet production needs are identified and the required quantity calculated, costed and availability confirmed with suppliers.</p> <p>1.3 Crop establishment procedures are selected consistent with seasonal factors, site and soil characteristics, production plans and the resources and equipment available.</p> <p>1.4 Post-planting care is planned according to production needs, enterprise standards and site capabilities.</p> <p>1.5 Plant germination and nutrient requirements are identified and planned for, taking into account soil characteristics.</p> <p>1.6 Resources, tools, equipment and machinery required for planting and post-planting care are identified, costed and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>1.7 Occupational Health and Safety (OHS) hazards associated with the crop establishment program are identified; risks assessed and controls developed according to enterprise guidelines.</p> |
| 2. Prepare and document the seed crop establishment program             | <p>2.1 Detailed plans are prepared based on the requirements of the crop establishment program and production requirements.</p> <p>2.2 Plan is produced which can be readily interpreted and understood by on-site personnel according to enterprise standards.</p> <p>2.3 On-site procedures and schedules required for the planting of the site and post-planting care of seed crop are developed and communicated to staff.</p> <p>2.4 Contingencies are planned for and alternative strategies identified if applicable.</p>   |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

### Ability to:

- determine requirements of the seed crop establishment program
- research suitable seed crop species for the site and proposed land use
- prepare and document the seed crop establishment program
- develop strategies for weed, pest and disease control

- assess seed crop for production potential
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- select suitable seed
- identify ‘off types’
- read and understand a seed statement.

Required knowledge includes:

**Knowledge of:**

- seed crop varieties and their characteristics, requirements and production potential
- establishment techniques of specific seed crop species and cultivars
- the advantages and disadvantages of a range of seed crop establishment procedures
- maintenance requirements and practices for specific seed crop species and cultivars after initial establishment
- planning process, including costing and scheduling of works
- plant identification of seed crops and weed species
- role of crops in sustainable land use
- environmental impacts of seed crop establishment
- seed production contracts.

**Evidence Guide**

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess site factors</li> </ul>



	<ul style="list-style-type: none"> <li>• select suitable pasture species and cultivars</li> <li>• identify threats to pasture establishment including weeds, pests and diseases</li> <li>• determine resources and equipment for planting and post-planting care</li> <li>• use livestock to meet pasture production plans and schedules.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Crops</i></b> may include:	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• temperate pastures</li> <li>• tropical pastures</li> <li>• vegetables and other horticultural seed crops.</li> </ul>
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## Unit Sector(s)

Seed Production



## AHCSDP402A Supervise seed crop establishment

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the supervision of seed crop establishment and defines the standard required to: identify the seasonal conditions which affect crop establishment; plan the planting operation including timing and resources required; carry out pest, weed and disease control either pre or post planting if required; supervise staff and monitor the planting operation; recognise poor growth and lack of vigour and investigate causes.

### Application of the Unit

This Unit applies to cropping managers and supervisors.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Source information for input to planting plan
  - 1.1 Documents within the organisation that detail the requirements of the production plan are identified and obtained.
  - 1.2 Information regarding activities that will be occurring at a similar time to planting is gathered through discussion with colleagues and management, and by reading the production/management plan.
  - 1.3 The specific target area, or paddock, for planting is identified from the production/management plan.
  - 1.4 Trash levels and seedbed conditions are assessed and accounted for in planning.
2. Prepare planting plan
  - 2.1 The seed *crop* and method of planting to be used are determined from the organisations production plan.
  - 2.2 The resources required for the planting operations are assessed and calculated from the area to be sown, the method of planting to be used, and the available timelines.
  - 2.3 The target dates are set for planting, including the sequencing for planting across paddocks or crop areas, in line with the overall production/management planning for the organisation.
  - 2.4 The chemical applications that are required prior to and post planting are selected and organised to occur at an appropriate time.
  - 2.5 The plan is prepared to ensure that any potential detrimental environmental impacts are minimised or eliminated, including the proper disposal of containers, drums and other waste.
  - 2.6 Occupational Health and Safety (OHS) hazards are identified, assessed, and safe work practices for planting are implemented and overseen with staff.
  - 2.7 Any approvals that are required for the planting operations are identified, sought and obtained.
  - 2.8 Measurable indicators, specifications and targets are determined, based on the production/management plan and the method, resources, and seed to be used.
3. Determine scheduling and key responsibilities
  - 3.1 Scheduling for planting is determined taking the range of geographic and resourcing factors into consideration, as well as operations that will be occurring at the same time as the planting.
  - 3.2 Key responsibilities for specific preparatory processes that are required before planting are determined.
  - 3.3 Key responsibilities for specific implementation processes are determined.

- 3.4 Recordkeeping requirements are determined and procedures are put in place to ensure compliance with the range of applicable regulations.
  - 3.5 The plan, including scheduling and key responsibilities, is clearly documented.
  - 3.6 The plan includes the type, format, frequency and detail of any reporting required by both managers and operators.
4. Monitor and adjust the planting plan
- 4.1 Monitoring points outlined in the implementation plan are adhered to.
  - 4.2 Checks are made to ensure that OHS procedures are being observed and followed.
  - 4.3 Checks are made to ensure that the site environmental requirements are being observed and followed.
  - 4.4 Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress.
  - 4.5 Checks are made to ensure that the documentation required by the organisation, or other regulating bodies, is completed clearly and accurately during the progress of the planting process.
  - 4.6 Where any corrective action or amendment to the planting plan is required, the action is initiated and taken.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- identify hazards and oversee safe operating procedures
- identify the seasonal conditions which affect crop establishment
- plan and schedule planting including amending plans during the operations
- recognise poor growth and lack of vigour caused by nutrient deficiency and incorrect planting depth
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex

workplace measures and data

- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge includes:

**Knowledge of:**

- the equipment that is required for a range of tillage methods, and pest and weed control prior to planting
- crop establishment requirements
- equipment servicing requirements
- integrated pest and weed management techniques
- environmental controls and codes of practice applicable to the enterprise
- Legislation, codes of practice and enterprise procedures for OHS and environmental management
- management practices and processes to minimise environmental impacts such as noise, soil degradation and debris from planting operations
- Plant Breeder’s Rights and open market seed.

**Evidence Guide**

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify the seasonal conditions which affect crop establishment</li> <li>• plan the planting operation including timing and resources required</li> <li>• carry out pest, weed and disease control either pre or post planting if required</li> <li>• supervise staff and monitor the planting operation.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

### Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Crops</i> may include:</p>	<ul style="list-style-type: none"> <li>• wheat and coarse grains</li> <li>• cotton</li> <li>• grain legumes</li> <li>• oilseeds</li> <li>• temperate pastures</li> <li>• tropical pastures</li> <li>• vegetables and other horticultural seed crops.</li> </ul>

### Unit Sector(s)

Seed Production

## AHCSDP403A Plan and implement seed crop maintenance

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the planning and implementation of seed crop maintenance and defines the standard required to: accurately assess crop needs; carry out crop cultural practices and treatments; monitor and assess crop maturity; ascertain water requirements from survey advice and weather forecasts; accurately measure soil moisture and interpret data; determine time of harvest with specialist advice.

### Application of the Unit

This Unit applies to farm supervisors and cropping managers who maintain the health of agricultural crops.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

1. Determine condition of seed crops
  - 1.1 Measurement and assessment of soil moisture is undertaken to calculate soil water percentage.
  - 1.2 Water requirements are calculated according to soil analysis data, standing crop, and forecast weather conditions.
  - 1.3 Nutrient requirements and availability for crops are assessed and deficiencies identified.
  - 1.4 Factors affecting crop capacity are identified.
  - 1.5 Sustainable land management is implemented according to enterprise requirements and environmental standards.
2. Determine pest control
  - 2.1 Evidence of pests and disease is assessed and integrated control measures appropriate to type and species of infestation are determined.
  - 2.2 Areas of weed infestation, which may be reduced or eradicated, are located and species identified.
  - 2.3 Integrated control methods are selected to control pests and weeds.
  - 2.4 Control methods are scheduled at the optimum time with minimal damage to the crop.
  - 2.5 Severity of infestations and records of treatments are maintained to provide essential data for future management programs.
3. Manage *crop* health
  - 3.1 Crop is planned and monitored to maintain water and nutritional requirements for optimal production.
  - 3.2 Weed and pest levels are monitored and the control program modified as required.
  - 3.3 Benefits from soil and plant inputs and treatments are assessed and documented for analysis in future management programs.
  - 3.4 Cropping programs are monitored for efficiency and effectiveness, and documented for future best practice.
  - 3.5 Relevant data is documented for continual analysis and effective crop management.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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**Ability to:**

- refer to records of, and assess, soil health and nutrient status
- dispatch soil samples to laboratories
- carry out a soil health appraisal
- identify likely threats to crop from pests, weeds and diseases
- recognise damage to crop caused by weeds, pests or diseases
- recognise poor growth and lack of vigour in crop caused by nutrient deficiency
- record monitoring results
- plan and implement integrated control strategies to address nutrient deficiencies, disease outbreaks, pest and weed infestations
- accurately measure soil moisture and estimate irrigation needs if required
- apply pesticides or fertility treatments as required
- communicate with industry, suppliers and other personnel
- read and interpret Material Safety Data Sheets (MSDSs), production plans and analysis results
- estimate and measure pest control treatments
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge includes:

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**Knowledge of:**

- crop growth stages and keys
- crop growth requirements compared to soil nutrient status
- fertiliser and soil ameliorant types and application times, methods and rates
- chemical use if applicable
- factors leading to development of chemical resistance
- integrated pest management strategies
- life-cycles of pest, diseases and weeds
- Occupational Health and Safety (OHS) legislative requirements
- relevant codes of practice with regard to the use and control of hazardous substances
- legislation and codes of practice with regard to environmental protection.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• accurately assess crop needs</li> <li>• carry out crop cultural practices and treatments</li> <li>• monitor and assess crop maturity</li> <li>• ascertain water requirements from survey advice and weather forecasts</li> <li>• accurately measure soil moisture and interpret data</li> <li>• determine time of harvest with specialist advice.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Crops*** may include:

- wheat and coarse grains
- cotton
- grain legumes
- oilseeds
- temperate pastures

	<ul style="list-style-type: none"><li>• tropical pastures</li><li>• vegetables and other horticultural seed crops.</li></ul>
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## Unit Sector(s)

Seed Production

## AHCSDP404A Supervise seed crop harvesting

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the supervision of seed crop harvesting and defines the standard required to: establish strategies, procedures and controls for crop harvesting, including fire prevention and control plans; negotiate and arrange contracts and agreements; estimate crop yields; maintain budgetary controls; assess crop maturity and quality in readiness for harvesting; arrange storage and delivery requirements and segregate grain for quality and monitor for moisture content.

### Application of the Unit

This Unit applies to farm managers and harvest supervisors whose work is likely to be carried out under broad supervision.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare for harvesting
  - 1.1 *Crop* maturity and quality is assessed in readiness for harvesting.
  - 1.2 Pre-harvest treatments for the control and eradication of pests are determined and carried out according to Occupational Health and Safety (OHS) requirements.
  - 1.3 Requirements for licences or permits for transporting or moving machinery are identified and complied with.
  - 1.4 Insurance requirements are assessed and risk management strategies planned and implemented as required.
2. Determine harvest strategy
  - 2.1 Optimum timing to carry out harvest is estimated and calculated according to crop maturity assessment.
  - 2.2 Resource requirements are assessed giving consideration to the size of the crop and estimated timing of harvest.
  - 2.3 Labour and equipment required to carry out harvesting operations is confirmed and arranged within budgetary constraint.
  - 2.4 Requirements for fire prevention and control are identified and arranged according to OHS requirements.
3. Coordinate the harvest strategy
  - 3.1 Effective communication strategies are implemented to ensure smooth workflow operations and personnel safety.
  - 3.2 Harvesting operations are implemented and adjusted as required according to weather, equipment and staff requirements.
  - 3.3 Equipment operation is coordinated for maximum efficiency and monitored for performance effectiveness.
  - 3.4 Existing and potential hazards are identified and controlled according to OHS and enterprise requirements.
4. Complete harvest operation
  - 4.1 Storage resources are located for efficient operations and strategies for drying grain are identified, if necessary, according to marketing initiatives.
  - 4.2 Quality of grain is monitored for moisture content according to classification standards.
  - 4.3 Harvesting operations and outcomes are evaluated against harvest strategy.
  - 4.4 Relevant information is documented for continual analysis and effective planning management.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- organise and schedule the maintenance of plant and equipment
- establish strategies, procedures and controls for crop harvesting
- negotiate and arrange contracts and agreements
- implement safe workplace and positive environmental practices
- deal with weather and other contingencies
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge includes:

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### Knowledge of:

- crop maturity and yield potential
- grain or seed quality
- functions and limitations of harvesting equipment
- crop measurement techniques and parameters
- market information and sources
- location and relative skills and abilities of available contractors
- weather conditions which may affect the harvest
- relevant legislation, codes of practice and enterprise requirements for OHS, contractor engagement, environment and pesticides
- environmental controls and codes of practice applicable to harvesting operations
- supervisor responsibilities in managing the safety of a workplace
- hygiene requirements for certified seed.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment</p>
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Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish strategies, procedures and controls for crop harvesting, including fire prevention and control plans</li> <li>• negotiate and arrange contracts and agreements</li> <li>• estimate crop yields</li> <li>• maintain budgetary controls</li> <li>• assess crop maturity and quality in readiness for harvesting</li> <li>• arrange storage and delivery requirements</li> <li>• segregate grain for quality and monitor for moisture content.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.



<i>Crops</i> may include:	<ul style="list-style-type: none"><li>• wheat and coarse grains</li><li>• cotton</li><li>• grain legumes</li><li>• oilseeds</li><li>• temperate pastures</li><li>• tropical pastures</li><li>• vegetables and other horticultural seed crops.</li></ul>
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## Unit Sector(s)

Seed Production

## AHCSDP405A Inspect a seed crop for quality assurance purposes

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the skills and knowledge required to undertake a field inspection and prepare a report on crop for commercial seed production.

### Application of the Unit

This Unit applies to commercial seed crop field inspectors who undertake crop inspection activities and produce reports for the purpose of describing the quality and suitability of that crop for commercial seed production.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for field inspection	<p>1.1 Inspection date according to suitable crop growth stage and related activities is established.</p> <p>1.2 A suitable time for crop inspection is arranged with grower.</p> <p>1.3 Vehicle, machinery, equipment and recording materials are checked and prepared prior to undertaking crop inspection.</p> <p>1.4 Paddock history and crop type is researched prior to inspection.</p>
2. Undertake a visual analysis of a commercial seed crop	<p>2.1 Weed species are visually identified, and weed counts or density are recorded.</p> <p>2.2 Insect/disease damage is visually inspected and recorded.</p> <p>2.3 Varietal identity of crop is visually inspected and recorded.</p> <p>2.4 Varietal purity of crop (presence of off-types) is visually inspected and recorded.</p> <p>2.5 Quadrat or rule is used to count crop plants to estimate yield.</p>
3. Complete an inspection report	<p>3.1 Results of visual inspection are documented and analysed.</p> <p>3.2 A determination is made on the quality and suitability of the crop for commercial and/or regulatory production.</p> <p>3.3 Determination is recorded in a crop inspection report and is forwarded to relevant parties.</p>
4. Complete decontamination procedure prior to leaving site	<p>4.1 Vehicles, machinery and equipment are checked and cleaned of seeds, soil and other contaminants.</p> <p>4.2 Clothing and footwear is checked and cleaned of seeds, soil and other contaminants.</p> <p>4.3 Contaminants and other foreign materials are handled and disposed appropriately.</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- visually analyse a crop
- identify available processes of literature searches, internet browsing, personal consultation with experts, specimen collections, field guides, workplace notes, and use of keys and charts to aid identification

- identify a range of commercial seed crops including morphology of plants grown for commercial seed, crop registration history and crop density
- measure crop density
- determine varietal purity (identifying off-types) including testing for and follow up audits
- identify weeds
- use research skills.

**Required knowledge includes:**

**Knowledge of:**

- requirements of Australian Quarantine Inspection service (AQIS) and AQIS Authorised Officers (AAO) phytosanitary reports
- hygiene requirements for crop inspectors
- plant breeders’ rights
- concepts of disease pressure
- concepts of pest pressure
- field inspectors reports
- crop sampling techniques and use of quadrats
- crop/seed certification systems for example Organisation for Economic Co-operation and Development (OECD), Australian Seed Authority (ASA)
- relevant health, safety and environment requirements.

**Evidence Guide**

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• classification of seed to species and/or variety level</li> <li>• use of taxonomic terms to describe seed</li> <li>• updating of seed reference collection</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the</p>

	<p>regional or enterprise circumstances.</p>
<p>Method of assessment</p>	<ul style="list-style-type: none"> <li>• Assessment methods must satisfy the endorsed Assessment Guidelines of the AHC10 Training Package and can be assessed holistically with other Units.</li> <li>• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge.</li> <li>• Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills.</li> <li>• Assessment methods must confirm the ability to access, interpret and apply the required knowledge.</li> <li>• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.</li> <li>• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li> <li>• Assessment may be in conjunction with assessment of other Units of Competency.</li> <li>• The assessment environment should not disadvantage the candidate.</li> <li>• Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English.</li> <li>• Where the participant has a disability, reasonable adjustment may be applied during assessment.</li> <li>• Language and literacy demands of the assessment task should not be higher than those of the work role</li> </ul>
<p>Guidance information for assessment</p>	<p>To ensure consistency in performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Seed characteristics may include:	Trueness to type, varietal purity, morphology.
Machinery and equipment may include:	Vehicles, motor bikes, quadrats, metre rule.
Checking and preparation for inspection may include:	Cleaning and appropriate disposal of contaminants and other foreign materials.
Crops may include:	Grass, legume, oilseed and horticultural crops grown for resale as commercial seed.

## Unit Sector(s)

Seed Production

## AHCSDT301A Prepare a working sample

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the process of obtaining a working sample from a seed sample submitted for testing.

### Application of the Unit

This Unit applies to seed analysts working independently within enterprise guidelines. In general, they prepare samples for testing; conduct specified tests in accordance with enterprise requirements; maintain records and interpret results; and troubleshoot equipment problems.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

- |                                       |   |
|---------------------------------------|---|
| 1. Receive submitted sample           | <p>1.1 Submitted sample is received and verified with submitted documentation according to enterprise guidelines.</p> <p>1.2 Supervisor is notified if type, condition or quantity of sample is unsatisfactory.</p> <p>1.3 Required paperwork is checked and labelling and data entry is completed.</p> <p>1.4 Submitted sample is prepared for testing as soon as practicable.</p> <p>1.5 Submitted sample is handled and, if necessary, stored under optimum species specific conditions.</p> |
| 2. Reduce sample                      | <p>2.1 Working area and equipment are checked for cleanliness.</p> <p>2.2 Submitted sample is reduced to equal or greater than the size required for working sample.</p> <p>2.3 <i>Sample reduction</i> is undertaken using prescribed apparatus and methods.</p> <p>2.4 <i>Mechanical dividers</i> are used where appropriate.</p> <p>2.5 Working sample is presented for testing.</p> <p>2.6 Labelling and records are completed.</p>   |
| 3. Store working sample after testing | <p>3.1 Records and labels for tested samples are checked and verified before storing.</p> <p>3.2 Samples where live insects have been detected are handled according to enterprise guidelines before storage.</p> <p>3.3 Samples are stored after testing in environmental conditions that minimise changes in seed quality traits.</p>   |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

### Ability to:

- interpret enterprise procedures accurately
- check and prepare records and labels accurately and legibly
- prepare working samples within required timeline without sacrificing safety, accuracy or quality
- maintain security, integrity and traceability of all samples, data/results and documentation
- recognition of different types of seeds including treated and coated seeds



- clean and maintain equipment.

Required knowledge includes:

**Knowledge of:**

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- procedures for obtaining working samples for different tests
- seed handling and storage
- sample reduction methods and apparatus
- mechanical dividers and their applications
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• receiving submitted samples</li> <li>• reducing samples</li> <li>• storing of submitted and working samples after testing.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where

	possible, over a number of assessment activities.
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### Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Seed may include:	bare seed; treated seed; and coated seed that has been prepared as required.
Coated seeds may include:	<ul style="list-style-type: none"> <li>• seed pellets</li> <li>• encrusted seed</li> <li>• seed granules</li> <li>• seed tapes</li> <li>• seed mats.</li> </ul>
<i>Sample reduction</i> methods may include	<ul style="list-style-type: none"> <li>• mechanical divider method</li> <li>• modified halving method</li> <li>• spoon method</li> <li>• hand halving method.</li> </ul>
<i>Mechanical dividers</i> may include	<ul style="list-style-type: none"> <li>• conical dividers</li> <li>• soil (riffle) dividers</li> <li>• centrifugal dividers</li> <li>• rotary dividers</li> <li>• variable sample dividers.</li> </ul>

### Unit Sector(s)

Seed Testing

## AHCSDT302A Identify seeds

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the recognition and identification of seeds and contributing samples to the seed reference collection.

### Application of the Unit

This Unit applies to seed analysts working independently within enterprise guidelines. In general, they prepare samples for testing; conduct specified tests in accordance with enterprise requirements; maintain records and interpret results; and troubleshoot equipment problems.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

- |                                    |  |
|------------------------------------|--|
| 1. Prepare for seed identification | 1.1 Seeds requiring identification are confirmed.<br>1.2 Resources and <i>equipment</i> for use in identification are prepared.<br>1.3 Processes for seed identification are identified, selected and prepared for use.                                    |
| 2. Identify seed                   | 2.1 Specified seeds are identified according to their general <i>characteristics</i> .<br>2.2 Botanical name of seed is recorded, where possible to species level.<br>2.3 Advice is sought when necessary and where appropriate to confirm identification. |
| 3. Update the reference collection | 3.1 Supervisor is consulted about possible addition to the reference collection.<br>3.2 If appropriate, information about seed is documented and the seed is added to the reference collection.  |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- use magnifying tools
- identify the range of seeds specific to the enterprise
- describe the seed attributes
- identify available resources of literature searches, internet browsing, personal consultation with experts, specimen collections, field guides, workplace notes.

Required knowledge includes:

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### Knowledge of:

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- concepts of seed identification
- seed identification techniques
- binomial nomenclature
- enterprise standard operating procedures (SOPs)
- enterprise and/or legal traceability requirements
- relevant health, safety and environment requirements.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• recognise or identify seed to genus and, where possible, species level</li> <li>• contribute to seed reference collection.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>
Method of assessment	<p>This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.</p>
Guidance information for assessment	<p>To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Seed characteristics</i></b> may include:	External visible characteristics such as size, shape, colour, seed structures, surface characteristics and

	accessory structures, and seed morphology.
<i>Equipment</i> may include:	Magnifying glass; microscope; seed reference collection; photographs and drawings.

## Unit Sector(s)

Seed Testing

## AHCSDT303A Perform a fluorescence test on seeds

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers undertaking a test that is designed to determine the presence of annual ryegrass species in perennial ryegrass seedlots.

### Application of the Unit

This Unit applies to seed analysts working independently or under limited supervision, within enterprise guidelines. In general, they prepare samples for testing; conduct specified tests in accordance with enterprise requirements; maintain records and interpret results; and troubleshoot equipment problems.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

- |                                     |  |
|-------------------------------------|--|
| 1. Prepare for a fluorescence test  | 1.1 <i>Seed</i> to be tested is identified and records completed.<br>1.2 Working sample is prepared from submitted sample.<br>1.3 The required number of replicates of 100 seeds are prepared.<br>1.4 Substrate is prepared with potassium nitrate.<br>1.5 Replicates are placed in a germination cabinet/room as directed.  |
| 2. Assess germinated seeds          | 2.1 All un-germinated seeds and abnormal seedlings are counted off and the number recorded.<br>2.2 Normal seedlings are examined under ultra violet light.<br>2.3 Normal seedlings that have fluorescent roots under ultra violet light are counted off and the number recorded.<br>2.4 Normal seedlings that do not have fluorescent roots under ultra violet light are counted off and the number recorded.<br>2.5 Exposure of bare skin to ultra violet light is minimised.<br>2.6 Enterprise worksheet is completed. |
| 3. Maintain a safe work environment | 3.1 Results of test are recorded, calculated and reported in accordance with enterprise guidelines.<br>3.2 Laboratory and hazardous waste are safely handled, collected and disposed of.<br>3.3 Apparatus and equipment used are cleaned and used chemicals and solutions are disposed of safely.  |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- assess seedlings under ultra violet light
- follow enterprise guidelines and standard operating procedures
- germinate seed
- prepare replicates for testing
- record results

Required knowledge includes:

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### Knowledge of:

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for



### Seed Testing

- fluorescence testing procedures
- seed biology
- enterprise and/or legal traceability requirements
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• prepare replicates from working sample</li> <li>• assess seedlings using ultra violet light</li> <li>• counting and recording of results.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be

included.	
<i>Seed</i> may include:	bare seed; treated seed; and coated seed that has been prepared as required.

## Unit Sector(s)

Seed Testing

## AHCSDT304A Perform a seed purity analysis

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers testing the analytical purity of seed in a working sample to infer the composition of a seed lot. It also involves recognition of different species of seeds and inert particles that make up the sample.

### Application of the Unit

This Unit applies to seed analysts working independently within enterprise guidelines. In general, they prepare samples for testing; conduct specified tests in accordance with enterprise requirements; maintain records and interpret results; and troubleshoot equipment problems.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare for a purity test
  - 1.1 Samples, test methods and equipment to perform the test are identified.
  - 1.2 **Equipment** and working spaces are cleaned and calibrated to enterprise standards.
  - 1.3 A working sample is prepared using mixing and dividing processes according to enterprise guidelines.
  - 1.4 Sample details are checked and correctly recorded on worksheets and sample packets according to enterprise requirements.
2. Assess working sample/s
  - 2.1 The working sample is separated into its component parts using appropriate equipment.
  - 2.2 Pure **Seed** is separated using visual characteristics, mechanical or pressure aids appropriate to the type of seed and enterprise guidelines.
  - 2.3 Seeds are handled carefully so as not to impair their capacity for germination.
  - 2.4 Separated component parts and matter are weighed to the number of decimal places as required by enterprise guidelines.
  - 2.5 Contaminant seeds are identified.
3. Process and interpret data
  - 3.1 Weights of all components parts are added and compared with original weight of the working sample.
  - 3.2 A retest is carried out if required.
  - 3.3 Seeds of species that cannot be identified are referred to a supervisor.
  - 3.4 The percentage weight of various component parts is calculated to one decimal place.
  - 3.5 Percentages of all fractions are added together and rounded to 100% as required by enterprise guidelines.
  - 3.6 Results of test are reported according to enterprise guidelines.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- prepare working samples

- use mixing and dividing equipment
- separate component parts of a working sample using visual, mechanical or pressure techniques
- assess pure seed from damaged seed
- identify pure seed, other seed species and inert materials
- weigh and calculate percentages of component parts
- carryout rounding procedure with calculations
- record and communicate results in accordance with enterprise procedures
- maintain security, integrity, traceability of samples, sub-samples, test data, results and documentation.

Required knowledge includes:

**Knowledge of:**

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- seed biology
- seed identification
- materials and apparatus used in seed purity tests
- enterprise standard operating procedures (SOPs)
- enterprise and/or legal traceability requirements
- relevant health, safety and environment requirements.

**Evidence Guide**

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• preparation of a working sample</li> <li>• separation of a working sample into component parts</li> <li>• reporting of percentages of component parts</li> <li>• rounding of calculations to enterprise requirements.</li> </ul>

Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b><i>Equipment</i></b> for separating a working sample may include:	<ul style="list-style-type: none"> <li>• magnifiers; reflected light; sieves; blowers; and diaphanoscopes.</li> </ul>
<b><i>Seed</i></b> may include:	<ul style="list-style-type: none"> <li>• bare seed; treated seed; and coated seed that has been prepared as required.</li> </ul>
Inert matter may include:	<ul style="list-style-type: none"> <li>• seed units where no true seed is present; broken or damaged seed 50% or less of their original size; other matter as prescribed in the International Rules for Seed Testing.</li> </ul>

## Unit Sector(s)

Seed Testing

## AHCSDT305A Perform a seed moisture test

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the determination of the moisture content of seeds by an oven method for routine use.

### Application of the Unit

This Unit applies to seed analysts working independently or under limited supervision, within enterprise guidelines. In general, they prepare samples for testing; conduct specified tests in accordance with enterprise requirements; maintain records and interpret results; and troubleshoot equipment problems.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare for testing
  - 1.1 Submitted sample is checked to ensure it is in an intact, moisture-proof container with as much air as possible excluded.
  - 1.2 *Appropriate apparatus* are selected for seed moisture testing.
  - 1.3 Temperature of submitted sample in container is equilibrated to that of the testing laboratory.
  - 1.4 Exposure of sample to the atmosphere of the laboratory is reduced to an absolute minimum according to the species and ISTA requirements.
2. Prepare samples for drying
  - 2.1 Submitted sample is thoroughly mixed.
  - 2.2 A minimum three subsamples are taken and combined to form a working sample of the required size.
  - 2.3 Exposure to air during sample reduction is limited to thirty seconds.
  - 2.4 Where cutting or grinding is required, one working sample is prepared so that two replicates can be drawn from the cut/ground material.
  - 2.5 Pre-drying is carried out where moisture content exceeds ISTA requirements.
  - 2.6 Containers and lids are weighed before and after filling.
  - 2.7 Weighing procedures conform with ISTA requirements and weight is expressed in grams to at least three decimal places.
  - 2.8 Lids are kept on containers until samples are placed in oven.
3. Dry and weigh sample
  - 3.1 Working sample is evenly distributed over surface of the container.
  - 3.2 Open containers and their lids are placed rapidly into an oven that is maintained at the required temperature for the species being tested.
  - 3.3 Drying period commences once oven returns to the required temperature after placement of containers.
  - 3.4 At the end of prescribed drying period, containers have their lids replaced before cooling to ambient temperature in desiccators.
  - 3.5 After cooling, the containers with lids and dried contents are weighed.
4. Calculate results
  - 4.1 Moisture content is expressed as a percentage of the weight of the original sample.
  - 4.2 Result of test is reported according to enterprise guidelines.



## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

### Ability to:

- prepare working samples to ISTA rules
- weigh containers and seed samples
- calculate weights and percentages
- cut and grind seeds
- report results.

Required knowledge includes:

### Knowledge of:

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- apparatus used in seed moisture testing
- enterprise and/or legal traceability requirements
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• preparing working samples</li> <li>• weighing containers and seed samples</li> <li>• calculating weights and percentages</li> <li>• cutting and grinding seeds</li> <li>• calculating and reporting results.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Appropriate apparatus</i></b> may include:	Grinding mill; electrically heated oven; containers with lids; a dessicator; a balance; sieves; and cutting tools.
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## Unit Sector(s)

Seed Testing

## AHCSDT306A Perform a seed germination test

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the process of performing testing the germination potential of a seed sample under laboratory conditions.

### Application of the Unit

This Unit applies to seed analysts working independently within enterprise guidelines. In general, they prepare samples for testing; conduct specified tests in accordance with enterprise requirements; maintain records and interpret results; and troubleshoot equipment problems.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Interpret and schedule test requirements
  - 1.1 Seeds to be germinated, test methods and equipment are identified.
  - 1.2 Hazards and enterprise control measures associated with the sample, seed pre-treatment, test methods, reagents and/or equipment are recognised.
  - 1.3 Work sequences are planned.
2. Prepare materials for test
  - 2.1 Prescribed number of replicates are drawn.
  - 2.2 **Growing media** is selected and prepared.
  - 2.3 Seed is **pre-treated** to break physiological dormancy where necessary.
  - 2.4 Water quality and pH is checked to ensure within required tolerances.
  - 2.5 Apparatus and/or equipment for germinating seeds is checked and prepared for the test.
3. Plant and maintain seeds
  - 3.1 Seed is planted on or into selected media according to enterprise guidelines.
  - 3.2 Temperature and light conditions of germination apparatus are monitored in accordance with test procedures.
4. Evaluate test results
  - 4.1 Seedlings are categorised and counted as **normal** or **abnormal**.
  - 4.2 **Un-germinated seed** is assessed as hard, fresh or dead.
  - 4.3 Other determinations for un-germinated seed are assessed if required.
  - 4.4 Results are recorded and reported in accordance with enterprise guidelines.
5. Maintain a safe work environment
  - 5.1 Safe work practices and personal protective equipment are used.
  - 5.2 Wastes and environmental impacts are minimised.
  - 5.3 Laboratory and hazardous waste are safely collected and disposed of.
  - 5.4 Equipment and reagents are cleaned and stored.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

**Ability to:**

- prepare growing media
- pre-treat seed to break dormancy
- plant and maintain seeds in a controlled environment
- assess seed germination
- record and report results
- maintain a safe work environment
- maintain security, integrity, traceability of samples, sub-samples, test data, results and documentation.

Required knowledge includes:

**Knowledge of:**

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- assessment of germination and determining need for retesting
- seed biology
- enterprise standard operating procedures (SOPs)
- enterprise and/or legal traceability requirements
- relevant health, safety and environment requirements
- calculations, tolerances and rounding results.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare growing media</li> <li>• assess seed germination</li> <li>• recording and reporting of results.</li> </ul>
Context of and specific resources for	Competency requires the application of work practices under work conditions. Selection and use of resources

assessment	for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Growing media</i></b> may include:	paper substrates; sand; or organic growing media.
<b><i>Pre-treatment of seeds</i></b> may include:	Pre-chilling; preheating; pre-storage; light; gibberellic acid; potassium nitrate; acid scarification; or mechanical scarification.
<b><i>Normal seedlings</i></b> may include:	intact seedlings; seedlings with slight defects; or seedlings with secondary infection as applicable to the species being tested.
<b><i>Abnormal seedlings</i></b> may include:	damaged; deformed or unbalanced; or decayed seedlings as applicable to the species being tested.
<b><i>Un-germinated seeds</i></b> may include:	hard; fresh; dead; or other categories of seed.

## Unit Sector(s)

Seed Testing

## AHCSDT307A Perform a 'Determination of Other Seeds by Number' test

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the estimation of the number of seeds of other species either generally (e.g. all other species) or by reference to one category or species of seed.

### Application of the Unit

This Unit applies to seed analysts working independently or under limited supervision, within enterprise guidelines. In general, they prepare samples for testing; conduct specified tests in accordance with enterprise requirements; maintain records and interpret results; and troubleshoot equipment problems.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare a working sample
  - 1.1 Seed to be tested is identified and records completed.
  - 1.2 Working sample is prepared from submitted sample.
  - 1.3 Size of working sample conforms with that prescribed under ISTA rules.
  - 1.4 The *extent of determination of other species* is selected based on client requirements, seed quantity or seed characteristics.
2. Examine seeds in working sample
  - 2.1 Working sample is searched for seeds of all other species or of certain stated species as required.
  - 2.2 Number of seeds found for each species is counted.
3. Calculate results
  - 3.1 Result is expressed as the number of seeds belonging to each stated species or category found in the quantity examined.
  - 3.2 Number of seeds per unit weight is calculated.
  - 3.3 Where two or more tests are carried out, result is expressed as total number of seeds found in total weight examined.
  - 3.4 Comparison of result is made with other determinations in the same or in a different laboratory.
4. Report results
  - 4.1 Result is reported under 'Other determinations'.
  - 4.2 Actual weight of seed examined is recorded.
  - 4.3 The scientific name and number of seeds of each species sought and found in the actual weight of seed examined.
  - 4.4 Extent of determination of other species of seed is recorded.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- prepare a working sample to ISTA rules
- identify a range of species
- examine and count seeds
- calculate weights and percentages
- report results.



Required knowledge includes:

**Knowledge of:**

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- seed biology
- seed identification
- enterprise and/or legal traceability requirements
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• prepare a working sample</li> <li>• examine seeds in working sample</li> <li>• calculate results</li> <li>• report results.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Extent of determination of other species*** may include:

"complete test" if full prescribed weight of seed is tested for all other species; "limited test" if test was for a limited range of other species; "reduced test" if weight tested was less than prescribed weight; "reduced-limited test" where weight was under prescribed weight and a limited number of species was examined; "test based on 25,000 seeds" where a sample of 25,000 seeds was examined and this sample was below the prescribed weight.

## Unit Sector(s)

Seed Testing

## AHCSDT401A Maintain a quarantine approved laboratory

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the maintenance and monitoring of a quarantine approved laboratory to meet Australian Quarantine Inspection Services (AQIS) certification.

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

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|--|--|
| 1. Interpret and communicate quarantine requirements | <ul style="list-style-type: none"> <li>1.1 Knowledge of <i>quarantine requirements</i> impacting on laboratory is maintained.</li> <li>1.2 Clear information is distributed on the responsibilities of individuals to maintain the laboratory's quarantine compliance.</li> <li>1.3 The implications of non-compliance are explained to all personnel within the laboratory.</li> </ul>  |
| 2. Ensure that work practices are compliant          | <ul style="list-style-type: none"> <li>2.1 Work practices are planned to ensure compliance.</li> <li>2.2 Testing procedures are implemented so that methods and <i>equipment</i> are fit for purpose.</li> <li>2.3 Systems to ensure the accuracy and/or efficiency of equipment are implemented.</li> <li>2.4 Team members are coached and mentored to manage their responsibilities.</li> </ul>  |
| 3. Monitor, analyse, adjust and report performance   | <ul style="list-style-type: none"> <li>3.1 Actual and potential problems with quarantine compliance are identified, rectified and reported promptly.</li> <li>3.2 Potential non-compliance is minimised through on-going analysis and supervision activities.</li> <li>3.3 Strategies to improve compliance are advised to laboratory personnel.</li> <li>3.4 New and improved procedures are communicated to laboratory personnel.</li> <li>3.5 Systems, records and reporting procedures are maintained according to AQIS requirements.</li> </ul> |
| 4. Investigate, rectify and report non-conformance   | <ul style="list-style-type: none"> <li>4.1 Incidents and occurrences of non-compliance are investigated and dealt with.</li> <li>4.2 On and/or off job training is provided for laboratory personnel to acquire and apply competencies to meet compliance.</li> <li>4.3 Workplace practices are re-designed or adjusted to ensure that non-compliance is not repeated.</li> </ul>  |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

**Ability to:**

- monitor and analyse laboratory practices to ensure AQIS compliance
- initiate appropriate action to rectify potential problems or instances of non-compliance
- provide information to laboratory staff on AQIS compliance
- negotiate changes to work processes and procedures to meet AQIS compliance
- provide coaching and mentoring support to laboratory personnel to change work practices
- keep required records complete, current and secure as required by AQIS

Required knowledge includes:

**Knowledge of:**

- AQIS requirements for a quarantine approved laboratory
- compliant laboratory systems, records and reporting procedures
- enterprise standard operating procedures (SOPs)
- training and mentoring strategies
- statutory and legal compliance requirements
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<ul style="list-style-type: none"> <li>• maintain laboratory operations to meet AQIS requirements for a quarantine approved laboratory</li> <li>• monitor and analyse work practices to ensure compliance</li> <li>• negotiate changes to work processes and procedures</li> <li>• provide coaching and mentoring support to personnel</li> <li>• keep required records.</li> </ul>
Context of and specific resources for assessment	This Unit of competency should be assessed in a laboratory environment that is accredited by either ISTA or NATA, as appropriate.

Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• observation of the candidate's interactions with and instruction of, laboratory personnel</li> <li>• review of verified records and reports generated by the candidate</li> <li>• feedback from managers regarding the candidate's ability to implement relevant enterprise procedures</li> <li>• review of information developed by the candidate and provided to the workgroup</li> <li>• This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.</li> </ul>
Guidance information for assessment	<p>To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Quarantine requirements</i></b> may include:	hygiene; isolation; signage; record-keeping; waste disposal; security; calibration, certification and efficacy of equipment; and operational procedures.
<b><i>Equipment</i></b> may include:	balances; scales; sterilisers; refrigerators; freezers; and storage cabinets.

## Unit Sector(s)

Seed Testing

## AHCSDT402A Prepare and maintain a seed reference collection

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the preparation and maintenance of a seed reference collection that can be used in the identification of seeds and which enables the quality control of laboratory procedures. This Unit does not include the botanical identification of seeds.

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Acquire responsibility for a seed reference collection
  - 1.1 Standard operating procedures for maintaining a seed reference collection are reviewed.
  - 1.2 Existing seed reference materials are checked to ensure labels and records are up to date.
  - 1.3 Seed collection complies with *industry protocols*.
  - 1.4 Procedures for introducing new seeds to the collection are confirmed.
  - 1.5 Record keeping and staff access arrangements are established.
2. Maintain a seed reference collection
  - 2.1 Storage conditions are reviewed to ensure that they comply with SOPs.
  - 2.2 Storage conditions are monitored to ensure seeds remain in good condition.
  - 2.3 Collection and records are updated as new seeds are added.
  - 2.4 Indicators of deterioration of seed in collection are advised to management.
3. Update the reference collection
  - 3.1 Information about seed is documented and added to the reference collection.
  - 3.2 Reference collection is updated as new seeds are identified according to enterprise guidelines.
  - 3.3 New materials are sourced as required to maintain currency and relevance of the collection.
4. Provide seed reference materials on request
  - 4.1 Seed reference material is provided, in accordance with enterprise policy, with action taken to prevent contamination.
  - 4.2 External requests for access to the seed reference collection are verified and approved by manager before being processed.
  - 4.3 Records of access to collection and removal of seeds from collection are maintained.
5. Maintain a safe work environment
  - 5.1 Safety and biosecurity protocols are observed when handling and processing seed reference materials.
  - 5.2 Redundant, diseased and outdated seed is disposed of safely and appropriately.



## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

### Ability to:

- maintain seed specimens so that the reference characteristics and attributes are stable in storage and retrieval
- keep and update records
- communicate appropriately with management, staff and external parties.

Required knowledge includes:

### Knowledge of:

- seed reference collections - what they are, when and why they should be used
- storage requirements of different seed varieties
- quarantine and isolation procedures
- taxonomic nomenclature
- seed biology
- enterprise Standard Operating Procedures (SOPs)
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• maintain and update a seed collection</li> <li>• source new materials</li> <li>• keep records</li> <li>• communicate with others.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

	enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Industry protocols</i></b> may include:	ISTA's "Universal List of Species"; laboratory's scope of accreditation.
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## Unit Sector(s)

Seed Testing

## AHCSDT403A Perform an Anguina test on annual ryegrass seed

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers testing seed of annual ryegrass for the presence of Nematode Gall (*Anguina tenuis*).

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare for *Anguina* testing
  - 1.1 Test request is reviewed to identify samples to be tested, required test methods, equipment, and staff to be involved in the test.
  - 1.2 Equipment and working space are cleaned and calibrated.
  - 1.3 The working sample or sub-samples are prepared using mixing and dividing processes.
  - 1.4 Sample details are correctly recorded on worksheets and sample packets.
2. Inspect seed samples
  - 2.1 A prescribed sample of ryegrass seed is prepared and inspected on a diaphanoscope for the presence of ***galls***.
  - 2.2 Any galls present, are separated into yellow and black galls, counted and reported separately.
  - 2.3 If galls are not present, then further samples of six grams (6gms) are inspected to a total of sixty grams (60gms) of seed.
3. Examine galls
  - 3.1 Galls are soaked in water for prescribed period.
  - 3.2 Galls are dissected and examined under a microscope for the presence of nematodes.
  - 3.3 The presence of nematodes is recorded.
4. Report results
  - 4.1 Testing procedures carried out by analysts are reviewed.
  - 4.2 Where no galls are found on the sixty grams (60gms) of seed, a report of no galls found is issued.
  - 4.3 Where galls have been detected containing nematodes, these are reported as number of galls per sample weight.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- plan work sequences
- inspect seed using a diaphanoscope
- dissect galls and using a microscope
- identify nematodes

- record and reporting of results of tests
- follow enterprise guidelines and standard operating procedures.

### Required knowledge includes:

#### Knowledge of:

- seed biology
- basic identification of nematodes
- recording and reporting protocols
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• plan and delegate testing tasks</li> <li>• inspect seed samples using a diaphanoscope</li> <li>• identify galls on ryegrass seed</li> <li>• use a microscope to detect nematodes.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Galls*** may include:

black and yellow galls.

## Unit Sector(s)

Seed Testing

# AHCSDT404A Develop and implement laboratory policy and procedures

## Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

## Unit Descriptor

This competency covers the outcomes required to develop and implement workplace policies and procedures in a seed testing laboratory including the modification of the policy to suit changed circumstances.

## Application of the Unit

This Unit applies to supervising analysts or managers of seed testing laboratories. In general, they manage personnel; monitor business performance and budgets; manage OHS processes; plan and monitor QA programs and maintain registration and statutory and legal compliances; develop and maintain laboratory documentation; and prepare for internal and external audits.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Nil.

## Employability Skills Information

This Unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Develop workplace *policy and procedures*
  - 1.1 Scope of policy and procedures is defined.
  - 1.2 Stakeholders are identified and consulted as a key component of the development process.
  - 1.3 Operational strategies relevant to all stages of work covered by the policy are reviewed.
  - 1.4 Recommendations for policy and procedures options based on likely effectiveness, timeframes and cost are proposed.
  - 1.5 The organisation's purpose and operational goals are reflected in the policy and procedures.
  - 1.6 *Implementation strategy* is agreed.
2. Communicate the policy
  - 2.1 The policy and procedures and the expected outcome are promoted to key stakeholders.
  - 2.2 The expected outcomes, activities to be undertaken and responsibilities are assigned and those involved in implementing the policy and procedures are informed.
3. Implement the policy
  - 3.1 Processes to help implement the policy and procedures are developed and communicated.
  - 3.2 Record system for tracking adoption of policy and procedures is established.
4. Review policy implementation
  - 4.1 Outcomes and feedback are provided to key personnel and stakeholders.
  - 4.2 Issues and non-conformances that may require remedial action are identified.
  - 4.3 Success or otherwise of policy and procedures is investigated.
  - 4.4 Policy and/or procedures are modified as required.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills includes:

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### Ability to:

- develop and implement policies and procedures



- interpret business/strategic plans
- evaluate complex and formal documents such as policy, legislation and seed testing protocols
- research, analysing and presenting information
- prepare written reports
- communicate with a range of different workplace personnel
- deal with different points of view and dissenting stakeholders.

Required knowledge includes:

#### Knowledge of:

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- relevant policy and procedure development and implementation processes
- legislation, protocols and rules impacting on the laboratory workplace
- enterprise standard operating procedures (SOPs)
- equal employment opportunity, equity and diversity principles and occupational health and safety implications of policy/s being developed.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<ul style="list-style-type: none"> <li>• develop workplace policy and procedures</li> <li>• prepare strategies for communicating and implementing policy and procedures</li> <li>• monitor and analyse effectiveness of policy and procedures.</li> </ul>
Context of and specific resources for assessment	This Unit of Competency should be assessed in a laboratory environment that is accredited by either ISTA or NATA, as appropriate.
Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• observation of the candidate's interactions with and instruction of, personnel</li> <li>• review of verified records and reports generated by the candidate</li> <li>• feedback from managers regarding the candidate's ability to implement relevant enterprise procedures</li> </ul>

	<ul style="list-style-type: none"> <li>review of information developed by the candidate and provided to the workgroup.</li> </ul>
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Policy and procedures</i></b> may include:	workplace operations; work instructions; temporary instructions; and compliance with industry and government codes and standards.
<b><i>Stakeholders</i></b> may include:	employees at all levels of the organisation; certifying agencies; customers; suppliers; regulators; other organisations.
<b><i>Implementation strategies</i></b> may include:	<ul style="list-style-type: none"> <li>awareness raising among stakeholders.</li> <li>training of staff in new/altered procedures</li> <li>marketing and promotional activities.</li> </ul>

## Unit Sector(s)

Seed Testing

## AHCSDT405A Handle & store quarantinable seeds

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the storage and handling of seeds subject to quarantine or isolation in accordance with laboratory procedures, and in compliance with AQIS or other regulatory requirements.

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

- |  |   |
|--|---|
| 1. Handle and test quarantinable <i>seed</i> | 1.1 Work practices involving the handling and testing of quarantinable seed are planned to ensure compliance.<br>1.2 Seed testing procedures are carried out so that methods and equipment are fit for purpose.<br>1.3 Procedures to ensure the accuracy, efficiency and AQIS compliance of equipment are implemented.<br>1.4 Team members are supervised and mentored to ensure AQIS compliance. |
| 2. Store quarantinable seeds                 | 2.1 AQIS and laboratory <i>requirements for storage facilities</i> and associated document processes are identified.<br>2.2 Quarantinable seeds are stored in accordance with AQIS requirements and documented procedures.<br>2.3 Stored quarantinable seed is secured to prevent unauthorised access.  |
| 3. Report non-compliance                     | 3.1 Incidents and occurrences of non-compliance with storage or handling of quarantinable seeds are reported to management.<br>3.2 Supervision and training is provided for laboratory personnel to meet compliance.<br>3.3 Workplace practices are re-designed or adjusted to prevent repetition of non-compliance.  |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- comply with AQIS and laboratory requirements when dealing with quarantinable seeds
- take appropriate action to rectify potential problems or instances of non-compliance
- provide information to laboratory staff on AQIS compliance
- suggest changes to laboratory procedures to meet AQIS compliance
- provide training and support to laboratory personnel to change work practices
- keep required records complete, current and secure as required by AQIS.

Required knowledge includes:

**Knowledge fo:**

- AQIS requirements required for handling and storing quarantinable seeds
- laboratory systems, records and reporting procedures for dealing with quarantinable seeds
- statutory and legal compliance requirements
- relevant health, safety and environment requirements.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• handle and store quarantinable seeds</li> <li>• maintain records and documentation relating to AQIS compliance</li> <li>• report non-compliance</li> <li>• redesign work procedures to prevent reoccurrence of non-compliance.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances<sup>0</sup></p>
Method of assessment	<p>This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.</p>
Guidance information for assessment	<p>To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Seed</i> may include:	<ul style="list-style-type: none"> <li>• bare seed; treated seed and coated seed that has been prepared as required.</li> </ul>
<i>AQIS requirements for storage</i> may include:	<ul style="list-style-type: none"> <li>• hygiene; isolation; signage; record-keeping; waste disposal; security; calibration, certification and efficacy of equipment and operational procedures.</li> </ul>

## Unit Sector(s)

Seed Testing

## AHCSDT406A Undertake internal audits in a seed laboratory

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit describes the performance outcomes, skills and knowledge required to carry out an internal audit in a seed testing laboratory.

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare for internal audit
  - 1.1 Previous internal audits are reviewed.
  - 1.2 Relevant enterprise documents are sourced and reviewed.
  - 1.3 *Audit plan* is prepared to suit staff availability and laboratory operations.
  - 1.4 Appropriate checklists and audit related documentation are prepared.
  - 1.5 In consultation with management, specific *methods and techniques are agreed*.
2. Conduct audit
  - 2.1 *Seed testing techniques* are conducted by analysts and observed and reported on by auditor.
  - 2.2 Questioning strategies are used to obtain further information from analysts on testing techniques and approaches.
  - 2.3 Deviations to the SOPs observed during observations of testing are relayed to the analyst.
  - 2.4 Seed storage, chemical store and sampling areas are inspected.
  - 2.5 Work charts, schedules, reports and plans are scrutinized.
  - 2.6 The availability and currency of *laboratory documents* are reviewed.
  - 2.7 *Archived documents* are inspected to ensure they are complete and meet statutory holding period.
3. Report findings
  - 3.1 Staff meeting is held to discuss outcomes of audit.
  - 3.2 Continuous improvement forms are completed by auditor with suggested corrective actions.
  - 3.3 An Audit Report is prepared and provided to management for review.
  - 3.4 Continuous improvement forms are presented at future staff meetings until corrective action is completed.
  - 3.5 Data collected during audit is filed in laboratory information management system.
  - 3.6 Confidentiality and security of enterprise information and laboratory data is maintained.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.



Required skills include:

**Ability to:**

- communicate with laboratory staff and management to explain audit requirements and outcomes
- organise and manage time to sequence audit tasks, meet timelines and arrange meetings
- use problem-solving skills to identify any issues that have the potential to impact on the auditing process or outcome, and to develop options to resolve these issues when they arise.

Required knowledge includes:

**Knowledge of:**

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- auditing methods and techniques
- seed testing techniques, equipment and methodologies
- enterprise standard operating procedures (SOPs)
- relevant legislation affecting business operation.

## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>Evidence of the following is required:</p> <ul style="list-style-type: none"> <li>• preparation of audit plan and strategy for a seed testing laboratory</li> <li>• gathering of data and information by a variety of methods</li> <li>• developing a continuous improvement report with suggested corrective actions</li> <li>• preparing an audit report for management review.</li> </ul>
Context of and specific resources for assessment	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Audit plan</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• audit requirements and/or identification of relevant quality system documentation</li> <li>• provision of personnel for audit</li> <li>• confidentiality requirements</li> <li>• reporting procedures</li> <li>• time lines and schedules.</li> </ul>
<p><b><i>Seed testing techniques</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• working sample preparation</li> <li>• purity tests</li> <li>• germination test</li> <li>• tetrazolium test</li> <li>• determination of other seed</li> <li>• seed identification</li> <li>• 1000 seed weight test</li> <li>• moisture content test.</li> </ul>
<p><b><i>Laboratory documentation</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOP's)</li> <li>• tolerance tables for analyst use</li> <li>• quality manual</li> <li>• quality policy manual</li> <li>• organisational chart</li> <li>• continuous improvement forms</li> <li>• customer complaint file</li> <li>• staff development and training records</li> <li>• seed reference collection</li> </ul>

<i>Archived documents</i> may include:	<ul style="list-style-type: none"><li>• ISTA Certificates</li><li>• Analysis Certificates (non-ISTA)</li><li>• audit reports</li><li>• request forms</li><li>• calibration records</li><li>• equipment log books.</li></ul>
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## Unit Sector(s)

Seed Testing

## AHCSDT407A Perform an endophytic seed test

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the determination of the presence of fungal endophyte in certain grasses.

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare for endophyte testing
  - 1.1 Test request is reviewed to identify samples to be tested and required test methods and equipment.
  - 1.2 Equipment and working space are cleaned and prepared for use.
  - 1.3 Endophyte staining solution is prepared.
  - 1.4 Working sample of seed is prepared from Pure Seed.
2. Test seed for endophyte presence
  - 2.1 Seed is softened in sodium hydroxide for recommended time period.
  - 2.2 Seed is rinsed thoroughly in running tap water.
  - 2.3 Seed is de-glumed, placed on a microscope slide in a drop of endophyte staining solution and slightly crushed.
  - 2.4 Cover glass is placed on seed and gentle pressure is applied.
  - 2.5 Seed is examined with compound microscope and scored as positive if endophytic hyphae are present.
3. Test seedlings for endophyte presence
  - 3.1 Seeds from working sample are selected at random and germinated.
  - 3.2 Seedlings from the sample germinated are examined after growing for a minimum of 48 days.
  - 3.3 Outermost sheath is removed from the seedling such that tissue to be examined should have no obvious discoloration from saprophytes and should have as little chlorophyll as possible.
  - 3.4 A longitudinal section of leaf sheath approximately 3–5 mm in width is isolated.
  - 3.5 Section is placed on a microscope slide with the epidermis side down.
  - 3.6 Section is stained immediately with the endophyte staining solution for prescribed time period.
  - 3.7 Excess dye is blotted off with tissue paper and a coverglass is placed over section and flooded with water.
  - 3.8 Section is examined with compound microscope and scored as positive if endophytic hyphae are present.
4. Record and report test results
  - 4.1 Results are entered under Other Determinations.
  - 4.2 The scientific name of the pathogen which has been tested for and the test method used is recorded in the test results.
  - 4.3 Sample size used for testing is recorded.
  - 4.4 In the case of a negative result where the pathogen was not detected, the results is reported in terms of the *tolerance standard*.
  - 4.5 In the case of a positive result the report should indicate percentage of infected seed.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

### Ability to:

- prepare endophyte stains
- inspect seed using a compound microscope
- detect endophyte presence in seeds and seedlings
- record and report test results.

Required knowledge includes:

### Knowledge of:

- seed biology
- identification of endophytes
- recording and reporting protocols
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	Evidence of the ability to: <ul style="list-style-type: none"> <li>• prepare endophyte stains</li> <li>• test seed for endophyte presence</li> <li>• test seedlings for endophyte presence</li> <li>• record and report results of tests.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units

	and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The *tolerance standard* may include:

an infection level less than 1% with 95% probability and depends on the total number of seeds tested,  $n$ , and is approximately  $3/n$  ( $P=0.95$ ) (see Roberts et al., 1993).

## Unit Sector(s)

Seed Testing

## AHCSDT408A Perform an electrophoresis test on a seed sample

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers testing seed by separating proteins of varying size and/or electric charge to get a banding pattern that can be used to identify or verify a particular variety.

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

1. Prepare *seed* extraction and gel
  - 1.1 Working sample is prepared from submitted sample.
  - 1.2 Seed to be tested is identified and records completed.
  - 1.3 Single seeds are cut or crushed and transferred to centrifuge tubes.
  - 1.4 Extraction solution is added and mixed with crushed seeds and allowed to stand for prescribed period.
  - 1.5 Tubes are centrifuged and supernatants are collected and stored.
  - 1.6 Gel mixture is prepared and chemicals used to achieve required level of polymerisation.
2. Carry out electrophoresis
  - 2.1 Buffer solution is placed in tanks.
  - 2.2 Samples are loaded into wells and gel is placed in tanks.
  - 2.3 Electrophoresis is carried out at the prescribed voltage and duration.
  - 2.4 Temperature is maintained as required throughout the process
3. Fix and stain sample
  - 3.1 Gel is removed from tank and treated with chemicals as prescribed.
  - 3.2 Gel is washed and treated to enhance stain.
  - 3.3 Stain is examined and/or photographed.
4. Evaluate stain
  - 4.1 Banding pattern is compared with that of authentic variety or that of a known control sample.
  - 4.2 Records and reports are provided in accordance with enterprise procedures.
  - 4.3 Determine if obvious procedure or equipment problems have led to atypical data or results..
5. Maintain a safe work environment
  - 5.1 Established safe work practices and personal protective equipment are used to ensure personal safety and that of other laboratory personnel.
  - 5.2 The generation of wastes and environmental impacts are minimised.
  - 5.3 The safe collection of laboratory and hazardous waste for subsequent disposal is ensured.
  - 5.4 Equipment and reagents are cared for and stored as required
6. Maintain laboratory records
  - 6.1 Approved data is entered into laboratory information management system.
  - 6.2 Confidentiality and security of enterprise information and laboratory data is maintained.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- analyse and report results
- evaluation stain banding
- fix and stain seed samples
- maintain security, integrity, traceability of samples, sub-samples, test data, results and documentation
- prepare seed extraction and gel
- record and communicate results in accordance with enterprise procedures
- select test methods and procedures
- use a centrifuge.

### Required knowledge includes:

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#### Knowledge of:

- seed biology
- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- principles of electrophoresis
- range of electrophoresis testing procedures
- materials and apparatus used in electrophoresis testing
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements
- using stain patterns and "fingerprints" to determine seed variety.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate	The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and

competency in this Unit	satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: <ul style="list-style-type: none"> <li>• extract seed and prepare gel</li> <li>• centrifuging seed and gel mixes</li> <li>• interpreting stain bands and patterns.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>Seed</b> may include:	bare seed; treated seed; and coated seed that has been prepared as required.
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## Unit Sector(s)

Seed Testing

## AHCSDT409A Perform a tetrazolium seed viability test

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the process of staining seeds with a tetrazolium solution to assess seed viability or germination potential.

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare *replicates* for testing
  - 1.1 Pure *Seed* is mixed thoroughly to reduce bias in results.
  - 1.2 Prescribed number of replicates are drawn from the Pure Seed fraction according to enterprise guidelines.
  - 1.3 Safe work practices and personal protective equipment are used to ensure personal safety and that of other laboratory personnel.
2. Pre-moisten replicates
  - 2.1 Seed is *pre-moistened* to reduce possibility of injury to seeds when puncturing or cutting and to enable penetration of the tetrazolium solution under prescribed temperature and light conditions.
  - 2.2 Sticky mucilage is removed from seeds as necessary.
  - 2.3 Seed *tissue is exposed* prior to staining according to enterprise guidelines.
  - 2.4 Seeds are kept moist prior to testing.
3. Stain with tetrazolium solution
  - 3.1 Seeds are completely immersed in tetrazolium solution according to enterprise guidelines.
  - 3.2 Fungicides and/or antibiotics may be added to solution according to enterprise guidelines.
  - 3.3 Low light levels are maintained as required by testing procedures to facilitate staining.
  - 3.4 At completion of staining period, the solution is decanted and seeds are rinsed with water.
4. Evaluate test results
  - 4.1 Each seed is examined and evaluated as viable or non-viable based on staining patterns applicable to the species being tested.
  - 4.2 The number of seeds considered viable in each replicate is counted.
  - 4.3 The percentage of viable seed in each replicate is calculated and average percentage of viable seed across all replicates is determined.
5. Finalise reporting and clean up
  - 5.1 Results of test are recorded and reported according to enterprise guidelines.
  - 5.2 Laboratory and hazardous waste are safely handled, collected and disposed of according to enterprise guidelines.
  - 5.3 Apparatus and equipment used in tetrazolium test is cleaned and used chemicals and solutions are disposed of safely in accordance with enterprise guidelines.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

### Ability to:

- calculate percentages and averages, rounding
- evaluate and report results
- expose seed tissue using recommended methods for particular seed types
- follow enterprise guidelines and standard operating procedures
- pre-moisten seed using a range of techniques
- prepare replicates for testing.

Required knowledge includes:

### Knowledge of:

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- seed biology
- tetrazolium testing procedures
- concepts of metrology
- enterprise and/or legal traceability requirements
- interpretation and recording of test result, including simple calculations
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• preparation of replicates for testing</li> <li>• staining with tetrazolium</li> <li>• evaluation and reporting of test results.</li> </ul>

Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Seed</i></b> may include:	<ul style="list-style-type: none"> <li>• bare seed; treated seed; and coated seed that has been prepared as required.</li> </ul>
<b><i>Replicate sample</i></b> may include:	<ul style="list-style-type: none"> <li>• pure seed fraction of a purity test, or a representative fraction of the submitted sample.</li> </ul>
<b><i>Pre-moistening method</i></b> may include:	<ul style="list-style-type: none"> <li>• slow moistening through imbibing between moist paper, or soaking in water.</li> </ul>
<b><i>Exposure of tissue</i></b> may include:	<ul style="list-style-type: none"> <li>• piercing the seed; longitudinal cutting; transverse cutting, transverse incision; excision of embryo, or removal of seed coat.</li> </ul>

## Unit Sector(s)

Seed Testing

## AHCSDT410A Perform a seed vigour test

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers testing for seed vigour to provide information about the seeds' planting value in a wide range of environments and/or the storage potential of seed lots.

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

1. Prepare for a *seed vigour* test
  - 1.1 Test request is reviewed to identify samples to be tested, required *test methods* and equipment.
  - 1.2 Equipment and working space are cleaned and calibrated to enterprise standards.
2. Receive and prepare samples
  - 2.1 Samples are logged using standard operating procedures (SOPs).
  - 2.2 Sample description is recorded, compared with specification and discrepancies reported to supervisor.
  - 2.3 Samples and standards are prepared in accordance with testing method requirements.
  - 2.4 Traceability of samples from receipt to reporting of results is maintained.
  - 2.5 If control samples are being used, ensure they are prepared according to enterprise guidelines (Reinstated MT).
3. Check equipment before use
  - 3.1 Equipment/instruments are set up in accordance with test method requirements.
  - 3.2 Pre-use and safety checks are performed in accordance with relevant enterprise and operating procedures.
  - 3.3 Faulty or unsafe components and equipment are identified and reported to appropriate personnel.
  - 3.4 Equipment calibration is checked using specified standards and procedures, if applicable.
  - 3.5 Out of calibration equipment/instruments is quarantined.
  - 3.6 Reagents required for the test are available and meet quality requirements.
4. Conduct test
  - 4.1 The test method to be used is determined according to the type of seed or as requested by the person requesting the test.
  - 4.2 Equipment is cleaned and maintained in a clean state as required by enterprise guidelines
  - 4.3 A working sample is prepared and replicates using mixing and dividing processes according to enterprise guidelines.
  - 4.4 Seed is prepared, placed and/or treated to suit test method requirements and enterprise guidelines.
  - 4.5 Measurements are made with equipment and/or counting and results are recorded as determined by test method and enterprise guidelines.
  - 4.6 A statement of specific variable is prepared and provided to accompany the results.

- |                                     |   |
|-------------------------------------|---|
| 5. Evaluate test results            | 5.1 The number of seeds or seedlings with required characteristics in each replicate is counted.  |
|                                     | 5.2 The percentage of seed or seedlings with required characteristics in each replicate is calculated and average percentage across all replicates is determined. |
|                                     | 5.3 Result of seed vigour test is reported to supervisor.   |
| 6. Process and interpret data       | 6.1 Test data is recorded noting atypical observations.   |
|                                     | 6.2 Results are recorded and reported in accordance with enterprise procedures.   |
|                                     | 6.3 Trends in data and/or results are interpreted and report out of specification or atypical results promptly to appropriate personnel.                          |
|                                     | 6.4 Determine if obvious procedure or equipment problems have led to atypical data or results   |
| 7. Maintain a safe work environment | 7.1 Established safe work practices and personal protective equipment are used to ensure personal safety and that of other laboratory personnel.                  |
|                                     | 7.2 The generation of wastes and environmental impacts are minimised.   |
|                                     | 7.3 The safe collection of laboratory and hazardous waste for subsequent disposal is carried out.   |
|                                     | 7.4 Equipment and store equipment and reagents are cleaned and cared for as required.   |
| 8. Maintain laboratory records      | 8.1 Approved data is entered into laboratory information management system.   |
|                                     | 8.2 Confidentiality and security of enterprise information and laboratory data is maintained.   |
|                                     | 8.3 Equipment and calibration logs are maintained in accordance with enterprise procedures.   |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- interpret test methods and procedures
- carry out sample preparation procedures
- perform calibration checks
- plan work sequences

- designate components of test to other staff
- use calculation methods, including appropriate units, uncertainties, balancing equations, and the concentration of the solution given the chemical reaction for the titration
- record and communicate results in accordance with enterprise procedures
- maintain security, integrity, traceability of samples, sub-samples, test data, results and documentation
- prepare and treat seed for testing
- follow enterprise guidelines and standard operating procedures
- calculate percentages, averages
- evaluate and report results.

Required knowledge includes:

### Knowledge of:

- role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- seed biology
- seed identification
- range of seed vigour testing procedures
- materials and apparatus used in seed vigour testing
- enterprise and/or legal traceability requirements
- relevant health, safety and environment requirements
- enterprise standard operating procedures (SOPs)
- calculations, tolerances and rounding results.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare and conduct a seed vigour test</li> <li>• record results</li> <li>• interpret and present results.</li> </ul>
Context of and specific resources for	Competency requires the application of work practices

assessment	under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Seed</i></b> may include:	<ul style="list-style-type: none"> <li>• bare seed; treated seed; and coated seed that has been prepared as required.</li> </ul>
<b><i>Seed vigour</i></b> may include:	<ul style="list-style-type: none"> <li>• rate and uniformity of seed germination and seedling growth;</li> <li>• emergence ability of seeds under unfavourable environmental conditions;</li> <li>• performance after storage including the retention of the ability to germinate.</li> </ul>
<b><i>Test methods</i></b> may include:	<ul style="list-style-type: none"> <li>• stress tests; seedling growth tests; and biochemical tests.</li> </ul>

## Unit Sector(s)

Seed Testing

## AHCSDT411A Perform a 1000 seed weight test

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers determining the weight per 1000 pure seeds from a submitted sample.

### Application of the Unit

This Unit applies to senior seed analysts working within enterprise guidelines. In general, they oversee the preparation of samples for testing; conduct and supervise specified tests in accordance with enterprise requirements; interpret and report results; maintain record-keeping systems; and have responsibility for overall laboratory operations, the supervision of staff, and implementation of quality assurance procedures.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare a *working sample*
  - 1.1 *Pure seed* is obtained following a purity analysis or as a representative fraction of a submitted sample.
  - 1.2 Mechanical dividers are used where appropriate.
  - 1.3 Moisture content of working sample is maintained through storage in moisture proof containers prior to counting.
  - 1.4 Labelling and records are completed.
2. Count and weigh seed by machine
  - 2.1 The entire working sample is put through a counting machine and the total number of seeds indicated is recorded.
  - 2.2 Working sample is weighed to the required number of decimal places.
3. Count and weigh replicates by hand
  - 3.1 Eight replicates of 100 seeds are counted out randomly from the working sample.
  - 3.2 Each replicate is weighed to the required number of decimal places.
  - 3.3 Weights of each replicate are recorded.
  - 3.4 Variance, standard deviation and coefficient of variance are calculated according to enterprise guidelines.
  - 3.5 Where the coefficient of variance exceeds the prescribed value, a new set of replicates is tested.
  - 3.6 Where the coefficient of variance does not exceed the prescribed value, the average weight of 1000 seed is determined.
4. Report results
  - 4.1 Results of weight determination is reported under "other determinations" to the prescribed number of decimal places.
  - 4.2 The method used and the result as calculated is reported.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

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### Ability to:

- prepare working samples
- use mechanical dividers and counting machines
- weigh seed samples
- calculate variance, standard deviation and coefficient of variance
- follow enterprise guidelines and standard operating procedures.

Required knowledge includes:

**Knowledge of:**

- role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- concepts of metrology
- seed biology
- apparatus for weighing, counting and dividing seed samples
- calculations such as variance, standard deviation and coefficient of variance
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	Evidence of the ability to: <ul style="list-style-type: none"> <li>• prepare and weigh replicates</li> <li>• calculate variance, standard deviation and coefficient of variance</li> <li>• report results.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Pure seed</i></b> may include:</p>	<p>seed as defined for a particular species under the International Rules for Seed Testing.</p>
<p>Seed used in the <b><i>working sample</i></b> may include:</p>	<p>the entire pure seed fraction of a purity analysis; or pure seed taken from a representative fraction of the submitted sample.</p>

## Unit Sector(s)

Seed Testing



# AHCSHG101A Undertake basic shearing and crutching

## Modification History

Not Applicable

## Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit of competency covers the process of basic wool removal under supervision as part of a shearing and crutching operation and defines the standard required to: Set-up a shearing handpiece, catch and shear a sheep in line with organisational, OHS and animal welfare standards.</p>
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## Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to shearing and crutching procedures at the beginner level and is usually conducted under supervision within established routines, methods and procedures.</p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Set-up shearing handpiece as directed	1.1.Potential and existing hazards in the workplace are identified and reported to supervisor. 1.2.Shearing equipment is checked for correct operation. 1.3.Assemble comb and cutter on handpiece. 1.4.Set lead and throw 1.5.Set tension to enable comb and cutter to cut wool cleanly with minimum friction. 1.6.Lubricate working surfaces and moving parts in line with manufacturers requirements.
2. Follow health and fitness procedures	2.1.Prepare for exercises to warm-up the body. 2.2.Perform back, shoulder, leg, arm, and abdomen stretches. 2.3.Recognise the necessities of hydration, nutrition and rest periods.
3. Catch sheep for shearing	3.1.Suitable personal protective equipment is selected, used and maintained in line with the OHS and workplace. 3.2.Sheep are caught and moved in line with organisational, OHS, industry and animal welfare standards. 3.3.Sheep are moved from the catching pen to the shearing board using safe manual handling techniques. 3.4.Sheep are positioned for shearing/crutching in line with industry agreed method.
4. Remove wool	4.1.Handpiece is activated and positioned readiness for

ELEMENT	PERFORMANCE CRITERIA
	shearing/crutching operations. 4.2. Shear/crutch section of sheep as directed. 4.3. Release sheep safely from the board into the count-out pens.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safety directions
- prepare materials, tools and equipment for work
- select and use equipment and materials appropriate for shearing sheep
- avoid contamination, second cuts and damage to wool, sheep and people
- catch and release sheep safely
- demonstrate safe and responsible workplace practices
- provide due care and handle sheep humanely
- clean and maintain shearing equipment, site and facilities
- communicate problems, faults and workplace hazards, and to comprehend instructions provided by the owner or overseer
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing and crutching techniques, and positions and method of shearing
- safe handling techniques for catching, dragging, shearing and releasing sheep
- anatomy of all types of sheep
- sheep diseases

**REQUIRED SKILLS AND KNOWLEDGE**

- animal welfare requirements in relation to sheep
- sheep behaviour
- personal protective clothing and equipment and when and how it should be used
- Federal Pastoral Industry Award, and/or State Shearing Award of Queensland, and/or Western Australian Shearing Contractors Award
- relevant State/Territory legislation and awards, regulations and codes of practice with regard to workplace OHS and animal welfare.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following under supervision:

- set-up a shearing handpiece,
- ensure health and fitness for shearing,
- catch and shear a sheep in line with organisational, OHS and animal welfare standards

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Shearing and crutching may include:	<ul style="list-style-type: none"> <li>the removal of fleece and or crutching wool from a range of breeds and types of sheep</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Shearing
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCSHG201A Crutch sheep

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of crutching sheep in an agricultural environment and defines the standard required to: load and prepare handpiece and ensure combs and cutters are sharp; catch sheep and move into position for crutching; crutch wool from face, belly and crutch area as directed for the mob; clear maggots and shear stained wool from fly blown sheep; avoid contamination in the wool and assist in keeping stained wool separate; disengage handpiece and release sheep after crutching.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the crutching of sheep within enterprise guidelines and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for crutching operations	<p>1.1. Crutching equipment is checked for correct operation prior to crutching session.</p> <p>1.2. Sheep to be crutched are identified, caught and moved in line with organisational, Occupational Health and Safety (OHS), industry, and animal welfare standards.</p> <p>1.3. Sheep are positioned for crutching in line with organisation determined and industry agreed crutching methods.</p> <p>1.4. Potential and existing hazards in the workplace are identified and reported to the supervisor.</p> <p>1.5. Suitable personal protective equipment is selected, used and maintained in line with OHS and workplace procedures.</p>
2. Perform crutching operations	<p>2.1. Handpiece is activated and positioned in readiness for crutching.</p> <p>2.2. Wool is shorn from face, crutch or belly as instructed and in line with industry standards.</p> <p>2.3. Crutching methods are used to ensure that injury to the sheep and damage to the fleece is avoided.</p> <p>2.4. Safe handling techniques are used at all times.</p>
3. Respond to complications	<p>3.1. Contamination is identified during crutching and reported to wool handlers in line with enterprise requirements.</p> <p>3.2. Cuts are treated in accordance with industry standards and animal welfare requirements.</p> <p>3.3. Flyblown sheep are identified and reported in line</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>with industry standards and animal welfare requirements.</p> <p>3.4. Problem sheep are identified and reported in line with enterprise and industry requirements.</p>
4. Complete crutching operations	<p>4.1. Wool is placed to avoid contamination and for wool handlers to collect in line with enterprise and industry requirements.</p> <p>4.2. Handpiece is switched off and re-positioned to non-operational position.</p> <p>4.3. Sheep are safely released from the board into the count out pens.</p> <p>4.4. Crutching grievances and difficulties are reported in line with enterprise and industry requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- select and use equipment and materials appropriate for crutching sheep
- avoid contamination, second cuts and damage to wool, animals and people
- catch and release sheep safely
- demonstrate safe and responsible workplace practices
- provide due care and handle sheep humanely
- clean and maintain crutching equipment, site and facilities
- read and interpret manufacturers specifications, work and maintenance plans
- work in a team as a team member
- communicate problems, faults and workplace hazards, and to comprehend instructions provided by the owner or overseer
- tally crutched sheep count
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures



## REQUIRED SKILLS AND KNOWLEDGE

- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed crutching techniques, positions and methods of crutching
- safe handling techniques for catching, dragging, crutching and releasing sheep
- anatomy of all types of sheep
- sheep diseases
- animal welfare requirements in relation to sheep
- sheep behaviour
- personal protective clothing and equipment, and when and how it should be used
- Federal Pastoral Industry Award and/or State Shearing Award of Queensland or Western Australian Shearing Contractors Award
- relevant State/Territory legislation and awards, regulations and codes of practice with regard to workplace OHS and animal welfare.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- load and prepare handpiece and ensure combs and cutters are sharp
- catch sheep and move into position for crutching
- crutch wool from face, belly and crutch area as directed for the mob
- clear maggots and shear stained wool from fly blown sheep

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• avoid contamination in the wool and assist in keeping stained wool separate</li> <li>• disengage handpiece and release sheep after crutching.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• all breeds and types of sheep.</li> </ul>
Crutching may include:	<ul style="list-style-type: none"> <li>• all crutch patterns recognised in the industry.</li> </ul>
Sheds may include:	<ul style="list-style-type: none"> <li>• a shearing shed</li> <li>• or a mobile crutching plant.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCSHG202A Assist in preparing for shearing and crutching

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of assisting the owner/classer in the preparation of sheds and facilities prior to shearing and crutching operations and defines the standard required to: maintain a contaminant and hazard-free environment for shearing and wool handling; recognise and report Occupational Health and Safety (OHS) hazards; carry out minor maintenance and repairs to equipment and facilities; dispose of waste in an environmentally responsible manner; arrange and position shearing materials ready for shearing or crutching; place sheep in pens ready for shearing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking usually within a team environment.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare equipment	<p>1.1. Facilities are inspected with owner/classer to determine the degree of preparation required.</p> <p>1.2. Facilities and equipment are cleaned to industry standards and hazards are eliminated according to OHS requirements, and as directed.</p> <p>1.3. Contaminating substances are identified, removed and disposed of according to enterprise and environmental requirements, and as instructed.</p> <p>1.4. Equipment faults or malfunctions are reported to owner/classer.</p> <p>1.5. Suitable personal protective equipment is selected, used and maintained according to OHS requirements</p>
2. Arrange equipment and materials	<p>2.1. Equipment is positioned according to owner/classers requirements.</p> <p>2.2. Bins/wool packs are arranged according to instructions.</p> <p>2.3. Brooms/scrapers are positioned according to requirements.</p>
3. Identify hazards and dispose of contaminants	<p>3.1. Potential and existing hazards are identified and reported to owner/classer.</p> <p>3.2. Directions of owner/classer are followed in eliminating hazards.</p>
4. Pen sheep	<p>4.1. Work is undertaken in conjunction with shed</p>

ELEMENT	PERFORMANCE CRITERIA
	manager/other shed staff, to ensure sheep are penned for shearing or crutching.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- maintain contamination and hazard-free environment for shearing and wool handling
- recognise and report OHS hazards
- carry out minor maintenance and repairs to equipment and facilities as directed
- disposal of waste in an environmentally responsible manner as directed
- communicate verbally with owner/classer and follow instructions
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- maintenance and hygiene requirements of shearing sheds, boards and catching pens
- OHS legislative requirements
- environmental procedures
- Quality Assurance (QA) procedures
- National codes of practice for the Shearing Industry (Health, Safety and Welfare standards).

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• maintain a contaminant and hazard-free environment for shearing and wool handling</li> <li>• recognise and report OHS hazards</li> <li>• carry out minor maintenance and repairs to equipment and facilities</li> <li>• dispose of waste in an environmentally responsible manner</li> <li>• arrange and position shearing materials ready for shearing or crutching</li> <li>• place sheep in pens ready for shearing.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Sheds and facilities may include:	<ul style="list-style-type: none"> <li>• all parts of the shearing and wool handling area of the shearing shed, and the equipment used.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Shearing
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCSHG203A Shear sheep to novice level

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of selection, handling and shearing of sheep under supervision to novice level, a minimum 40 sheep per day, and defines the standard required to: catch sheep; set-up shearing handpiece; remove fleece; apply health and safety procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shearing and shearing shed procedures at the novice level and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Set-up shearing handpiece	<p>1.1.Potential and existing hazards in the workplace are identified.</p> <p>1.2.Shearing equipment is checked for correct operation.</p> <p>1.3.Comb and cutter is assembled on handpiece.</p> <p>1.4.Lead and throw is set for comb and cutter.</p> <p>1.5.Tension is set to enable comb and cutter to cut wool cleanly with minimum friction.</p> <p>1.6.Working surfaces and moving parts are lubricated in line with manufacturer's requirements.</p>
2. Follow health and fitness procedures	<p>2.1.Exercises to warm-up the body are prepared for.</p> <p>2.2.Back, shoulder, leg, arm and abdomen stretches are performed.</p> <p>2.3.The necessities of hydration, nutrition and rest periods are recognised and complied with.</p>
3. Catch sheep for shearing	<p>3.1.Suitable personal protective equipment is selected, used and maintained in line with the Occupational Health and Safety (OHS) and workplace.</p> <p>3.2.Sheep are caught and moved in line with organisational, OHS, industry and animal welfare standards.</p> <p>3.3.Sheep are dragged from the catching pen to the shearing board using safe manual handling techniques.</p> <p>3.4.Sheep are positioned for shearing in line with industry agreed shearing method.</p>
4. Remove fleece	<p>4.1.Handpiece is activated and positioned readiness for</p>

ELEMENT	PERFORMANCE CRITERIA
	shearing operations. 4.2. Shear section of sheep in position suitable to the individual's competence. 4.3. Shear the six basic positions in sequence. 4.4. Minimise injury to sheep. 4.5. Release sheep safely from the board into the count-out pens. 4.6. Maintain shearing effort to achieve the required minimum rate per day to acceptable standard.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safe work practices
- select and use equipment and materials appropriate for shearing sheep
- load a handpiece correctly
- avoid contamination, second cuts, and damage to wool, sheep and people
- shear sufficient sheep within eight hours to match novice skill level
- suturing
- catch and release sheep safely
- demonstrate safe and responsible workplace practices
- provide due care and handle sheep humanely
- clean and maintain shearing equipment, site and facilities
- work in a team as a team member
- communicate problems, faults and workplace hazards, and to comprehend instructions provided by the owner or overseer
- tally shorn sheep count
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing techniques and positions, and method of shearing
- safe handling techniques for catching, dragging, shearing and releasing sheep
- anatomy of all types of sheep
- sheep diseases
- animal welfare requirements in relation to sheep
- sheep behaviour
- personal protective clothing and equipment, and when and how it should be used
- Federal Pastoral Industry Award and/or State Shearing Award of Queensland and/or Western Australian Shearing Contractors Award
- relevant State/Territory legislation and awards, regulations and codes of practice with regard to workplace OHS and animal welfare.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances. Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

- catch sheep
- set-up shearing handpiece
- remove fleece
- apply health and safety procedures.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

	enterprise circumstances.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Shearing may include:

- the removal of fleece from all breeds and types of sheep.

**Unit Sector(s)**

<b>Unit sector</b>	Shearing
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCSHG204A Shear sheep to improve level

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of selecting, handling and shearing of sheep to improve level and defines the standard required to: set up and adjust handpiece to the shearing conditions; operate shearing equipment safely; maintain position and control of the sheep while minimising stress on the shearer; avoid damage to sheep as well as second cuts and contaminants in fleece; handle and shear 70 to 80 sheep per day using industry accepted methods and procedures; recognise problem and diseased sheep and report accordingly.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working with the application of judgement and discretion and would be carried out with minimal supervision as part of a shearing operation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for shearing	<p>1.1. Shearing equipment is checked for correct operation prior to shearing session.</p> <p>1.2. Potential and existing hazards in the workplace are identified, and reported to the supervisor.</p> <p>1.3. Suitable personal protective equipment is selected, used and maintained in line with Occupational Health and Safety (OHS) and workplace procedures.</p>
2. Perform shearing operations	<p>2.1. Sheep to be shorn are identified, caught and moved in line with organisational, OHS, industry and animal welfare standards.</p> <p>2.2. Sheep are positioned for shearing using identified positions in line with industry standards.</p> <p>2.3. Handpiece is activated and positioned in readiness for shearing operations.</p> <p>2.4. Sheep are shorn using identified method and positions in line with industry standards.</p> <p>2.5. Shearing methods ensure that injuries and damage to the sheep and fleece is avoided in meeting volume expectations.</p> <p>2.6. Safe and humane handling techniques are used at all times according to OHS and animal welfare requirements.</p>
3. Respond to complications	<p>3.1. Contamination is identified during shearing operations and reported to wool handlers in line with enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Sheep cuts are sutured in line with industry standards and animal welfare requirements.</p> <p>3.3. Flyblown sheep are identified and reported in line with industry standards and animal welfare requirements.</p> <p>3.4. Problem sheep are identified and reported in line with industry and enterprise requirements.</p>
4. Complete shearing operation	<p>4.1. Wool is placed to avoid contamination and for wool handlers to collect in line with enterprise and industry requirements.</p> <p>4.2. Handpiece is set to non-operational position and stored in line with manufacturer's specifications and enterprise requirements.</p> <p>4.3. Sheep are safely released from the board into the count-out pens.</p> <p>4.4. Shearing grievances and difficulties are reported in line with enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions
- select and use equipment and materials appropriate for shearing sheep
- avoid contamination, second cuts and damage to wool, sheep and people
- shear sufficient sheep within eight hours to match skill level as per industry award minimum rate of pay for learner shearers
- suturing
- catch and release sheep safely
- demonstrate safe and responsible workplace practices
- provide due care and handle sheep humanely
- clean and maintain shearing equipment, site and facilities
- read and interpret manufacturers specifications, work and maintenance plans
- work in a team as a team member
- communicate problems, faults and workplace hazards, and to comprehend instructions provided by the owner or overseer



## REQUIRED SKILLS AND KNOWLEDGE

- tally shorn sheep count
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry shearing techniques and positions and method of shearing
- safe handling techniques for catching, dragging, shearing and releasing sheep.
- anatomy of all types of sheep
- sheep diseases
- animal welfare requirements in relation to sheep
- sheep behaviour
- personal protective clothing and equipment, and when and how it should be used
- Federal Pastoral Industry Award and/or State Shearing Award of Queensland, and/or Western Australian Shearing Contractors Award
- relevant State/Territory legislation and awards, regulations and codes of practice with regard to workplace OHS, animal welfare.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• set up and adjust handpiece to the shearing conditions</li> <li>• operate shearing equipment safely</li> <li>• maintain position and control of the sheep while minimising stress on the shearer</li> <li>• avoid damage to sheep as well as second cuts and contaminants in fleece</li> <li>• handle and shear 70 to 80 sheep per day using industry accepted methods and procedures</li> <li>• recognise problem and diseased sheep and report accordingly.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• all types of woollen sheep as well as all ages and genders of sheep, including rams, ewes, wethers, lambs, hoggets, and stags.</li> </ul>
Shearing rate may include:	<ul style="list-style-type: none"> <li>• a rate that must be equivalent to the minimum rate of pay as set down by the industry award - between 70 and 80 sheep per day.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCSHG205A Grind combs and cutters for machine shearing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of grinding combs and cutters for machine shearing to ensure they are effective in the type of wool and shearing conditions and defines the standard required to: determine need for sharpening combs and cutters; prepare grinder and pendulum for use; wash combs and cutters ready for grinding; carry out grinding using Personal Protective Equipment (PPE) and being mindful of others safety; detect faults and unevenness in grinding and make adjustments.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes involved with the grinding of combs and cutters for machine shearing and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine need for sharpening combs and cutters	<p>1.1. Combs and cutters are checked for wear in line with supervisor's instructions.</p> <p>1.2. Combs and cutters are cleaned to enterprise and manufacturers recommendations prior to grinding.</p> <p>1.3. Potential and existing hazards are recognised, controlled and reported in line with Occupational Health and Safety (OHS) and organisational requirements.</p>
2. Prepare grinder and pendulum for use	<p>2.1. The grinder and its location are checked for serviceability.</p> <p>2.2. Grinder faults or malfunctions are identified and reported to supervisor for repair or replacement.</p> <p>2.3. Grinding papers are applied to grinder discs.</p> <p>2.4. Grinding papers are correctly stored and cared for.</p> <p>2.5. The bottom bar of the pendulum is checked, cleaned and adjusted to ensure it is true.</p> <p>2.6. The pressure bar and pins are set at the recommended distance in accordance with manufacturers guidelines.</p> <p>2.7. Height setting of pendulum is checked in line to manufacturer's guidelines.</p>
3. Carry out grinding	<p>3.1. Eye protection is worn while grinding is carried out.</p> <p>3.2. Comb or cutter is secured for grinding.</p> <p>3.3. Correct pressure is applied while grinding.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4. Combs and cutters are ground according to manufacturer's specifications and/or supervisors instructions.</p> <p>3.5. Combs and cutters are visually checked for even grinding.</p> <p>3.6. Faults or unevenness in grinding are identified and rectified.</p> <p>3.7. Grinding wheel is not left running when unattended.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and apply safe work practices
- determine need for sharpening combs and cutters
- prepare grinder and pendulum for use
- carryout grinding
- clearly report any OHS hazards to the appropriate person
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types of combs and cutters
- terminology, techniques and procedures for grinding combs and cutters
- setting of, storage and caring for grinding papers
- tools and equipment used in grinding combs and cutters
- OHS requirements for grinding combs and cutters.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine need for sharpening combs and cutters</li> <li>• prepare grinder and pendulum for use</li> <li>• wash combs and cutters ready for grinding</li> <li>• carry out grinding using PPE and being mindful of others safety</li> <li>• detect faults and unevenness in grinding and make adjustments.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Combs and cutters may include:	<ul style="list-style-type: none"> <li>• any of the brands or types of combs and cutters and grinding equipment.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCSHG206A Prepare handpiece and downtube for machine shearing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing handpieces for machine shearing and defines the standard required to: select and load comb and cutter for shearing; lubricate and maintain handpiece; lubricate downtube and check safety clutch; recognise and remedy or report any health and safety hazards; carry out minor maintenance on handpiece and downtube as required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shearers, crutchers or the shed manager and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare combs and cutters for shearing	<p>1.1.Combs and cutters are selected to suit fleece type and shearing conditions.</p> <p>1.2.Combs and cutters are checked for serviceability and prepared in line with manufacturer's specifications and enterprise requirements.</p> <p>1.3.Comb and cutter faults or malfunctions are identified and reported for repair or replacement in accordance with enterprise requirements.</p> <p>1.4.Combs and cutters are cleaned prior to sharpening to enterprise requirements.</p> <p>1.5.Combs and cutters are changed during the shearing operations to suit shearing conditions.</p> <p>1.6.Potential and existing hazards are recognised, controlled and reported in line with Occupational Health and Safety (OHS) and organisational requirements.</p>
2. Prepare handpiece for shearing	<p>2.1.Comb and cutter are secured for shearing.</p> <p>2.2.Handpiece is lubricated prior to shearing.</p> <p>2.3.Tension is adjusted to suit shearing conditions and preference of the shearer.</p> <p>2.4.Handpiece is checked for serviceability and prepared in line with manufacturer's specifications and enterprise requirements.</p> <p>2.5.Handpiece faults or malfunctions are identified and reported for repair or replacement in line with enterprise requirements.</p>
3. Prepare downtube for	3.1.Downtube is checked for serviceability and prepared

ELEMENT	PERFORMANCE CRITERIA
shearing	<p>in line with manufacturer's specifications and enterprise requirements.</p> <p>3.2. Downtube faults or malfunctions are identified and reported for repair or replacement in line with enterprise requirements.</p> <p>3.3. Safety clutch is adjusted in line with manufacturer's specifications and enterprise requirements.</p> <p>3.4. Downtube is adjusted in line with manufacturer's specifications and enterprise requirements.</p> <p>3.5. Downtube is lubricated prior to shearing.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- prepare combs, cutters, handpieces and downtubes for shearing
- lubricate and maintain handpiece and downtube
- carry out minor maintenance and repairs
- recognise and clearly report any OHS hazards to the appropriate person
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- components of a shearing handpiece
- components of a downtube
- terminology for handpieces and downtubes
- maintenance and lubrication procedures for shearing equipment and handpieces
- types of combs and cutters to use under different conditions
- OHS policies and practices in the wool shed before and during shearing and

**REQUIRED SKILLS AND KNOWLEDGE**

crutching.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select and load comb and cutter for shearing
- lubricate and maintain handpiece
- lubricate downtube and check safety clutch
- recognise and remedy or report any health and safety hazards
- carry out minor maintenance on handpiece and downtube as required.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Handpiece and downtube may include:

- the handpiece and downtube used in commercial shearing.

**RANGE STATEMENT**

Handpiece and downtube  
excludes:

- drive gear or grinding equipment.

**Unit Sector(s)**

<b>Unit sector</b>	Shearing
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCSHG207A Shear goats

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of catching, handling and shearing goats and defines the standard required to: load and prepare handpiece and ensure combs and cutters are sharp; catch goat and move into position for shearing; shear goats using industry accepted methods and procedures; avoid damage to goats and fleece; recognise problem and diseased goats and apply treatments; avoid contamination in the fibre and assist in keeping stained fibre separate; disengage handpiece and release goat after shearing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes involved with shearing goats and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for shearing	<p>1.1. Shearing equipment is checked for correct operation prior to shearing session.</p> <p>1.2. Goats to be shorn are identified, caught and moved according to Occupational Health and Safety (OHS), animal welfare and enterprise requirements.</p> <p>1.3. Goats are positioned for shearing according to industry agreed shearing methods.</p> <p>1.4. Potential and existing hazards in the workplace are identified, assessed and controlled according to OHS requirements.</p> <p>1.5. Suitable personal protective equipment is selected, used and maintained according to OHS and enterprise requirements.</p>
2. Perform shearing operations	<p>2.1. Shearing equipment is prepared in readiness for shearing operations.</p> <p>2.2. Goats are shorn using identified positions according to industry standards.</p> <p>2.3. Shearing methods ensure that damage to the goat and fleece is minimised and that the volume of shearing meets enterprise requirements.</p> <p>2.4. Safe and humane handling techniques are used at all times according to OHS and animal welfare requirements.</p>
3. Respond to complications	<p>3.1. Contamination is identified during shearing operations and reported to owner according to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>enterprise requirements.</p> <p>3.2.Cuts to goats are treated according to industry standards and animal welfare requirements.</p> <p>3.3.Problem goats are identified and reported according to industry and enterprise requirements.</p>
4. Complete shearing operation	<p>4.1.Fibre is placed to avoid contamination and for collection by handlers according to enterprise and industry requirements.</p> <p>4.2.Handpiece is set to non-operational position and stored according to manufacturer's specifications and enterprise requirements.</p> <p>4.3.Goats are safely released from the board into the count-out pens.</p> <p>4.4.Shearing grievances and difficulties are reported according to enterprise requirements.</p> <p>4.5.Environmental implications associated with shearing activities are monitored and controlled according to enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- select and operate equipment appropriate to shearing tasks
- shear goats using industry accepted methods and procedures
- avoid contamination, second cuts and damage to fleece, goats and people
- appropriately treat injured goats
- handle goats with due care
- demonstrate safe and environmentally responsible workplace practices
- maintain safe and hazard-free equipment
- read and interpret Material Safety Data Sheets (MSDSs), manufacturer's specifications and shearing schedules
- effectively communicate with work teams and supervisor, and comprehend and apply task instructions
- use literacy skills to follow sequenced written instructions and record information



## REQUIRED SKILLS AND KNOWLEDGE

accurately and legibly

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- types of shearing sheds, boards and catching pens
- components and functions of shearing equipment and machinery
- industry accepted handling and shearing techniques and positions
- goat anatomy and behavioural characteristics
- goat diseases and treatments
- environmental codes of practice with regard to livestock production
- OHS and animal welfare legislative requirements
- codes of practice for goat shearing
- relevant industry awards.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- load and prepare handpiece and ensure combs and cutters are sharp
- catch goat and move into position for shearing
- shear goats using industry accepted methods and procedures
- avoid damage to goats and fleece

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• recognise problem and diseased goats, and apply treatments</li> <li>• avoid contamination in the fibre and assist in keeping stained fibre separate</li> <li>• disengage handpiece and release goat after shearing.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• all types of non shedding goats in all shearing shed sizes and configurations.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCSHG208A Shear alpacas

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of selecting, handling and shearing alpacas and defines the standard required to: set up and adjust handpiece to the shearing conditions; operate shearing equipment safely; position alpaca and restrain for shearer safety; avoid damage to alpaca as well as second cuts and contaminants in fleece; handle and shear alpacas using industry-accepted methods and procedures; meet volume and productivity expectations.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes involved with shearing alpacas and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for shearing	<p>1.1. Shearing materials, tools and equipment are checked for serviceability and prepared in readiness for shearing operations.</p> <p>1.2. Alpacas to be shorn are identified, drafted and moved according to Occupational Health and Safety (OHS), animal welfare and enterprise requirements.</p> <p>1.3. Alpacas are positioned for shearing according to industry agreed shearing methods.</p> <p>1.4. Potential and existing hazards in the workplace are identified, assessed and controlled according to OHS requirements.</p> <p>1.5. Suitable Personal Protective Equipment (PPE) is selected, used and maintained according to OHS and enterprise requirements.</p>
2. Perform shearing operations	<p>2.1. Alpacas are shorn using shearing methods that minimise damage to the alpaca and fleece and ensure that volume of shearing meets enterprise requirements.</p> <p>2.2. Safe and humane handling techniques are used at all times according to OHS and animal welfare requirements.</p> <p>2.3. Own shearing performance is monitored and posture, shearing rate or speed and position of alpaca are adjusted as required.</p>
3. Respond to complications	<p>3.1. Where contamination is identified during shearing operations, it is reported to owner according to enterprise requirements.</p> <p>3.2. Cuts to alpacas are treated according to industry</p>

ELEMENT	PERFORMANCE CRITERIA
	standards and animal welfare requirements. 3.3. Problem alpacas are identified and appropriate measures are taken.
4. Complete shearing operation	4.1. Fleece is placed correctly for collection by handlers to avoid contamination and according to enterprise and industry requirements. 4.2. Shearing handpiece is set to non-operational position and stored according to manufacturer specifications and enterprise requirements. 4.3. Alpacas are safely released from the board into holding yards. 4.4. Shearing grievances and difficulties are reported to supervisor according to enterprise requirements. 4.5. Environmental implications associated with shearing activities are monitored and controlled according to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and apply safe work practices
- appropriately treating injured alpacas
- avoiding contamination, second cuts and damage to fleece, alpacas and people
- demonstrating safe and environmentally responsible workplace practices
- effectively communicating with work teams and supervisor, and comprehending and applying task instructions
- handling alpacas with due care
- maintaining safe and hazard-free equipment
- observing signs of alpaca diseases and disorders
- reading and interpreting Material Safety Data Sheets (MSDSs), manufacturer specifications and shearing schedules
- selecting, setting up and operating equipment appropriate to shearing tasks
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as

## REQUIRED SKILLS AND KNOWLEDGE

specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor

- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- alpaca anatomy and behavioural characteristics
- alpaca diseases and treatments
- codes of practice for alpaca shearing
- components and functions of shearing equipment and machinery
- environmental codes of practice with regard to livestock production
- industry-accepted handling and shearing techniques and positions
- OHS, environment and animal welfare legislative and enterprise requirements
- relevant industry awards
- types of shearing sheds, boards and catching pens.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- set up and adjust handpiece to the shearing conditions
- operate shearing equipment safely
- position alpaca and restrain for shearer safety
- avoid damage to alpaca as well as second cuts and contaminants in fleece
- handle and shear alpacas using industry-accepted methods and procedures

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• meet volume and productivity expectations.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• all types and strains of alpacas and all fleece types, including crossbred, huacaya, and suri.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCSHG209A Support alpaca shearing operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of supporting alpaca shearing operations and defines the standard required to: prepare facilities for alpaca shearing; handle animals safely and humanely while being shorn; remove contaminants from shorn fleece and sort and pack according to enterprise requirements; deal with shearing wounds or injuries if required; monitor weather conditions post-shearing for risk of exposure for shorn animals.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the processes involved with supporting alpaca shearing operations and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for alpaca shearing support activities	<p>1.1. Required materials, tools and equipment are identified according to lists provided and/or supervisor instructions.</p> <p>1.2. Checks are conducted on all materials, tools and equipment, and insufficient or faulty items are reported to supervisor.</p> <p>1.3. Suitable Personal Protective Equipment (PPE) and clothing are selected and checked prior to use.</p> <p>1.4. Occupational Health and Safety (OHS) hazards in the workplace are recognised and reported to supervisor, and actions are taken to minimise risks to self and others.</p>
2. Carry out alpaca shearing support duties	<p>2.1. Supervisor instructions are followed and clarification is sought when necessary.</p> <p>2.2. Work is undertaken in a safe and environmentally appropriate manner, using correct manual handling techniques and according to enterprise and OHS guidelines and animal welfare requirements.</p> <p>2.3. Interactions with others are carried out in a positive and professional manner.</p> <p>2.4. Problems or difficulties that may impact on completion of work to the required standards or achievement of timelines are reported to supervisor and remedial action is taken as directed.</p> <p>2.5. Site quarantine and other biosecurity protocols are observed.</p> <p>2.6. Waste material produced during alpaca shearing is stored in a designated area according to supervisor</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>instructions.</p> <p>2.7. Own work area is kept clean and tidy while working and assistance is provided as instructed to keep the general work area clean and tidy.</p>
3. Clean up on completion of alpaca shearing	<p>3.1. Materials are returned to store or disposed of according to supervisor instructions.</p> <p>3.2. Tools and equipment are cleaned, maintained and stored according to manufacturer specifications and supervisor instructions.</p> <p>3.3. Work outcomes are reported to supervisor, feedback on performance is sought and any required improvements are noted for future action.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identifying hazards and applying safe work practices
- cleaning up during and on completion of alpaca shearing
- handling, penning and working around alpacas
- preparing and handling materials, tools and equipment for alpaca shearing support tasks
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- alpaca fleece types
- basic fleece handling practices
- safe work practices associated with alpaca shearing activities
- shearing tools and equipment

**REQUIRED SKILLS AND KNOWLEDGE**

- OHS, environment and animal welfare requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare facilities for alpaca shearing
- handle animals safely and humanely while being shorn
- remove contaminants from shorn fleece and sort and pack according to enterprise requirements
- deal with shearing wounds or injuries if required
- monitor weather conditions post-shearing for risk of exposure for shorn animals.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Animals may include:

- all types and strains of alpacas and all fleece

**RANGE STATEMENT**

	types, including crossbred, huacaya, and suri.
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**Unit Sector(s)**

<b>Unit sector</b>	Shearing
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCSHG301A Prepare livestock for shearing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to sort and prepare livestock for shearing and defines the standard required to: select equipment appropriate to crutching and shearing tasks; organise crutching and shearing operations' muster, move and draft livestock to be crutched or shorn; critically observe and monitor livestock health and condition; organise feed and water supplies allowing for emptying out; avoid and remove contamination carried in fleece or on site.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to preparing livestock for shearing and requires application of some judgement and discretion, and would be carried out with minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Sort livestock for shearing	<p>1.1.Livestock are located, identified and confirmed according to enterprise shearing plan.</p> <p>1.2.Livestock are safely mustered and moved to shearing facilities, sorted and yarded according to shearing plan and enterprise requirements.</p> <p>1.3.Livestock with pigmented fleece are identified and culled for separate shearing operations.</p> <p>1.4.Potential and existing hazards are identified and controlled according to Occupational Health and Safety (OHS) and enterprise requirements.</p>
2. Prepare livestock for shearing	<p>2.1.Suitable personal protective equipment is selected, used and maintained according to OHS and enterprise requirements.</p> <p>2.2.Shearing, cleaning and drenching equipment is checked for correct operation according to manufacturer's specifications.</p> <p>2.3.Livestock are crutched, as required, according to industry and enterprise requirements.</p> <p>2.4.Contaminated and crushed wool is removed and disposed of according to enterprise requirements.</p> <p>2.5.Livestock are taken off feed to allow emptying out before shearing.</p>
3. Monitor livestock	<p>3.1.Feed and water supplies for livestock are provided and maintained according to enterprise requirements.</p> <p>3.2.Suitable shelter for livestock is provided and</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>maintained according to animal welfare and enterprise requirements.</p> <p>3.3.Livestock condition and health status is monitored for evidence of sickness, and recorded or reported according to enterprise requirements.</p> <p>3.4.Environmental implications associated with shearing activities are monitored and controlled.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- select equipment appropriate to crutching and shearing tasks
- organise crutching and shearing operations
- detect disease or nutritional disorders and treat appropriately
- critically observe and monitor livestock health and condition
- organise feed and water supplies
- avoid and remove contamination of fleece
- handle livestock in compliance with animal welfare requirements
- demonstrate safe and environmentally responsible workplace practices
- read and interpret MSDS, manufacturers specifications and shearing plan requirements
- communicate verbally with work team and manager, comprehend and apply task instructions
- calculate livestock numbers, keep mobs separate
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types and purposes of shearing boards, yards and catching pens
- components and functions of shearing, cleaning and drenching equipment
- handling, mustering and movement techniques
- livestock breeds, nutritional and hygiene requirements
- livestock diseases and treatments
- quality management systems for fleece/fibre

**REQUIRED SKILLS AND KNOWLEDGE**

- fleece contaminants and types of pigmentation faults
- environmental codes of practice with regard to livestock production
- OHS and animal welfare legislative requirements
- National codes of practice for the Shearing Industry (Health, Safety and Welfare standards).

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select equipment appropriate to crutching and shearing tasks
- organise crutching and shearing operations
- muster, move and draft livestock to be crutched or shorn
- critically observe and monitor livestock health and condition
- organise feed and water supplies allowing for emptying out
- avoid and remove contamination carried in fleece or on site.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Livestock may include:	<ul style="list-style-type: none"> <li>covers sheep, goats and alpacas.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCSHG302A Prepare combs and cutters for machine shearing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing combs and cutters for machine shearing and defines the standard required to: determine need for sharpening combs and cutters; determine need for dressing combs; prepare grinder and pendulum for use; grind the leading edge of comb and cutter to suit the wool type and conditions in accordance with industry standards and manufacturer's guidelines; set, store and care for grinding papers; dress combs, including selecting bevels, teeth thinning and polishing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to preparing combs and cutters for machine shearing and is carried out routinely by either the shearer or shed expert/manager.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Grind combs and cutters	<p>1.1.Faulty components are identified and level of repair or replacement requirements are determined.</p> <p>1.2.Grinder is operated in a safe manner without risk of injury to operator or others or damage to equipment.</p> <p>1.3.Pendulum pin settings are adjusted and set and pendulum bar is clean and checked for level.</p> <p>1.4.Grinding plates are tested visually in terms of being balanced and true.</p> <p>1.5.Worn and incorrectly adhered papers are identified and replaced.</p> <p>1.6.Grinder is set.</p> <p>1.7.Even wear of combs and cutters is identified and combs and cutters are sharpened.</p>
2. Dress combs	<p>2.1.Bevel is selected and/or modified, appropriate to wool type.</p> <p>2.2.Factors affecting combs selection are described in terms of type of sheep and seasonal conditions.</p> <p>2.3.Comb teeth are dressed to uniform shape and length.</p> <p>2.4.Comb teeth are uniformly thinned along their length.</p> <p>2.5.Comb is polished leaving no rough or sharp points.</p>

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
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## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- identify hazards and apply safe operating procedures to grinding
- determine need for sharpening combs and cutters
- determine need for dressing combs
- prepare grinder and pendulum for use
- carry out grinding
- set, store and care for grinding papers
- dress combs, including selecting bevels, teeth thinning and polishing
- report safety concerns to the appropriate person
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- types of combs and cutters
- terminology, techniques and procedures for grinding combs and cutters
- tools and equipment used in grinding combs, and cutters and dressing combs
- Occupational Health and Safety (OHS) policies and practices related to grinding combs and cutters.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine need for sharpening combs and cutters</li> <li>• determine need for dressing combs</li> <li>• prepare grinder and pendulum for use</li> <li>• grind the leading edge of comb and cutter to suit the wool type and conditions in accordance with industry standards and manufacturers guidelines</li> <li>• set, store and care for grinding papers</li> <li>• dress combs, including selecting bevels, teeth thinning and polishing.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Combs and cutters may include:	<ul style="list-style-type: none"> <li>• the full range of types and makes and wear status which are required for shearing in different situations.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCSHG303A Maintain and service shearing handpieces

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining and servicing shearing handpieces as part of a wool harvesting operation and defines the standard required to: assemble and disassemble handpieces; identify worn and faulty handpiece components; install minor repair kit components; maintain and service handpieces to optimal shearing performance standards.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shearers or shed managers and is essential to achieve the speed and accuracy required in professional shearing. Advice may be sought from equipment suppliers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify worn and faulty handpiece components and install minor repair kit components	<p>1.1.The performance of the handpiece is assessed.</p> <p>1.2.Comb bed, cups and fork yokes are checked and cleaned, and comb bed is visually checked for flatness.</p> <p>1.3.Worn and faulty handpiece components are determined in terms of manufacturer's specifications.</p> <p>1.4.Minor repair kit components are installed according to manufacturer's specifications and Occupational Health and Safety (OHS) requirements.</p> <p>1.5.Faulty comb beds are checked and the required scope of repairs is assessed.</p> <p>1.6.The need for a technician to repair the fault is determined.</p> <p>1.7.Repairs are carried out according to manufacturer's specifications and OHS requirements.</p> <p>1.8.Repairs by a technician are arranged as required.</p>
2. Service handpiece	<p>2.1.Handpiece components are adjusted to maintain operational performance.</p> <p>2.2.Handpiece is lubricated to manufacturer's specifications.</p> <p>2.3.Components requiring periodic replacement are installed according to manufacturer's specifications.</p> <p>2.4.Wear and tear on handpiece is identified in terms of effects on performance.</p> <p>2.5.Safety components are installed and checked before operation of the handpiece.</p> <p>2.6.Handpiece is run and checked prior to use to</p>

ELEMENT	PERFORMANCE CRITERIA
	determine safe operational performance.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify OHS hazards and implement safe work procedures
- identify worn and faulty handpiece components
- install minor repair kit components
- service handpieces
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- terminology and assembly procedures for handpieces
- maintenance and servicing requirements for shearing handpieces
- components of a shearing handpiece
- types of combs and cutters to use under different conditions
- OHS policies and practices in the wool shed before and during shearing and crutching
- enterprise procedures for disposal of waste.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assemble and disassemble handpieces</li> <li>• identify worn and faulty handpiece components</li> <li>• install minor repair kit components</li> <li>• maintain and service handpieces to optimal shearing performance standards.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Handpieces may include:	<ul style="list-style-type: none"> <li>• maintain all handpieces to meet industry standards for crutching and shearing requirements.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCSHG304A Shear sheep to professional level

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of selecting, handling and shearing sheep to professional level of 100-120 or more sheep per day, and defines the standard required to: select, use and maintain shearing equipment; avoid contamination, second cuts and damage to wool and sheep; recognise problem and diseased sheep and apply treatments accordingly; shear sufficient sheep within eight hours to match skill level of a professional shearer; analyse and build skills from improver shearer level.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shearing of sheep to professional level and is performed independently while working as part of a shearing team.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Recognise and correct faults in shearing technique	1.1. Analyse shearing technique. 1.2. Recognise and correct faults in sheep position, footwork and free hand use. 1.3. Recognise and correct faults in the number of blows and their placement. 1.4. Improve co-ordination of footwork, free hand use, sheep control and blow placement.
2. Apply techniques to increase shearing speed and accuracy	2.1. Increase speed at which the handpiece is pushed forward and returned between blow placements. 2.2. Improve the power, direction and manoeuvrability applied at the increased speed. 2.3. Improve rhythm at the increased speed. 2.4. Maintain calm temperament for 8-hour working day. 2.5. Recognise the importance of stamina and fitness in improvement of output consistency.
3. Shear required number of sheep in an eight hour day working day to quality standard of the industry for both sheep and wool	3.1. Demonstrate safety procedures during shearing in relation to people and sheep. 3.2. Avoid excessive wool contamination and damage to the wool. 3.3. Shear 120 adult merino sheep or equivalent using identified method and positions in line with industry standards in a normal eight-hour working day. 3.4. Use correct movement of feet and hands, and maintain correct positioning to the downtube. 3.5. Release sheep at increased speed in line with industry and enterprise requirements. 3.6. Comply with Occupational Health and Safety

ELEMENT	PERFORMANCE CRITERIA
	(OHS), animal welfare and industry and enterprise quality requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- select use and maintain shearing equipment
- avoid contamination, second cuts and damage to animals
- shear sufficient sheep within eight hours to match skill level of a professional shearer
- analyse and improve on improver shearer level
- shear with co-ordination and rhythm
- stitch wounds
- catch and release sheep safely
- demonstrate safe and responsible workplace practices
- provide due care and handle sheep humanely
- clean and maintain shearing equipment, and sharpen combs and cutters
- work in a team as a team member
- review quality of own work
- tally shorn sheep count
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types of shearing sheds, boards and catching pens
- service and maintenance of handpieces
- industry agreed shearing techniques and positions and method of shearing
- grinding procedures



**REQUIRED SKILLS AND KNOWLEDGE**

- safe handling techniques for catching, dragging, shearing and releasing sheep
- animal welfare requirements in relation to sheep
- sheep behaviour
- shearing clothing and equipment and when and how it should be used
- Federal Pastoral Industry Award and/or State Shearing Award of Queensland or Western Australian Shearing Contractors Award
- relevant State/Territory legislation and awards, regulations and codes of practice with regard to workplace OHS and animal welfare.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select, use and maintain shearing equipment
- avoid contamination, second cuts and damage to wool and sheep
- recognise problem and diseased sheep and apply treatments accordingly
- shear sufficient sheep within eight hours to match skill level of a professional shearer
- analyse and build skills from improver shearer level.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Breeds of sheep may include:

all ages and genders including:

- rams
- ewes
- wethers
- lambs
- hoggets
- stags.

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCSHG305A Maintain consistent shearing performance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of maintaining shearing performance and defines the standard required to: prepare and set up equipment to maintain shearing output; assess and monitor the shearing conditions and environment; maintain speed and accuracy; maintain control, coordination, rhythm and output during shearing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shearing of sheep to professional level and is performed independently while working as part of a shearing team.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain shearing control, coordination and rhythm	1.1. Maintain consistent rhythm for 8-hour working day. 1.2. Maintain coordination of footwork to assist control and blows placement for 8-hour working day. 1.3. Analyse eye to hand coordination to optimise consistent blow placement.
2. Maintain shearing output	2.1. Shearing output and quality are maintained to meet expectation of the grower, contractor and self in terms of shearing conditions. 2.2. Shearing output and quality are maintained in terms of minimum industry output requirements and minimum industry quality requirements. 2.3. Evaluate current stamina/fitness program, including eating, exercise, back care, fluid intake and rest periods, for means of improvement maintaining shearing performance.

## Required Skills and Knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>
<ul style="list-style-type: none"> <li>identify hazards and implement risk controls</li> <li>prepare and set up equipment to maintain optimum shearing output</li> </ul>

## REQUIRED SKILLS AND KNOWLEDGE

- maintain application of improved techniques
- maintain speed and accuracy
- assess and monitor the shearing conditions and environment
- maintain control, coordination, rhythm and output during shearing
- work in a team as a team member
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing techniques and positions and method of shearing
- safe handling techniques for catching, dragging, shearing and releasing sheep
- anatomy of all types of sheep
- animal welfare requirements in relation to sheep
- sheep behaviour
- personal protective clothing and equipment and when and how it should be used
- Federal Pastoral Industry Award and/or State Shearing Award of Queensland or Western Australian Shearing Contractors Award.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• prepare and set up equipment to maintain shearing output</li> <li>• assess and monitor the shearing conditions and environment</li> <li>• maintain speed and accuracy</li> <li>• maintain control, coordination, rhythm and output during shearing.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Breeds of sheep may include:	<ul style="list-style-type: none"> <li>• all ages and genders of sheep including:</li> <li>• rams</li> <li>• ewes</li> <li>• wethers</li> <li>• lambs</li> <li>• hoggets</li> <li>• stags.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCSHG306A Carry out post-shearing procedures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of caring for shorn livestock and defines the standard required to: determine livestock requirements for weather conditions; prepare a contingency plan for bad weather and anticipate emergency action; handle livestock with due care and provide feed and water; observe and monitor livestock behaviour health and condition.
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### Application of the Unit

<b>Application of the unit</b>	This unit entails working with the application of some judgement and discretion, and is carried out with minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor weather conditions	<p>1.1. Weather is monitored during and post-shearing operations, and work programs revised in response to changing circumstances.</p> <p>1.2. Adverse weather conditions are identified and the likely impacts on livestock, feed and property assessed and reported according to enterprise requirements.</p> <p>1.3. Appropriate actions are determined to minimise loss or damage to livestock in/during adverse weather conditions according to enterprise requirements.</p>
2. Assess and monitor livestock condition	<p>2.1. Livestock condition and health status is assessed and recorded according to industry and enterprise requirements.</p> <p>2.2. Abnormal behaviour or evidence of sickness is identified and reported for remedial action according to enterprise requirements.</p> <p>2.3. Water and feed requirements for livestock are determined and provided, and supplementary feeding arranged as required.</p>
3. Maintain livestock environment	<p>3.1. Livestock yards and facilities are clean, secure and safe and maintained according to enterprise requirements.</p> <p>3.2. Suitable shelter for shorn livestock is maintained to prevent losses according to animal welfare requirements.</p> <p>3.3. Existing and potential hazards are recognised and controlled according to Occupational Health and Safety (OHS) and enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Complete post-shearing operations	4.1.Environmental implications associated with shearing activities are monitored and controlled. 4.2.Shearing facilities and equipment are cleaned and waste is disposed of according to enterprise environmental requirements. 4.3.Relevant information is recorded and reported according to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- relate weather conditions to livestock requirements
- prepare contingency plan and anticipate emergency action
- handle livestock with due care
- weigh livestock and assess condition
- observe and monitor livestock behaviour, health and condition
- read and interpret weather information
- calculate livestock numbers and calculate and measure feed requirements
- provide feed and water
- rug animals where required
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- impacts of adverse weather conditions on shorn livestock
- physiological conditions brought on by stress, and treatment of same
- types and constructs of livestock shelter
- livestock handling techniques
- condition scoring
- appropriate types of feed for stressed livestock

**REQUIRED SKILLS AND KNOWLEDGE**

- environmental and animal welfare codes of practice with regard to livestock production
- OHS and animal welfare legislative requirements
- national codes of practice for the Shearing Industry (Health, Safety and Welfare standards).

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine livestock requirements for weather conditions
- prepare a contingency plan for bad weather and anticipate emergency action
- handle livestock with due care and provide feed and water
- observe and monitor livestock behaviour health and condition.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Shearing may include:	<ul style="list-style-type: none"> <li>shorn livestock of all breeds and types.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Shearing
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCSHG307A Plan and prepare for alpaca shearing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the preparation involved prior to alpaca shearing and defines the standard required to: develop a shearing work plan; ensure that all required planning and preparation for shearing are completed; set up facilities for alpaca shearing; arrange employment and communicate with shearers and shed staff; work safely with and around alpacas according to established work plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to an alpaca stud farm owner or employee who will either be shearing the stud's animal fleece or working with a specialist shearer. Work will be carried out under minimal or no supervision according to a work plan.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Complete work contracts for shearers and shed staff	<p>1.1. Arrangements are made in advance to obtain shearing services.</p> <p>1.2. Terms and conditions of employment or engagement are agreed and checked against the award or other accepted arrangements.</p> <p>1.3. Where employment is arranged, employment terms and conditions are written into an employment contract and are signed by employer and employees.</p>
2. Develop work plan for shearing day	<p>2.1. Shearing work plan is discussed, developed, agreed and documented with shearing team.</p> <p>2.2. Occupational Health and Safety (OHS) hazards relevant to the preparation and conduct of shearing are identified and documented in work plan and appropriate action is taken to minimise risks.</p> <p>2.3. Work is carried out according to work plan.</p> <p>2.4. Work plan is reviewed with shearing team and any required improvements are noted for future action.</p>
3. Check shearing equipment	<p>3.1. Work plan is used to identify and obtain all equipment and supplies necessary for shearing.</p> <p>3.2. Equipment required for shearing is checked and prepared according to enterprise procedures to ensure it is clean, set up and functioning correctly.</p>
4. Ensure shed and yards are prepared for shearing	<p>4.1. Shearing shed is checked and cleaned prior to commencement of shearing, ensuring enterprise quality standards.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.2. Yards are checked and cleaned prior to commencement of shearing, ensuring enterprise quality standards.</p> <p>4.3. Sources of alpaca fibre contamination are removed according to enterprise and industry quality standards.</p> <p>4.4. Safety hazards are reported to fibre grower or shed manager.</p>
5. Pen up alpacas	<p>5.1. Alpacas are moved according to shearing sequence, and OHS, animal welfare and enterprise requirements.</p> <p>5.2. Alpacas are penned by mobs, according to work plan.</p> <p>5.3. Pen density is determined to avoid crushing, trampling or soiling of alpaca fibre.</p> <p>5.4. Gates are secured to prevent mixing of mobs or escape of alpacas.</p> <p>5.5. Alpaca numbers are monitored in holding pens to ensure continuous supply to shearer.</p> <p>5.6. Pens are monitored to maintain alpaca in standing position to avoid soiling of alpaca fibre.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- carrying out cleaning and decontamination of pens and shearing shed to industry standards
- moving alpacas according to OHS, animal welfare and enterprise requirements
- mustering and drafting alpacas into pens according to enterprise and industry standards
- operating any necessary equipment to industry standards
- using industry-accepted alpaca handling techniques
- using safe and environmentally responsible workplace practices
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible

**REQUIRED SKILLS AND KNOWLEDGE**

information collected and select and apply procedures for a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- Alpaca Industry Best Practice Standards for Harvesting of Alpaca Fibre
- elements of effective and appropriate alpaca shearing work plans
- equipment requirements for alpaca shearing
- how to clean and decontaminate sheds and pens
- industry-accepted alpaca handling and moving techniques
- personal protective equipment and when and how it should be used
- relevant industry awards and conditions
- relevant state and territory legislation regulations and codes of practice with regard to workplace OHS.
- animal welfare requirements under the code of practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- develop a shearing work plan
- ensure that all required planning and preparation for shearing are completed
- set up facilities for alpaca shearing
- arrange employment and communicate with shearers



<b>EVIDENCE GUIDE</b>	
	and shed staff <ul style="list-style-type: none"> <li>work safely with and around alpacas according to established work plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Shearing may include:	<ul style="list-style-type: none"> <li>all strains and classes of alpacas.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Shearing
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### Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCSHG401A Apply advanced shearing techniques

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers applying advanced shearing techniques and defines the standard required to: prepare and set up equipment to optimise shearing output; assess and monitor a diverse range of shearing conditions and environments; maintain control, co-ordination, rhythm, high quality performance and output during shearing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shearers who demonstrate a high level of professional skill.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare and set up equipment to optimise shearing output	<p>1.1. Range and condition of equipment available for selection meets anticipated shearing conditions.</p> <p>1.2. Equipment is selected and set up based on the assessment of shearing conditions to ensure the optimum yield and shearing throughput within Occupational Health and Safety (OHS) requirements.</p> <p>1.3. Equipment performance is monitored and adjustments are initiated to maintain optimum shearing throughput.</p>
2. Assess and monitor the shearing conditions and environment	<p>2.1. The style and approach adopted for the shear are appropriate to the shearing conditions, and maintain the quality and throughput at a level that meets enterprise requirements.</p> <p>2.2. Approaches for mitigating adverse shearing conditions are adopted prior to and during the shearing.</p> <p>2.3. Monitoring and assessment of the shearing environment are undertaken with consideration of the whole wool harvesting operation.</p> <p>2.4. Potential and existing hazards are identified and resolved to ensure the quality and throughput are at a level that meets grower and contractor expectations.</p> <p>2.5. Opportunities to support and encourage the performance of other shearers are identified and constructively responded to while maintaining own output.</p>
3. Maintain control, rhythm and output	<p>3.1. Personal position and shearing method is adapted to accommodate limitations in equipment performance</p>

ELEMENT	PERFORMANCE CRITERIA
during shearing	<p>and set up.</p> <p>3.2. Timing, length and width of blows optimise selected shearing pattern.</p> <p>3.3. Blow commencement and finish positions are economical of effort and reflect the shortest route.</p> <p>3.4. Blow placement, body work and sheep positioning combine to represent sustainable shearing effort and output.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare and set up equipment to optimise shearing output
- assess and monitor a diverse range of shearing conditions and environments
- maintain control, co-ordination, rhythm, high quality performance and output during shearing
- work in a team as a piece worker
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing techniques, and positions and method of shearing
- safe handling techniques for catching, dragging, shearing and releasing sheep
- anatomy of all types of sheep

**REQUIRED SKILLS AND KNOWLEDGE**

- sheep diseases
- animal welfare requirements in relation to sheep
- sheep behaviour
- personal protective clothing and equipment, and when and how it should be used
- Federal Pastoral Industry Award and/or State Shearing Award of Queensland, or Western Australian Shearing Contractors Award
- relevant State/Territory legislation and awards, regulations and codes of practice with regard to workplace OHS and animal welfare.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare and set up equipment to optimise shearing output
- assess and monitor a diverse range of shearing conditions and environments
- maintain control, co-ordination, rhythm, high quality performance and output during shearing.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Techniques may include:	<ul style="list-style-type: none"> <li>those that cover all sheep types, shearing facilities and equipment that are likely to be used for wool harvesting.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCSHG402A Conduct equipment experting for machine shearing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers conducting equipment experting for machine shearing and defines the standard required to: trim and finish combs; scallop combs.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to professional shearers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Trim and finish combs	1.1. Signs of non-optimal equipment performance are identified and acted upon. 1.2. The trim and finish meet the requirements of the current shearing task. 1.3. Control of comb and tools is maintained throughout the experting process in accordance with Occupational Health and Safety (OHS) requirements. 1.4. Comb is adapted in a form that meets individual shearing style.
2. Scallop comb	2.1. The principles and method of scalloping are recognised and applied. 2.2. The interrelationship between correctly scalloped combs and shearing performance is determined in terms of density of wool, time of year, and breed. 2.3. Combs are scalloped to meet the shearing style of individual shearers.

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• trim and finish combs</li> <li>• scallop combs</li> <li>• identify hazards and implement safe work practices</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly</li> </ul>

**REQUIRED SKILLS AND KNOWLEDGE**

information collected and select and apply procedures to a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- types of combs and cutters
- trimming and finishing techniques
- tools and equipment used in experting
- OHS legislation and enterprise procedures related to experting
- scalloping techniques
- assessing relationship of comb preparation to shearing performance.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- trim and finish combs
- scallop combs.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Equipment may include:	<ul style="list-style-type: none"> <li>all shearing and experting equipment available for use in the industry.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCSHG403A Account for shearing shed supplies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved with accounting for shearing shed supplies and defines the standard required to: complete an inventory of supplies for shearing; identify supplies that have to be purchased for shearing; order supplies and arrange transport; and receive supplies and store.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shearing team managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine supplies for shearing	1.1.List of required supplies is prepared according to enterprise needs. 1.2.Existing supplies are determined and recorded. 1.3.Required storage facilities are identified.
2. Obtain supplies for shearing	2.1.Supplier of required goods is identified. 2.2.Supplies are ordered and purchased prior to commencement of shearing operations. 2.3.Delivery of supplies is arranged according to enterprise guidelines.
3. Record supplies for shearing	3.1.Stores inventory is maintained for duration of shearing. 3.2.Supplies are stored according to health and enterprise requirements. 3.3.Stores account is prepared and submitted to the grower.

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• determine supplies for shearing</li> <li>• negotiate discounts on bulk purchases</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly</li> </ul>

**REQUIRED SKILLS AND KNOWLEDGE**

information collected and select and apply procedures to a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- supplies required to support shearing operations
- procedures for ordering supplies and purchasing
- books of account
- maintaining records
- GST requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- complete an inventory of supplies for shearing
- identify supplies that have to be purchased for shearing
- order supplies and arrange transport
- receive supplies and store.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Supplies may include:

- all shearing shed supplies that are required for a shearing team.

**Unit Sector(s)****Unit sector**

Shearing

**Co-requisite units****Co-requisite units****Competency field****Competency field**

## AHCSHG404A Manage shearing and crutching operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the management of shearing and crutching operations and defines the standard required to: prepare for shearing; organise mobs into order of shearing; supervise clip preparation and pressing; identify and remove potential sources of contamination; organise mob cut outs and maintain supply of livestock; complete clip documentation and provide feedback to grower.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to professional wool classers or shed managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and implement shearing and crutching operations	<p>1.1.Flock owner/manager is consulted about requirements and informed of planning issues.</p> <p>1.2.Order of mobs is determined for shearing and crutching according to enterprise requirements.</p> <p>1.3.Staffing needs are determined according to legislative requirements and negotiated with grower/contractor.</p> <p>1.4.Staff are allocated duties and given necessary directions. Shed equipment and materials are arranged in accordance with Occupational Health and Safety (OHS) requirements and quality management system.</p> <p>1.5.Shearing/crutching plan is implemented and adjusted as conditions change.</p>
2. Implement shearing plan and monitor work flow	<p>2.1.Board is kept clear and fleeces are thrown ready for skirting.</p> <p>2.2.Non-fleece wools are removed and packed as directed.</p> <p>2.3.Shed staff are given directions for skirting, and fleece to skirting ratio is monitored.</p> <p>2.4.Directions are issued for closing off bins and lines for mob cut-outs.</p> <p>2.5.Enterprise requirements with regard to safe workplace and positive environmental practices are complied with according to OHS and quality management system.</p>
3. Supervise wool	<p>3.1.Wool presser is directed on order for pressing and</p>

ELEMENT	PERFORMANCE CRITERIA
pressing	<p>procedures to minimise contamination.</p> <p>3.2. Wool presser is consulted to monitor the rate of build-up in lines.</p> <p>3.3. Pressing instructions are issued which reduce mixed bales, while meeting code of practice requirements for uniformity within lines.</p> <p>3.4. Bale weights are monitored to ensure efficiencies are achieved for the grower.</p> <p>3.5. Bales are branded in line with code of practice requirements.</p> <p>3.6. Wool book is monitored for accuracy, legibility and kept up to date at all times.</p>
4. Provide feedback to grower on clip performance and shearing and crutching operations	<p>4.1. Staff performance in clip preparation is reported on.</p> <p>4.2. Mob characteristics are related to work flow and clip preparation.</p> <p>4.3. Possible improvements to wool handling facilities are reported.</p> <p>4.4. Equipment effectiveness and maintenance requirements are reported to grower.</p> <p>4.5. Lines made and bale details are related to mob characteristics.</p> <p>4.6. Lotting advice is explained to grower/ manager.</p> <p>4.7. Wool clip documentation is completed and presented to grower for signature.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan and implement shearing operations
- organise and schedule staff and work tasks
- supervise staff and monitor productivity
- identify and remove potential workplace hazards
- implement risk management strategies
- monitor wool flow and clip preparation

**REQUIRED SKILLS AND KNOWLEDGE**

- press wool, record bale details and brand bales
- monitor environmental impacts and implement control measures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- supervisory procedures with regard to operations and personnel
- staff management including team building and conflict resolution
- industry requirements with regard to hygiene and safety for shearing facilities and equipment
- planning and implementation processes
- completing workplace documentation
- employment agreements, processes and requirements
- OHS and environmental legislation, codes of practice and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare for shearing

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>organise mobs into order of shearing</li> <li>supervise clip preparation and pressing</li> <li>identify and remove potential sources of contamination</li> <li>organise mob cut outs and maintain supply of livestock</li> <li>complete clip documentation and provide feedback to grower.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Operations may include:	<ul style="list-style-type: none"> <li>shearing and crutching operations for merino and crossbred clips, as well as for goat and alpaca shearing.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Shearing
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCSHG405A Arrange employment for shearing operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved with arranging employment for shearing operations and defines the standard required to: determine staffing requirements for shearing; advertise vacancies and recruit staff; induct staff into the shearing team.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shearing team managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine staffing requirements	1.1. Assessments are made of the numbers and types of staff required for wool harvesting. 1.2. Lists of duties are drawn up for additional staff. 1.3. Required capabilities of staff are defined prior to selection.
2. Seek applicants	2.1. Informal enquiries are made and vacancies advertised. 2.2. Possible staff are followed up by telephone and in person.
3. Select staff	3.1. Potential staff are interviewed against selection criteria. 3.2. Staff are selected having due regard to equal employment opportunity.
4. Induct staff	4.1. New staff are briefed on relevant awards, enterprise agreements, pay rates and related administration. 4.2. New staff are advised of terms and conditions and signed on. 4.3. New staff are familiarised with the workplace and colleagues. 4.4. Occupational Health and Safety (OHS) legislation and requirements are outlined in detail to staff.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

## REQUIRED SKILLS AND KNOWLEDGE

- determine staff needs
- select and induct staff
- carry out induction processes
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- industry awards and conditions
- duty statements for each category of wool harvesting staff
- interviewing techniques
- advertising mechanisms for staff vacancies
- telephone techniques
- equal employment opportunity legislation
- staff selection process
- induction procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• determine staffing requirements for shearing</li> <li>• advertise vacancies and recruit staff</li> <li>• induct staff into the shearing team.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Shearing operations may include:	<ul style="list-style-type: none"> <li>• all sheep types, shearing facilities and equipment that are likely to be used for wool harvesting.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Shearing
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCSHG406A Prepare shearing team wages

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the processes involved with preparing shearing team wages and defines the standard required to: maintain staff records; calculate earnings, deductions and nett pay; prepare pays for workers.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shearing team managers.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain staff records	1.1.All employees are signed on and declaration forms signed. 1.2.Employment agreements are arranged. 1.3.Work is recorded accurately. 1.4.Units of work are totalled for each employee. 1.5.Injury records are maintained. 1.6.Tax file and superannuation numbers and collected and maintained confidentially.
2. Calculate earnings	2.1.Relevant awards and current pay rates are obtained. 2.2.Employment contracts are followed. 2.3.Gross earnings are calculated for each employee.
3. Calculate deductions and nett pay	3.1.Taxation deductions are calculated. 3.2.Group certificates are completed. 3.3.Tax is forwarded to the Australian Taxation Office. 3.4.Occupational superannuation is calculated and documented.
4. Pay staff	4.1.Pays are prepared and staff paid in accordance with the relevant Award. 4.2.Cash advances are arranged on request.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- maintain staff records

## REQUIRED SKILLS AND KNOWLEDGE

- calculate earnings, deductions and nett pay
- prepare pays and pay slips
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- maintaining records
- contract duplicates
- group certificate copies
- work records
- books of account
- GST requirements
- PAYG.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- maintain staff records
- calculate earnings, deductions and nett pays
- prepare pays for workers.

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Payment of wages may include:	<ul style="list-style-type: none"> <li>all awards and legislation that deal with the payment of wages and withholding of taxation and superannuation.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Shearing
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCSHG407A Oversee and instruct shed staff

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the overseeing and instructing of shed staff and defines the standard required to: assess levels of staff competency against job requirements; designate and communicate staff roles and responsibilities; provide training to undertake work activities and to develop competence in staff; implement strategies to foster teamwork; negotiate with staff and deal with conflict; implement environmental policies in the shearing workplace where appropriate; monitor team and individual work performance and provide feedback to staff.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies owner classer or wool classer to oversee and instruct shed staff in preparing their clip.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Define work shed roles	<p>1.1.Roles and responsibilities of shed staff are clearly defined.</p> <p>1.2.Skills of shed staff are accurately identified and matched with available tasks and duties.</p> <p>1.3.Requirements of job duties and the industry code of practice are clearly identified and communicated to shed staff.</p> <p>1.4.Occupational Health and Safety (OHS) policy and procedures are effectively communicated and implemented.</p>
2. Induct shed staff	<p>2.1.OHS hazards are identified, risks assessed and suitable controls are implemented.</p> <p>2.2.The details of shearing, including flock and mob details, are communicated to staff.</p> <p>2.3.New staff are briefed on relevant awards, enterprise agreements, pay rates and related administration.</p> <p>2.4.New staff are advised of terms and conditions and signed on.</p> <p>2.5.New staff are familiarised with the workplace and colleagues.</p>
3. Support on-the-job training	<p>3.1.Training needs are determined through skills analysis and monitoring work performance.</p> <p>3.2.Practical skills are explained and demonstrated where required Training is provided based on clear explanations and practical demonstration of skills</p> <p>3.3.Performance required is clearly indicated to the learner.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Training is delivered in line with operational requirements.
4. Monitor work performance of shed staff	4.1. Board staff are allocated responsibilities and their performance is monitored. 4.2. Skirting procedures are explained and skirtings are monitored for compliance to instructions. 4.3. Requirements for separating specific parts of the fleece are clearly described to wool handlers and justified by Code of Practice or processor requirements. 4.4. Condition of wool room is monitored to minimise contamination of all wool lines. 4.5. All bending and lifting that is required is done according to safe working practices and using the available safety equipment.
5. Provide follow-up and support to shed staff	5.1. Staff responsibilities are adjusted to allow for practice and skills development where required. 5.2. Coaching is provided to assist learning. 5.3. Discussion and information sharing is routinely used to communicate requirements of work activities through a participative approach. 5.4. Feedback is clear, constructive and provided promptly to individuals to maintain high quality clip preparation. 5.5. Disagreements and conflicts are managed constructively using appropriate conflict management strategies.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- supervise and instruct staff to achieve work activities
- delegate and allocate tasks
- identify and provide training requirements
- plan and monitor ongoing training needs

## REQUIRED SKILLS AND KNOWLEDGE

- demonstrate effective time management
- demonstrate safe workplace and environmentally responsible practices
- solve problems (staffing, resources)
- pen sheep
- perform board person duties
- pick up fleeces
- handle non fleece wool
- skirt and roll fleeces
- operate the wool press
- weigh, brand and stack bales safely
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## Required knowledge

- industry awards and conditions
- duty statements for each category of wool harvesting staff
- shearing industry Awards and personnel processes
- principles of team work, negotiation and time management
- conflict management techniques
- enterprise training requirements and processes
- relevant State/Territory legislation, regulations and Codes of Practice
- the use and control of hazardous substances and machinery and equipment
- hazard identification, assessment and control
- sheep behaviour
- animal welfare
- board duties
- contamination
- parts of the fleece
- non fleece wool
- wool press operating procedures
- pressing requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess levels of staff competency against job requirements</li> <li>• designate and communicate staff roles and responsibilities</li> <li>• provide training to undertake work activities and to develop competence in staff</li> <li>• implement strategies to foster teamwork</li> <li>• negotiate with staff and deal with conflict</li> <li>• implement environmental policies in the shearing workplace where appropriate</li> <li>• monitor team and individual work performance and provide feedback to staff.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Staff may include:	<ul style="list-style-type: none"> <li>• full time</li> <li>• part time</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• casual staff</li> <li>• contractors.</li> </ul>
Scale of operation may include:	<ul style="list-style-type: none"> <li>• one stand to greater than 10 stands.</li> </ul>
Flocks may include:	<ul style="list-style-type: none"> <li>• all flocks run on the property.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Shearing
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCSOL201A Determine basic properties of soil and/or growing media

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of determining the basic properties of soil or soil-less growing media and defines the standard required to: undertake basic soil/media analysis descriptive tests for soil texture, salinity and pH; use basic proprietary soil testing equipment for testing pH and salinity; determine basic soil structure with a view to using soil structure ameliorants.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to determining basic properties of soil/growing media and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collect soil/media samples for testing	<p>1.1. Tools and materials for collecting soil/media samples are prepared.</p> <p>1.2. Area from which soil/media samples are to be collected is identified from workplace records or supervisors instructions.</p> <p>1.3. Services are located using site plans and in consultation with the supervisor.</p> <p>1.4. Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented and reported to the supervisor.</p> <p>1.5. Suitable safety equipment and Personal Protective Equipment (PPE) are selected, used and maintained.</p> <p>1.6. Samples are taken randomly from the designated area according to recognised sampling techniques and are prepared for on site or off site analysis</p> <p>1.7. Samples are labelled and recorded according to organisational procedures.</p>
2. Perform basic soil/media test	<p>2.1. Soil profile is determined, where appropriate.</p> <p>2.2. Soils/media are tested or inspected for physical properties.</p> <p>2.3. Soils/media is tested for chemical properties.</p> <p>2.4. Results are recorded according to organisational procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collect soil/media samples
- perform basic soil/media tests
- interpret results from own or laboratory results
- record and store information
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- soil sampling techniques
- soil/media physical properties
- soil/media chemical properties
- soil/media plant relationships
- basic soil/media field tests
- interpreting laboratory results
- techniques to ameliorate soil properties.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance



<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• undertake basic soil/media analysis descriptive tests for soil texture, salinity and pH</li> <li>• use basic proprietary soil testing equipment for testing pH and salinity</li> <li>• determine basic soil structure with a view to using soil structure ameliorants.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Soils may include:	<ul style="list-style-type: none"> <li>• all types of soils and growing media used for commercial production.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Soils and media
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCSOL301A Prepare growing media

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of determining the requirements of a growing media for various plants and preparing and storing the media in accordance with the production specifications and defines the standard required to: confirm specifications of growing media; prepare growing media; store growing media.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the preparation of growing media for growing plants. The preparation of growing media and is likely to be undertaken without supervision. General guidance may be sought.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Confirm specifications of growing media	<p>1.1. Various media components are investigated for specific plant requirements.</p> <p>1.2. Components of a growing media are determined by plant requirements and accepted industry practice.</p> <p>1.3. Nutrient requirements are determined for growing period.</p> <p>1.4. Different sources of nutrients are investigated for their suitability.</p> <p>1.5. Growing media analysed for chemical, physical and biological characteristics to determine suitability for plants.</p> <p>1.6. Sterilisation methods of the growing media are determined.</p>
2. Prepare and store growing media	<p>2.1. Growing media composition established.</p> <p>2.2. Work is undertaken according to OHS legislation and codes of practice requirements.</p> <p>2.3. Required equipment is maintained in a safe, clean and effective condition.</p> <p>2.4. Components are stored in a safe and hygienic manner and in a non-contaminated environment.</p> <p>2.5. Components are identified and weighed, mixed and incorporated into the growing media in accordance with production requirements.</p> <p>2.6. Waste is handled and disposed of safely in accordance with relevant legislation and Occupational Health and Safety (OHS) requirements.</p> <p>2.7. Work is undertaken according to OHS legislation</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>and codes of practice requirements.</p> <p>2.8. Media is stored in safe and hygienic manner in accordance with enterprise standards.</p> <p>2.9. Records are kept in accordance with enterprise standards.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collect and analyse data
- interpret published research and historical records to identify acceptable media parameters
- interpret chemical labels
- record and store information
- weigh and measure volumes
- operate machinery
- co-ordinate own activities
- determine requirements and schedules of contractors and other work colleagues
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- requirements of a growing media
- ingredients used in the preparation of growing media
- properties of the various ingredients used in the preparation of the growing media
- physical, chemical and biological characteristics required of the media
- plant nutrition
- hygiene in the preparation and storage of the media
- alternative methods of incorporating ingredients into a growing media
- volume and weight determination
- OHS requirements in relation to chemical use.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• confirm specifications of growing media</li> <li>• prepare growing media</li> <li>• store growing media.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Ingredients may include:	<ul style="list-style-type: none"> <li>• those for growing media production and the range of plant requirements.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Soils and media
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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# AHCSOL302A Construct a soil profile

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of constructing soil profiles and defines the standard required to: determine construction requirements from plans; survey and create working plans for construction sites; excavate earthworks and establish working and finished levels; install drainage and sub-surface irrigation components; install sustainable soils and growing media; implement a construction project.
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## Application of the Unit

<b>Application of the unit</b>	This unit applies to the construction of new soil profiles in residential, commercial and public recreational open space development and residential and rural property development in new projects and in the complete renovation of existing soil profiles in urban and regional areas.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Survey the construction site	<p>1.1. Surveying equipment is set up and used according to industry standards.</p> <p>1.2. Existing levels are surveyed and temporary benchmark established. Details are recorded accurately and legibly according to industry standards.</p> <p>1.3. New levels are set according to specifications and pegs placed according to industry convention.</p> <p>1.4. Contour map with reduced levels and a cross section is developed and drawn using accepted industry symbols and mapping conventions.</p>
2. Prepare for construction work	<p>2.1. Enterprise work team, contractors and design consultants are identified and, where required, engaged.</p> <p>2.2. Work tasks are scheduled in a logical, timely and effective manner in consultation with the supervisor.</p> <p>2.3. Materials required are estimated and costed according to accepted industry practice and ordered.</p> <p>2.4. Plans for the new construction profile are obtained or developed.</p>
3. Set out site for construction	<p>3.1. Soil profile construction requiring set out.</p>
4. Excavate the	<p>4.1. Excess soil is removed and the construction site cleared with the stockpile being placed in a</p>

ELEMENT	PERFORMANCE CRITERIA
construction site	<p>designated area according to enterprise work procedures.</p> <p>4.2. The base is graded to the level and slope specified in the base design.</p> <p>4.3. The base of the profile is prepared over the entire site according to the construction plan.</p> <p>4.4. Sub-surface irrigation system components and fittings are installed to the required depth and design specified in the construction plan.</p> <p>4.5. Install drainage system.</p>
5. Install soil profile	<p>5.1. Quantities of material required are calculated and measured according to the construction plan.</p> <p>5.2. Soils and growing media are selected for sustainable use and according to the construction plan.</p> <p>5.3. Each profile layer is installed and compacted to reflect the final contour.</p> <p>5.4. The interface between profile layers is uniform and unbroken according to the construction plan.</p> <p>5.5. Soil amendments are prepared and implemented.</p> <p>5.6. The finishing soil surface is given a final levelling and consolidated, ready for planting, according to the construction plan and enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- draft basic working plans
- survey site levels and dimensions
- install drainage and irrigation systems
- measure materials, interpret , survey and assess site measurements, and interpret and apply test results
- coordinate work group, contractors and own activities to sequentially and effectively complete construction in a timely and cost effective manner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>information collected and select and apply procedures for a range of tasks</p> <ul style="list-style-type: none"> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• practical understanding of the range and use of materials, tools, equipment and machinery available for construction of soil profiles, including soil amendments and base construction materials</li> <li>• soil and growing media types suitable for sustainable landscapes</li> <li>• practical understanding of the range of construction methods that may be used to construct soil profiles and the association of construction methods with site limitations, environmental implications, and end use of the site</li> <li>• practical understanding of surveying principles and techniques</li> <li>• soil testing techniques and the application of results to the construction process</li> <li>• awareness of the comparative environmental implications associated with construction and excavation activity, drainage and irrigations systems, soil amendments and waste disposal procedures</li> <li>• AS4419-2003 and AS4454-2003.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine construction requirements from plans</li> <li>• survey and create working plans for construction</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>sites</p> <ul style="list-style-type: none"> <li>• excavate earthworks and establish working and finished levels</li> <li>• install drainage and sub-surface irrigation components</li> <li>• install sustainable soils and growing media</li> <li>• implement a construction project.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Constructing profiles may include:	<ul style="list-style-type: none"> <li>• construction sites</li> <li>• landscaping sites</li> <li>• land developments</li> <li>• farms</li> <li>• land management operations</li> <li>• restoration projects.</li> </ul> <p>This standard does not cover high performance turf sporting surface constructions.</p>

### Unit Sector(s)

<b>Unit sector</b>	Soils and media
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCSOL401A Sample soils and interpret results

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers sampling of soils and interpreting of soil test results and defines the standard required to: collect soil/media samples using appropriate sampling methodology; prepare soil/media samples for dispatch to soil analysis laboratory; receive and interpret analytic results; file and record analytic results for future use; implement a nutrient/nutrition program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to those whose job role includes undertaking soil or growing media sampling and interpreting the results as a foundation for further horticultural operations such as nutrition programs and irrigation scheduling.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for soil sampling	<p>1.1.The soils to be surveyed, surveying activity and contractors are identified according to site plans and enterprise work procedures.</p> <p>1.2.Tools, equipment and machinery are selected according to site conditions, testing agency requirements and enterprise work procedures.</p> <p>1.3.If required, pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</p> <p>1.4.Areas of homogeneous soil types are identified for sampling.</p> <p>1.5.Services are located using site plans and in consultation with the supervisor.</p> <p>1.6.Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p> <p>1.7.Suitable safety equipment and Personal Protective Equipment (PPE) are selected, used and maintained.</p> <p>1.8.A clean and safe work area is maintained throughout and on completion of work.</p>
2. Determine soil characteristics by performing soil sampling	<p>2.1.The density and depth for a representative sampling of the area are determined according to enterprise work procedures.</p> <p>2.2.Holes are excavated at identified sampling sites according to enterprise work procedures, OHS requirements and with due consideration of the environmental implications.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Samples for off-site testing are collected and prepared, packaged, accurately labelled and dispatched according to testing agency requirements and enterprise work procedures.</p> <p>2.4. The physical and chemical characteristics of the soil are determined according to investigative requirements and best practice guidelines.</p> <p>2.5. Sampling and testing tools and equipment are cleaned of all residues and returned to storage according to manufacturer's specifications and enterprise work procedures.</p> <p>2.6. Results are recorded in an established format according to enterprise work procedures.</p>
3. Interpret results of soil analysis	<p>3.1. The soil types of the sample area are classified according to standards for soil classification.</p> <p>3.2. The acceptable soil physical and chemical parameters for a specified plant are determined from published data and historical records.</p> <p>3.3. Collected analytical results are compared with acceptable physical and chemical parameters for a specified plant.</p> <p>3.4. Soil characteristics are evaluated to determine whether they can be altered to meet plant needs.</p> <p>3.5. The Readily Available Water (RAW) values for irrigation sites are determined according to industry standards and enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with work team members, supervisors and contractors, interpret and apply soil surveying specifications, utilise proforma reporting, analysis and work procedure documents, and understand soil surveying data
- measure distance, depth and spacing, calculate area, volume and RAW values, calibrate tools and equipment, and interpret analytical results
- coordinate own activities with the requirements and schedules of contractors and



**REQUIRED SKILLS AND KNOWLEDGE**

other work teams to sequentially and effectively complete surveying activities in a timely and cost effective manner

- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- practical understanding of the range of sample collection, testing and analytical methods that may be used to perform soil surveys, and the association of surveying methods with site conditions, environmental implications and intended horticultural use of the surveyed site
- the physical and chemical properties of soils in relation to their ability to support specified horticultural production
- the capacity of soils to provide water to plants
- the importance of organic matter in soil in relation to the intended horticultural use
- awareness of ameliorants and soil improvement techniques for addressing site limitations identified through surveying
- awareness of the comparative environmental implications associated with soil surveying activities and the application of analytical results.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• collect soil/media samples using appropriate sampling methodology</li> <li>• prepare soil/media samples for dispatch to soil analysis laboratory</li> <li>• receive and interpret analytic results</li> <li>• file and record analytic results for future use</li> <li>• implement a nutrient/nutrition program.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Soils may include:	<ul style="list-style-type: none"> <li>• all soil types used for horticultural and agricultural production.</li> </ul>
Soil tests may include:	<ul style="list-style-type: none"> <li>• a range of chemical analyses</li> <li>• structure and texture analysis</li> <li>• soil biology analysis.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Soils and media
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCSOL402A Develop a soil use map for a property

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a soil use map for a property and defines the standard required to: perform a soil survey; analyse survey results; determine soil characteristics; plot topography and soil survey data on a property map.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to farmers and advisors who determine soil characteristics and develop soil maps to illustrate the characteristics of a property to making decisions about plants/crops, irrigation and drainage. The outcomes of this process will inform decisions relating to whole farm planning.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collect information for soil mapping	<p>1.1. Confirm soil samples were collected for off-site assessment by soil testing agencies using recommended procedures.</p> <p>1.2. The information on the physical characteristics of the soil is collected.</p> <p>1.3. The information on the chemical characteristics of the soil is collected.</p> <p>1.4. The information about biological characteristics of the soil is collected.</p> <p>1.5. The acceptable soil parameters for specified plants are determined from published data and historical records.</p> <p>1.6. Information about areas of cultural significance and habitats of biodiversity on the property is collected.</p> <p>1.7. Research outcomes are collated in accordance with enterprise record keeping procedures.</p>
2. Analyse soil information	<p>2.1. The soil types of the sample area are classified according to standards for soil classification.</p> <p>2.2. Collected results are compared with established parameters for actual or proposed land use and production.</p> <p>2.3. Soil characteristics are evaluated to determine whether they can be altered to meet land use needs.</p> <p>2.4. The Readily Available Water (RAW) values for irrigation sites are determined in line with industry standards.</p>
3. Plot topography and	3.1. Interpreted results are mapped in an established

ELEMENT	PERFORMANCE CRITERIA
soil survey data on property map	<p>format according to enterprise guidelines.</p> <p>3.2.Potential uses of the soil for purposes of land classing, land capability, areas of cultural significance and habitats of biodiversity are identified.</p> <p>3.3.Property boundaries and property features are defined.</p> <p>3.4.Paddocks or irrigation areas are identified.</p> <p>3.5.Contour or spot level information is plotted.</p> <p>3.6.Soil sampling sites are plotted on map.</p> <p>3.7.Soil profile and irrigation characteristics for each sampling site and/or irrigation area are described and indexed to the map.</p> <p>3.8.The RAW values for irrigation sites are indexed to the map.</p> <p>3.9.Areas of specific concern are plotted on the map and descriptions are indexed to the map.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret soil analyses results
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- interpret published data and historical records to identify acceptable soil parameters
- plot information on a map
- use soil and water testing techniques
- follow relevant enterprise Occupational Health and Safety (OHS) and environmental procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data</li> <li>• use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• methods and techniques of soil sampling</li> <li>• OHS and environmental legislative requirements and enterprise procedures</li> <li>• environmental impacts of irrigation, using water from any ground or underground source</li> <li>• soil types and profiles</li> <li>• physical and chemical properties of soils</li> <li>• nutrient availability in soils</li> <li>• soil analyses results</li> <li>• biodiversity habitats</li> <li>• cultural sites</li> <li>• soil quality factors</li> <li>• soil water retention testing techniques</li> <li>• water table and salinity</li> <li>• RAW.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• perform a soil survey</li> <li>• analyse survey results</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>determine soil characteristics</li> <li>plot topography and soil survey data on a property map.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of soils may include:	<ul style="list-style-type: none"> <li>soils in the natural or agricultural landscape but does not include growing media.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Soils and media
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### Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCSOL403A Prepare acid sulphate soil management plans

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing management plans that address the relevant legislation and issues associated with land and ground water disturbing activities for Acid Sulphate Soil (ASS) and defines the standard required to: complete a desktop assessment of the land for actual and potential ASS risk based on current/proposed land use, site data and compliance issues; collect and use field and test data to identify strategies to remediate and manage the site; document an ASS management plan and effectively communicate it to the landowner, relevant consent authority and contractors; support implementation of ASS management plan by reports on materials management and remediation and site rehabilitation.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out independently within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Conduct desktop assessment of the land and groundwater disturbing activity for potential and actual ASS risk	<p>1.1. Current/proposed land use established and documented following discussions with landholder and relevant consent authority.</p> <p>1.2. Site data assessed following industry guidelines and relevant consent authority standards.</p> <p>1.3. Compliance issues established/checked with relevant regulatory authority or environmental legislation and/or industry procedures.</p> <p>1.4. Site investigations communicated to proponent/landholder and concurrence is established to develop a management plan in accordance with relevant consent authority requirements.</p>
2. Develop ASS remediation/management strategy	<p>2.1. Field investigation and laboratory test data reviewed and matched to strategy options consistent with industry principles and relevant consent authority standards.</p> <p>2.2. ASS management options identified consistent with industry guidelines and relevant consent authority requirements.</p> <p>2.3. Remediation/management strategies identified and documented in consultation with the landholder/developer and relevant consent authority.</p>
3. Prepare an ASS site	3.1. Remediation/management strategies are checked

ELEMENT	PERFORMANCE CRITERIA
management plan	<p>against industry guidelines and relevant consent authority requirements.</p> <p>3.2.Design specifications for structures incorporated in management plan details.</p> <p>3.3.Monitoring strategies for the site are detailed in line with prevailing site factors and industry guidelines and relevant consent authority standards.</p> <p>3.4.On site responsibilities listed following industry guidelines and relevant consent authority requirements.</p> <p>3.5.Contingency procedures in accordance with industry guidelines and relevant consent authority requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- ability to assess field and laboratory results from AASS and PASS sites
- collaborate with designers and relevant consent authority
- develop remediation and management strategies
- develop monitoring strategies
- prepare works action plans
- prepare ASS management plans
- prepare reports on materials management and remediation and site rehabilitation to implement approved ASS plans
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• relevant environmental, planning and groundwater legislation</li> <li>• planning process for remediation and management plans</li> <li>• ASS assessment tools</li> <li>• environmental impacts of ASS</li> <li>• environmental plans, strategies and options for management and remediation</li> <li>• total catchment issues</li> <li>• principles of duty of care and due diligence</li> <li>• soils and soil chemistry</li> <li>• levels and levelling</li> <li>• earthmoving principles</li> <li>• environmental impact issues</li> <li>• managing acid leachate water flows</li> <li>• subsurface and surface drainage principles and systems.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• complete a desktop assessment of the land for actual and potential ASS risk based on current/proposed land use, site data and compliance issues</li> <li>• collect and use field and test data to identify strategies to remediate and manage the site</li> <li>• document an ASS management plan and effectively communicate it to the landowner, relevant consent authority and contractors</li> <li>• support implementation of ASS management plan by reports on materials management and remediation and site rehabilitation.</li> </ul>

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Management plans may include:	<ul style="list-style-type: none"> <li>• plans covering type of land use and/or works</li> <li>• land class (LGA zoning and ASS Planning and Risk Map classes)</li> <li>• site characteristics</li> <li>• land tenure</li> <li>• drainage administration</li> <li>• construction methodology</li> <li>• materials remediation</li> <li>• site rehabilitation to industry guidelines and relevant consent authority standards.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Soils and media
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCSOL404A Supervise acid sulphate soil remediation and management projects

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supervising acid sulphate soil remediation and management projects and defines the standard required to: review Acid Sulphate Soils (ASS) management plan and plan the work; document and communicate objectives of the project, as well as environmental and Occupational Health and Safety (OHS) issues, to stakeholders and individual contractors; carry out the works identified in the ASS management plan in compliance with regulatory requirements and work specifications; monitor completed works and carry out modifications in consultation with the approved plan provider where necessary.
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### Application of the Unit

<b>Application of the unit</b>	This unit of competency applies to those who implement ASS remediation and management plans for civil and agricultural activities.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan implementation	<p>1.1.Plans and specifications are reviewed and related to the works site.</p> <p>1.2.Work sequences are planned and recorded in line with proposed work schedule.</p> <p>1.3.Compliance with established regulatory planning and environmental legislation is maintained.</p>
2. Carry out environmental site induction	<p>2.1.Specific site environmental and OHS issues are communicated to all stakeholders following relevant work schedule and special requirements.</p> <p>2.2.Overall objectives of the project are defined to all stakeholders noting individual responsibilities and duty of care.</p> <p>2.3.Equipment operators, contractors and other staff are briefed on special aspects of performance relating to specific equipment, and handling of hazardous materials for their specific function in accordance with the approved plan.</p> <p>2.4.Monitoring requirements for the site is defined and individual responsibilities identified in accordance with the works schedule as stated in the approved</p>

ELEMENT	PERFORMANCE CRITERIA
	plan.
3. Direct implementation of planned works	3.1. Equipment, materials and personnel deployment ensures works stages are completed in accordance with the approved plan. 3.2. Works specifications and regulatory requirements maintained in accordance with the approved plan. 3.3. Contingency procedures implemented in accordance with the approved plan.
4. Monitor works specifications and site environment	4.1. Continual review of works and site environment to ensure specifications, contracts and targets are in accordance with the approved plan. 4.2. Instructions to staff and contractors to ensure compliance with the approved plan. 4.3. Modifications are made to works in consultation with the approved plan provider.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- achieve efficient implementation of works
- protect natural areas from damage and pollution
- direct the implementation of planned works
- monitor work specifications and environmental requirements
- supervise staff in operations
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- relevant environmental, planning and groundwater legislation
- principles of duty of care and due diligence
- ASS and soil chemistry
- subsurface and surface drainage principles and systems
- appropriate supervision techniques
- OHS and environmental legislation, codes of practice and enterprise procedures
- work sequence knowledge
- equipment most suited to ASS site remediation and management
- Quality Assurance systems, processes and practices
- staff supervision.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- review ASS management plan and plan the work
- document and communicate objectives of the project, as well as environmental and OHS issues, to stakeholders and individual contractors
- carry out the works identified in the ASS management plan in compliance with regulatory requirements and work specifications
- monitor completed works and carry out modifications in consultation with the approved plan provider where necessary.

#### Context of and specific resources for

Competency requires the application of work practices under work conditions. Selection and use of resources

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Soil disturbance may include	<ul style="list-style-type: none"> <li>works that disturb soils and water tables in ASS landscapes.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Soils and media
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCSOL501A Monitor and manage soils for production

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring and managing soils in an agricultural or horticultural production environment and defines the standard required to: interpret soil analytical data for the purposes of developing management or production plans; develop and conduct soil improvement programs; review and analyse ongoing soil monitoring programs; document the soil management plan or production plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit of competency applies to the role of land managers in agriculture and horticulture production systems and covers the improvement and ongoing management of soils.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Research information about soil	<p>1.1. Soil type, characteristics and properties are researched and analysed for relevance to enterprise requirements.</p> <p>1.2. Particular soil properties, identified as relevant to the enterprise, are researched for further enquiry.</p> <p>1.3. Acceptable soil physical and chemical parameters for a specified crop are determined from published data and historical records.</p> <p>1.4. Relevant properties of soils and areas of homogenous soils are identified for testing.</p> <p>1.5. Soil sampling is conducted across a representative sampling area of the whole production area.</p> <p>1.6. Soil samples are collected, packaged, accurately labelled and dispatched according to testing agency requirements.</p>
2. Apply information from soil testing to production and/or management plan	<p>2.1. Soil types of the sample area are classified according to standards for soil classification.</p> <p>2.2. Results from soil testing are compared with the identified soil physical and chemical parameters for the specified crop.</p> <p>2.3. Results from soil testing are compared with soil records and production history.</p> <p>2.4. The comparative results are reviewed and differences recorded and charted.</p> <p>2.5. Production or management plan is developed and testing results and comparative results are recorded.</p>
3. Develop soil	3.1. Soil properties capable of being ameliorated are

ELEMENT	PERFORMANCE CRITERIA
amendment practices	<p>identified for action.</p> <p>3.2.Relevant soil ameliorants or cultural practices are identified and included in production/management plan.</p> <p>3.3.Soil ameliorants are quantified and purchased.</p> <p>3.4.Soil ameliorating activities are costed and included in production/management plan.</p>
4. Monitor soil amendment practices	<p>4.1.Areas of ameliorant activities are sampled for testing across a representative sampling area.</p> <p>4.2.Results are analysed to measure the performance of soil amelioration activities.</p> <p>4.3.Monitoring program is recorded and included in the production/management plan.</p>
5. Review and document the soil management plan	<p>5.1.Analysis of the sampling methods is recorded and methods amended as required.</p> <p>5.2.Monitoring program is reviewed, amended for effectiveness and recorded.</p> <p>5.3.Production/management plan is documented incorporating reviews and reports.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research information
- prepare production/management plans for crops/plants
- collect soil/media samples
- interpret results from laboratory tests
- record and store information
- review methods and practices
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views

**REQUIRED SKILLS AND KNOWLEDGE**

- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- soil types
- soil physical properties
- soil chemical properties
- plant nutrition through soil management
- soil conservation strategies and sustainable production techniques
- basic soil field tests
- soil sampling techniques
- interpreting laboratory results
- techniques to ameliorate soil properties
- record keeping.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- interpret soil analytical data for the purposes of developing management or production plans
- develop and conduct soil improvement programs
- review and analyse ongoing soil monitoring programs
- document the soil management plan or production plan.



<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Soils may include:	<ul style="list-style-type: none"> <li>all types of soils and growing media used for commercial production.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Soils and media
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCSPO301A Operate a screen cleaner for seed processing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating screen cleaners to process seed and defines the standard required to: select screens and prepare machinery for use; operate a screen cleaner; complete and report on cleaning operations.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the operation of screen cleaners and aspirators for cleaning or processing commercial quantities of seed.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Select and prepare a screen cleaning machine for use</p>	<p>1.1. Specialised screen cleaning machinery and equipment is selected and prepared to job requirements and confirmed against work plan.</p> <p>1.2. Routine pre-operational checks of screen cleaning machinery and equipment are completed to manufacturer's specifications and enterprise requirements.</p> <p>1.3. Occupational Health and Safety (OHS) hazards in the workplace are recognised and risks assessed and minimised according to enterprise requirements.</p>
<p>2. Operate a screen cleaning machine</p>	<p>2.1. Machinery and equipment is operated in a safe and controlled manner and monitored for performance and efficiency.</p> <p>2.2. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly.</p> <p>2.3. Suitable personal protective clothing and equipment is selected, used, maintained and stored according to OHS requirements.</p> <p>2.4. Environmental implications associated with machinery operation are identified, assessed and reported to the supervisor.</p>
<p>3. Complete and report on the seed cleaning operation</p>	<p>3.1. Shut-down procedures for screen cleaning machinery and equipment are completed to manufacturer's specifications and enterprise requirements.</p> <p>3.2. Screen cleaning machinery and equipment operational records are completed and maintained according to enterprise requirements.</p> <p>3.3. Malfunctions, faults, observation of irregular performance to screen cleaning machinery and equipment are detailed and reported according to</p>

ELEMENT	PERFORMANCE CRITERIA
	enterprise requirements. 3.4. Screen cleaning machinery and equipment is cleaned, secured and stored according to OHS and enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- define the processing requirements of a seed processing job
- determine the limitations of seed cleaning machinery and make adjustments to achieve a desired outcome
- disassemble a screen cleaner
- clean a screen cleaner
- assemble a screen cleaner for operation
- select and place screens appropriate for the cleaning task
- assess the input and outputs of the screen cleaner
- make adjustments to the screen cleaner settings to maximise the output
- operate the screen cleaner effectively
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the principles of a screen cleaner
- the different types of screen cleaners available for the task
- the adjustment and effect of airflow within each of the screen cleaner's chambers
- the correct clean down procedure
- possible contamination points
- screen types and designs

**REQUIRED SKILLS AND KNOWLEDGE**

- ball trays and their purpose
- required maintenance and usual wear points
- machinery safety
- types of impurities and the machine's ability to handle impurities
- documentation associated with seed cleaning.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- select screens and prepare machinery for use
- operate a screen cleaner
- complete and report on cleaning operation.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Use of screen cleaners may include:

- usage for a wide range of commercially grown seed and include:

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• aspirators</li> <li>• pre-cleaners</li> <li>• air screen cleaners</li> <li>• any variation of these machines, both reciprocating and rotary, with or without additions to enhance performance.</li> </ul>
Screen cleaning of seed may occur	<ul style="list-style-type: none"> <li>• on farms using mobile screen cleaners</li> <li>• in seed processing plants.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Seed processing
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCSP0302A Operate an indent cylinder

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating an indent cylinder for cleaning or processing seed and defines the standard required to: select and prepare an indent cylinder seed processing machine for use; operate an indent cylinder seed processing machine; complete and report on seed cleaning machinery operations.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to the operation of an indent cylinder to clean or process seed.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select and prepare an indent cylinder seed processing machine for use	1.1. An indent shell or cylinder is selected and prepared to job requirements and confirmed against work plan. 1.2. Routine pre-operational checks of the machine are completed to manufacturers' specifications and enterprise requirements. 1.3. Occupational Health and Safety (OHS) hazards in the workplace are recognised, risk assessed and minimised according to enterprise requirements.
2. Operate an indent cylinder seed processing machine	2.1. The indent cylinder machine is operated in a safe and controlled manner and monitored for performance and efficiency. 2.2. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly. 2.3. Suitable personal protective clothing and equipment is selected, used, maintained and stored according to OHS requirements. 2.4. Environmental implications associated with machinery operation are identified, assessed and reported to the supervisor.
3. Complete and report on seed cleaning machinery operation	3.1. Shut-down procedures for the machine are completed to manufacturer's specifications and enterprise requirements. 3.2. Operational records are completed and maintained according to enterprise requirements. 3.3. Malfunctions, faults, observation of irregular performance and damage to the machine are detailed

ELEMENT	PERFORMANCE CRITERIA
	<p>and reported according to enterprise requirements.</p> <p>3.4. The machine is cleaned and the shells or cylinder are stored according to OHS and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- disassemble an indent cylinder length separator
- select the correct indent cylinder type and size required for the task
- assemble an indent cylinder length separator for operation
- assess the product input and outputs of the indent cylinder length separator
- determine the limitations of an indent cylinder machine and make adjustments to achieve a desired outcome
- operate the indent cylinder length separator effectively
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the principles of a indent cylinder length separator
- indent cylinder types and sizes
- machine design and configurations
- operation of a indent cylinder length separator
- machinery safety.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>In order to confer competency, evidence must prove that the candidate is able to:</p> <ul style="list-style-type: none"> <li>• select and prepare an indent cylinder seed processing machine for use</li> <li>• operate an indent cylinder seed processing machine</li> <li>• complete and report on seed cleaning machinery operations.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Indent cylinder seed processing may include:	<ul style="list-style-type: none"> <li>• any separator with the purpose of separating seed or seed contaminants by their length</li> <li>• any variation of these machines, with or without additions, to enhance performance.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Seed processing
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCSP0303A Operate a gravity table

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating a gravity table to clean or process seed defines the standard required to: set up and prepare gravity table for use; operate a gravity table to process seed; complete and report on seed cleaning operations.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to the operation of gravity tables to clean or process seed.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Set up and prepare gravity table for use	1.1. A gravity table is set up and prepared to job requirements and confirmed against work plan. 1.2. Routine pre-operational checks of the gravity table are completed to manufacturer's specifications and enterprise requirements. 1.3. Occupational Health and Safety (OHS) hazards in the workplace are recognised, risk assessed and minimised according to enterprise requirements.
2. Operate a gravity table to process seed	2.1. The gravity table is operated in a safe and controlled manner and monitored for performance and efficiency. 2.2. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly. 2.3. Suitable personal protective clothing and equipment is selected, used, maintained and stored according to OHS requirements. 2.4. Environmental implications associated with machinery operation are identified, assessed and reported to the supervisor.
3. Complete and report on seed cleaning operation	3.1. Shut-down procedures for the gravity table are completed to manufacturers' specifications and enterprise requirements. 3.2. Operational records are completed and maintained according to enterprise requirements. 3.3. Malfunctions, faults, observation of irregular performance and damage to the gravity table are detailed and reported according to enterprise requirements. 3.4. The gravity table is cleaned according to OHS and enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assemble a gravity table for operation
- disassemble a gravity table after operation
- correctly set the air flow appropriate for the task
- assess the product input and outputs of the gravity table
- make adjustments to the gravity table settings to maximise the output
- operate the gravity table effectively
- perform basic maintenance of gravity table
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- seed biology and damage to seed by mechanical action
- the principles of gravity separation
- types of gravity tables available
- the adjustment and effect of airflow, oscillation and deck angle
- deck types and designs and their effects on operational effectiveness
- machinery safety
- machine capabilities and settings
- cleaning strategies.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>In order to confer competency, evidence must prove that the candidate is able to:</p> <ul style="list-style-type: none"> <li>• set up and prepare gravity table for use</li> <li>• operate a gravity table to process seed, and</li> <li>• complete and report on seed cleaning operations.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Gravity table operations may include:	<ul style="list-style-type: none"> <li>• all gravity type separators using the principles of stratification which involves dividing seed into a series of graded statuses by the use of air</li> <li>• shake and angle to achieve a separation of seed density or specific gravity</li> <li>• any variation of these machines, with or without additions, to enhance performance.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Seed processing
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCSP0304A Operate seed modification machinery

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of operating seed modification machinery and equipment and defines the standard required to: set up and prepare machinery for use; operate seed modification machinery; complete and report on seed modification machinery and equipment operation.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit relates to operating seed modification or seed alteration machinery and equipment such as de-awners</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and prepare seed modification machinery and equipment for use	1.1. Seed modification machinery is selected and prepared to job requirements and confirmed against work plan. 1.2. Routine pre-operational checks of seed modification machinery and equipment are completed to manufacturers' specifications and enterprise requirements. 1.3. Occupational Health and Safety (OHS) hazards in the workplace are recognised, risk assessed and minimised according to enterprise requirements.
2. Operate seed modification machinery and equipment	2.1. Seed modification machinery is operated in a safe and controlled manner and monitored for performance and efficiency. 2.2. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly. 2.3. Suitable personal protective clothing and equipment is selected, used, maintained and stored according to OHS requirements. 2.4. Environmental implications associated with machinery operation are identified, assessed and reported to the supervisor.
3. Complete and report on seed modification machinery and equipment operation	3.1. Shut-down procedures for seed modification machinery are completed to manufacturers' specifications and enterprise requirements. 3.2. Seed modification machinery operational records are completed and maintained according to enterprise requirements.

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Malfunctions, faults, observation of irregular performance and damage to seed modification machinery are detailed and reported according to enterprise requirements.</p> <p>3.4. Seed modification machinery is cleaned, secured and stored according to OHS and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify the need for a particular line of seed to be modified
- operate a seed de-awners/clippers
- operate seed scarifiers
- operate huskers and sifters
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- seed biology - coleoptiles
- the damage caused to seed by modification machinery
- the principles of operation and the expectations and limitations, maintenance and safety associated with an oats de-awner/clipper
- the principles of operation and the expectations and limitations, maintenance and safety associated with scarifiers
- the principles of operation and the expectations and limitations, maintenance and safety associated with rice huskers
- safe machinery operation.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>In order to confer competency, evidence must prove that the candidate is able to:</p> <ul style="list-style-type: none"> <li>• assessment of the seed for its requirement for modification and risk of potential damage</li> <li>• set up and prepare machinery for use</li> <li>• operate seed modification machinery, and</li> <li>• complete and report on seed modification machinery and equipment operation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Mechanical modification of seed may include:	<ul style="list-style-type: none"> <li>• the range of machines which provides mechanical modification of seed to enhance its performance and any variation of these machines, with or without additions, to enhance performance.</li> </ul>
Machinery may include:	<ul style="list-style-type: none"> <li>• all machines and equipment other than standard seed grading equipment which modify the physical characteristics of the seed for the purpose of:</li> <li>• improving the seed's ability to germinate and grow</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• improving the seed's plantability</li> <li>• improving the seed's appearance</li> <li>• improving the seed's ability to be graded and or treated.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Seed processing
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCSP0305A Operate seed treatment machinery

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of applying a range of treatments or modifications to seed and defines the standard required to: set up and prepare seed treatment machinery for use; operate seed treatment machinery; complete and report on seed treatment machinery and equipment operation.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to operating seed modification or seed treatment machinery and equipment such as coating and pelleting machinery and chemical treatment machinery.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select and prepare seed treatment machinery and equipment for use	<p>1.1. Seed treatment machinery and equipment is selected and prepared to job requirements and confirmed against work plan.</p> <p>1.2. Routine pre-operational checks of seed treatment machinery and equipment are completed to manufacturers' specifications and enterprise requirements.</p> <p>1.3. Occupational Health and Safety (OHS) hazards in the workplace are recognised, risk assessed and minimised according to enterprise requirements.</p>
2. Operate seed treatment machinery and equipment	<p>2.1. Seed treatment machinery and equipment is operated in a safe and controlled manner and monitored for performance and efficiency.</p> <p>2.2. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly.</p> <p>2.3. Suitable personal protective clothing and equipment is selected, used, maintained and stored according to OHS requirements.</p> <p>2.4. Environmental implications associated with seed treatment machinery operation are identified, assessed and reported to the supervisor.</p>
3. Complete and report on seed treatment machinery and equipment operation	<p>3.1. Shut-down procedures for seed treatment machinery and equipment are completed to manufacturers' specifications and enterprise requirements.</p> <p>3.2. Seed treatment machinery and equipment operational records are completed and maintained according to enterprise requirements.</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Malfunctions, faults, observations of irregular performance and damage to seed treatment machinery and equipment are detailed and reported according to enterprise requirements.</p> <p>3.4. Seed treatment machinery and equipment is cleaned, secured and stored according to OHS and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- operate seed treatment machinery and equipment
- formulate a chemical mix to achieve the best practice
- calculate, calibrate and measure dose rates
- apply powders and thickeners
- identify and understand seed dryers and their expectations and limitations
- identify different types of seed coating machines
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- difference between coating and pelleting [ $\leq 5\%$  weight gain film coating (insecticide/fungicide) or  $\gt 5\%$  weight gain is pelleting]
- chemical types and classes
- hazards of chemicals
- Personal Protective Equipment (PPE)
- the expectations and limitations of different types of seed coating machines
- the labelling requirements associated with coated seed.
- the use and differences in biological components in seed coatings
- the interaction of biological components and their effect on other chemicals,

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<p>powders, polymers and heat</p> <ul style="list-style-type: none"> <li>• confined space working hazards</li> <li>• rules and regulations for storage, transportation and bunding</li> <li>• types of seed treatment machinery and equipment</li> <li>• basics of programmable logic controller / treatment control systems and electrical process.</li> <li>• methods of applying chemical and basic recipe formula</li> <li>• methods of applying powders and thickeners</li> <li>• disposal of waste chemical</li> <li>• procedures for drying, scalping and aspiration of treated seed.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>In order to confer competency, evidence must prove that the candidate is able to:</p> <ul style="list-style-type: none"> <li>• set up and prepare seed treatment machinery for use</li> <li>• operate seed treatment machinery, and</li> <li>• complete and report on seed treatment machinery and equipment operation.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>
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<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Seed treatments may include:	<ul style="list-style-type: none"> <li>• all forms of commercial seed treatment from very basic spray pack application of insecticide for stored grain pests through to all configurations of continuous, batch and rotary machines</li> <li>• for example:                             <ul style="list-style-type: none"> <li>• hand held spray packs</li> <li>• slurry treaters</li> <li>• spray pumps</li> <li>• direct seed coaters</li> <li>• mist-a-matic</li> <li>• batch treaters</li> <li>• Panagen</li> <li>• rotary coaters</li> <li>• coating pans</li> <li>• driers</li> <li>• cement mixers.</li> </ul> </li> </ul>
Machinery and equipment may include:	<ul style="list-style-type: none"> <li>• all machinery and equipment used to apply treatments to seed including but not exclusive to:                             <ul style="list-style-type: none"> <li>• fungicides</li> <li>• insecticides</li> <li>• biologicals</li> <li>• colours and polymers</li> <li>• powders and coating mediums</li> <li>• any variation of these machines, with or without additions to enhance performance.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Seed processing
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCSP0306A Operate specialised seed processing machinery

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of operating specialised seed processing machinery and equipment and defines the standard required to: set up and prepare machinery for use; operate seed modification machinery; complete and report on seed modification machinery and equipment operation.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to operating specialised seed processing machinery and equipment such as spiral and colour separators. This unit also covers the storage and bulk handling of processed seed and include all the methods of transfer of the product from grading or storage to packaging to storage.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select and prepare specialised seed processing machinery and equipment for use	<p>1.1. Specialised machinery and equipment is selected and prepared to job requirements and confirmed against work plan.</p> <p>1.2. Routine pre-operational checks of specialised machinery and equipment are completed to manufacturers' specifications and enterprise requirements.</p> <p>1.3. Occupational Health and Safety (OHS) hazards in the workplace are recognised, risk assessed and minimised according to enterprise requirements.</p>
2. Operate specialised seed processing machinery and equipment	<p>2.1. Machinery and equipment is operated in a safe and controlled manner and monitored for performance and efficiency.</p> <p>2.2. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly.</p> <p>2.3. Suitable personal protective clothing and equipment is selected, used, maintained and stored according to OHS requirements.</p> <p>2.4. Environmental implications associated with machinery operation are identified, assessed and reported to the supervisor.</p>
3. Complete and report on specialised seed processing machinery and equipment operation	<p>3.1. Shut-down procedures for specialised machinery and equipment are completed to manufacturers' specifications and enterprise requirements.</p> <p>3.2. Specialised machinery and equipment operational records are completed and maintained according to enterprise requirements.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Malfunctions, faults, observation of irregular performance and damage to specialised machinery and equipment are detailed and reported according to enterprise requirements.</p> <p>3.4. Specialised machinery and equipment is cleaned, secured and stored according to OHS and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- operate an airleg machine
- operate seed spirals machines
- operate seed dryers
- operate colour sorters
- operate seed sizing equipment
- operate velvet rollers
- operate magnetic rollers
- operate floatation tanks
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the legislative and legal requirements of information relating to domestic and international requirements
- the basic principles and operation of airlegs
- the basic principles and operation of seed spirals
- the basic principles and operation of seed dryers

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>• the basic principles and operation of colour sorters</li> <li>• the basic principles and operation of seed sizing equipment</li> <li>• the basic principles and operation of velvet rollers</li> <li>• the basic principles and operation of magnetic rollers</li> <li>• the basic principles and operation of floatation tanks</li> <li>• safe operation of machinery.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>In order to confer competency evidence must prove that the candidate is able to:</p> <ul style="list-style-type: none"> <li>• set up and prepare specialised seed processing machinery for use</li> <li>• operate specialised seed processing machinery</li> <li>• complete and report on specialised seed processing machinery and equipment operation.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
Specialised seed processing	<ul style="list-style-type: none"> <li>• all the procedures and equipment involved in the packaging, labelling and palletising of</li> </ul>



<b>RANGE STATEMENT</b>	
machinery may include:	processed seed.
Specialised seed processing machinery includes	<ul style="list-style-type: none"> <li>any non-standard seed processing equipment that improves seed quality or marketability apart from standard seed processing procedures.</li> </ul>
Sorting may be done by	<ul style="list-style-type: none"> <li>colour, sizing, polishing, drying, removing fines, separation using liquid and removing metal contaminants.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Seed processing
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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# AHCSP0307A Handle, package and store commercial quantities of seed

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of handling, packaging and storing commercial seed quantities of seed and defines the standard required to: set up and prepare seed packaging and labelling machinery for use; operate seed packaging and labelling machinery; handle and store packaged seed.
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## Application of the Unit

<b>Application of the unit</b>	This unit relates to the packaging and labelling and storing of commercial quantities of seed.
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select and prepare seed packaging and labelling machinery and equipment for use	<p>1.1. Seed packaging and labelling machinery and equipment is selected and prepared to job requirements and confirmed against work plan.</p> <p>1.2. Routine pre-operational checks of machinery and equipment are completed to manufacturer's specifications and enterprise requirements.</p> <p>1.3. Information for labelling is checked against work orders and job descriptions.</p> <p>1.4. Performance, efficiency and irregularities are reported to the supervisor.</p> <p>1.5. Occupational Health and Safety (OHS) hazards in the workplace are recognised, risk assessed and minimised according to enterprise requirements.</p>
2. Operate seed packaging and labelling machinery and equipment	<p>2.1. Machinery and equipment is operated in a safe and controlled manner and monitored for performance, efficiency and irregularities are reported to the supervisor.</p> <p>2.2. Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly.</p> <p>2.3. Suitable personal protective clothing and equipment is selected, used, maintained and stored according to OHS requirements.</p> <p>2.4. Environmental implications associated with machinery operation are identified, assessed and reported to the supervisor.</p>
3. Complete and report on seed packaging	<p>3.1. Shut-down procedures for machinery and equipment are completed to manufacturers' specifications and</p>

ELEMENT	PERFORMANCE CRITERIA
and labelling machinery and equipment operation	<p>enterprise requirements.</p> <p>3.2. Machinery and equipment operational records are completed and maintained according to enterprise requirements.</p> <p>3.3. Malfunctions, faults, observation of irregular performance and damage to machinery and equipment are detailed and reported according to enterprise requirements.</p> <p>3.4. Machinery and equipment is cleaned, secured and stored according to OHS and enterprise requirements.</p>
4. Move and store packaged seed	<p>4.1. Packaged seed is handled with care and loaded onto pallets ready for moving and storage.</p> <p>4.2. Packaged seed is stored and retrieved according to enterprise storage plans.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare bulk storage
- operate bulk seed transportation equipment
- prepare packaging
- operate industrial sewing machines
- identify alternative methods of bag sealing
- operate label printers and label and apply stickers and labels
- operate palletizing equipment
- operate a pallet wrapper / Shrink wrap palletised seed
- operate bag and pallet transportation systems
- perform basic machinery maintenance
- label and stencil seed bags
- seal seed packages
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening,

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<p>clarifying information and consulting with supervisors as required</p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• associated regulations and legislation that covers labelling of packaged seed</li> <li>• chemical warnings, the detail of the seed that must be put on the bag</li> <li>• alternative methods of bag sealing</li> <li>• bulk seed storage</li> <li>• seed packaging methods</li> <li>• seed packaging equipment</li> <li>• basic equipment maintenance</li> <li>• packaged product transport and storage</li> <li>• machinery and workplace safety</li> <li>• enterprise storage plans</li> <li>• enterprise labelling requirements</li> <li>• types of packaging.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• set up and prepare machinery for use</li> <li>• operate packaging and labelling machinery, and</li> <li>• move and store packaged seed.</li> </ul>
<b>Context of and specific resources for</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources</p>

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Activities may include:	<ul style="list-style-type: none"> <li>those associated with all commercial quantities of seed.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Seed processing
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCSP0308A Sample seed before and after processing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of sampling seed before and after processing and defines the standard required to: take seed samples for testing by other agencies; package and label seed samples; record workplace information about seed samples.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to sampling seed both on arrival at a processing plant and after processing for quality and certification purposes.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Sample seed before cleaning or processing	1.1.The seed lot is prepared for sampling in accordance with job requirements. 1.2.Sampling equipment is selected for use in accordance with the type of seed and the job requirements. 1.3.Samples are inspected visually for contaminants. 1.4.Results of sampling are recorded or reported to supervisors. 1.5.Seed load is directed for storage as appropriate. 1.6.Samples are labelled, recorded and kept for future reference.
2. Sample seed after processing	2.1.The seed lot is prepared for sampling in accordance with job requirements. 2.2.Sampling equipment is selected for use in accordance with the type of seed and the job requirements. 2.3.Samples are taken according to specified sampling techniques. 2.4.Samples are batched and labelled. 2.5.Samples are packaged with accompanying notation and forwarded to relevant authorities.



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- select and evaluate the equipment to be used to provide a representative sample within the guidelines of the relevant certification authority.
- sample seed from a truck on arrival at a processing plant using appropriate sampling techniques
- sample seed in bulk containers and/or sacks using appropriate sampling techniques
- sample graded and/or treated seed
- prepare samples for despatch
- use tools for sampling and prepare a sample for despatch.
- complete relevant sampling documentation
- recognise common weed seeds and other seed contaminants
- use appropriate recording and labelling techniques
- carry out moisture testing, temperature and seed density tests in accordance with enterprise requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- personnel protective equipment used for sampling treated seed
- the principles of sampling
- what type of seed requires sampling
- correct methods of sampling
- the controlling bodies of seed movement - Australian Quarantine and Inspection Service (AQIS), the Organisation for Economic Co-operation and Development (OECD), the Association of Official Seed Certifying Agencies (AOSCA) and other certification agencies
- relevant workplace records and other documentation
- seed handling and the importance of seed moisture content at all stages of the cleaning process.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• take seed samples for testing by other agencies</li> <li>• package and label seed samples</li> <li>• record workplace information about seed samples.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Representative seed sampling may include:	<ul style="list-style-type: none"> <li>• drawing a representative seed sample for testing against relevant industry standards including the International Seed Testing Association (ISTA), OECD and AOSCA or for other industry quality standards.</li> </ul>
Use of sampling equipment may include:	<ul style="list-style-type: none"> <li>• equipment from the basic Nobbe trier and spike samplers through to inline automatic samplers.</li> </ul>

### Unit Sector(s)

Unit sector	Seed processing
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCTEQ301A Install and terminate extra low voltage wiring systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of installing wiring enclosures, cable support systems, cables and accessories in electrical systems of 36 volts or less and defines the standard required to: plan, design and carry out installation of wiring enclosures, cable support systems, cables and accessories in electrical systems of 36 volts or less; undertake checks that the system conforms to requirements and operates effectively; read labels and signage to differentiate between extra low voltage and other electrical systems; size cables and wires to suit calculated load; check and notify completed installation activities; follow enterprise OHS procedures and safely work with extra low voltage systems.
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### Application of the Unit

<b>Application of the unit</b>	This unit describes specialist work which is carried out independently within own area of responsibility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and prepare for installation of extra low voltage wiring	<p>1.1. Installation is planned and prepared to ensure OHS policies and procedures are followed, and the work is appropriately sequenced according to requirements.</p> <p>1.2. Appropriate personnel are consulted to ensure the work is co-ordinated effectively with others on the work site.</p> <p>1.3. Cables and wires are sized to suit calculated load.</p> <p>1.4. Wiring system components are checked against job requirements.</p> <p>1.5. Accessories are obtained according to established procedures and to comply with organisational and task requirements.</p> <p>1.6. Location in which specific items of accessories, apparatus and circuits are to be installed is determined from job requirements.</p> <p>1.7. Materials necessary to complete the work are obtained according to established procedures and checked against the job requirement.</p> <p>1.8. Tools, equipment and testing devices needed to carry out the installation work are obtained, following established procedures they are checked for correct</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>operation and safety.</p> <p>1.9.Preparatory work is checked to ensure that it complies with requirements and no unnecessary damage has occurred.</p>
2. Install wiring systems	<p>2.1.Occupational Health and Safety (OHS) policies and procedures for installing electrical wiring systems are followed.</p> <p>2.2.Wiring systems are installed to meet requirements, without damage or distortion to the surrounding environment or services.</p> <p>2.3.Accessories are terminated and wires are connected as required to solenoids and controllers, according to manufacturer and enterprise requirements.</p> <p>2.4.Unplanned events or conditions are responded to using established procedures.</p> <p>2.5.Approval is obtained from appropriate personnel according to established procedures before any contingencies are implemented.</p> <p>2.6.On-going checks of the quality of the work are undertaken according to established procedures.</p>
3. Check and notify completion of work	<p>3.1.Final checks are undertaken to ensure the installed wiring systems conforms to requirements.</p> <p>3.2.System is tested to ensure that it works.</p> <p>3.3.Work completion is notified according to established procedures.</p>

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
<b>Required skills</b>
<ul style="list-style-type: none"> <li>• read labels and signage to differentiate between extra low voltage and other electrical systems</li> <li>• read and follow enterprise procedures for irrigation system wiring</li> <li>• size cables and wires to suit calculated load</li> <li>• check and notify completed installation activities</li> <li>• follow enterprise OHS procedures and safely work with extra low voltage systems</li> </ul>

## REQUIRED SKILLS AND KNOWLEDGE

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- basic electricity and electrical principles relating to extra low voltage wiring
- milking equipment, garden lighting and/or irrigation system wiring materials and techniques
- isolation and tagging procedures
- computerised controller systems
- enterprise policies and procedures
- testing equipment and procedures
- OHS guidelines for installing extra low voltage wiring.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- plan, design and carry out installation of wiring enclosures, cable support systems, cables and accessories in electrical systems of 36 volts or less
- undertake checks that the system conforms to requirements and operates effectively
- read labels and signage to differentiate between extra low voltage and other electrical systems
- size cables and wires to suit calculated load

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• check and notify completed installation activities</li> <li>• follow enterprise OHS procedures and safely work with extra low voltage systems.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of low voltage wiring systems may include:	<ul style="list-style-type: none"> <li>• 36 volts or less.</li> </ul>
Applications include:	<ul style="list-style-type: none"> <li>• milking equipment systems such as pulsation systems</li> <li>• in irrigation systems between controllers and system components such as solenoid valves</li> <li>• in domestic garden lighting systems.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Tools and equipment
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### Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCTRF101A Support turf work

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting turf work and defines the standard required to: prepare materials, tools and equipment for turf work; assist with turf work as directed; handle materials and equipment and clean up on completion of turf work.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others in the turf industry including green keeping and turf production.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare materials, tools and equipment for turf work	<p>1.1.The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2.Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3.Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4.Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5.Turf support is provided according to Occupational Health and Safety (OHS) requirements and according to workplace information.</p> <p>1.6.OHS hazards are identified and reported to the supervisor.</p>
2. Undertake turf work as directed	<p>2.1.Instructions and directions provided by supervisor are followed and clarification sought when necessary.</p> <p>2.2.Turf work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3.Interactions with other staff and turf users are carried out in a positive and professional manner.</p> <p>2.4.Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.</p> <p>2.5.Problems or difficulties in completing work to</p>

ELEMENT	PERFORMANCE CRITERIA
	required standards or timelines are reported to supervisor.
3. Handle materials and equipment	3.1.Plant debris and waste material produced during turf work are stored in a designated area according to supervisor's instructions. 3.2.Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines. 3.3.A clean and safe work site is maintained while completing turf activities.
4. Clean up on completion of turf work	4.1.Materials are returned to store or disposed of according to supervisor's instructions. 4.2.Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions. 4.3.Work outcomes are reported to the supervisor.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- safe work practices for turf production
- prepare materials, tools and equipment for turf work
- assist turf work as directed
- handle materials and equipment
- clean up on completion of turf work
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- safe work practices required at turf work sites
- mowing patterns and heights

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<ul style="list-style-type: none"> <li>turf machinery and equipment</li> <li>turf and facility maintenance practices</li> <li>OHS and environmental protection legislation and enterprise procedures.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>prepare materials, tools and equipment for turf work</li> <li>assist with turf work as directed</li> <li>handle materials and equipment</li> <li>clean up on completion of turf work.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
Turf work tasks may include:	<ul style="list-style-type: none"> <li>assisting with the maintenance of turf including:                             <ul style="list-style-type: none"> <li>mowing</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• edging</li> <li>• watering</li> <li>• fertilising</li> <li>• lifting and laying sod.</li> <li>• assisting with collecting rubbish and removing weeds and disposing as directed.</li> <li>• assisting with maintaining turf facilities including:                             <ul style="list-style-type: none"> <li>• assisting with repair, upkeep</li> <li>• moving of on-site structures and equipment</li> <li>• marking out</li> <li>• cleaning of water bodies</li> <li>• raking of sand traps.</li> </ul> </li> </ul>
Tools and equipment may include:	<ul style="list-style-type: none"> <li>• Mowers including:                             <ul style="list-style-type: none"> <li>• cylinder</li> <li>• rotary</li> <li>• flail</li> <li>• hand</li> <li>• hand-operated cylinder mowers and greens mowers.</li> </ul> </li> <li>• Other tools, equipment and machinery including: rollers                             <ul style="list-style-type: none"> <li>• super soakers</li> <li>• line marking equipment</li> <li>• brush cutters</li> <li>• edge clippers</li> <li>• edge slicers</li> <li>• water pumps.</li> </ul> </li> </ul>
Hazards may include:	<ul style="list-style-type: none"> <li>• people and animals moving across the site during work</li> <li>• obstacles and debris on the site</li> <li>• disturbance or interruption of services</li> <li>• solar radiation</li> <li>• dust</li> <li>• noise</li> <li>• chemicals and hazardous substances</li> <li>• manual handling</li> <li>• moving machinery and machinery parts</li> <li>• uneven surfaces</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• flying objects.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Turf
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCTRF201A Assist with turf construction

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of support a worker provides to others in a team who are constructing soil profiles for the establishment of turf and defines the standard required to: work in a team on a turf construction project; use a range of turf construction machinery and equipment; follow procedures and sequence work during the course of the construction; clean, maintain and store turf construction machinery and equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of assisting with turf construction and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for soil profile construction	<p>1.1.Services are located using site and construction plans and in consultation with the supervisor.</p> <p>1.2.Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.3.Suitable safety equipment is selected for the soil profile construction program.</p> <p>1.4.The construction site is prepared according to enterprise work procedures and the construction plan.</p>
2. Prepare equipment for soil profile construction	<p>2.1.Construction tools, equipment and machinery are selected that are appropriate to the task being undertaken.</p> <p>2.2.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</p> <p>2.3.Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p>
3. Undertake soil profile construction	<p>3.1.The base is graded to the specified level and on a consistent slope, and is consolidated to achieve uniform compaction over the entire site, according to enterprise work procedures.</p> <p>3.2.Trench lines are dug to the specified depth, width and fall, with all superfluous material evacuated and stored safely according to the construction plan and enterprise work procedures.</p> <p>3.3.Construction of the soil profile is undertaken</p>

ELEMENT	PERFORMANCE CRITERIA
	according to OHS requirements.
4. Restore the site after drainage and irrigation installation	<p>4.1. Trenches are back-filled with specified construction materials, consolidated and levelled according to the construction plan and enterprise work procedures.</p> <p>4.2. The construction site is levelled to visual satisfaction as each layer of the soil profile is installed.</p> <p>4.3. The construction site is hand watered thoroughly on completion according to enterprise work procedures.</p> <p>4.4. Waste material is removed from the construction site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p> <p>4.5. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p> <p>4.6. A clean and safe area is maintained throughout and upon completion of work according to enterprise work procedures.</p> <p>4.7. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- inspect and check machinery
- erect safety equipment
- handle manual loads correctly
- use turf construction machinery and equipment
- calibrate machinery
- interpret site plans and turf construction specifications
- measure quantities, area, volume, ratios and application rates
- measure distances and calculate depth
- calculate material requirements
- participate in teams and contribute to team objectives
- read and interpret instructions

**REQUIRED SKILLS AND KNOWLEDGE**

- communicate effectively with team members and supervisor
- utilise proforma recording, reporting and work procedure documents
- co-ordinate own activities with the work group
- minimise environmental disturbance
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- various requirements of turf species and their cultural requirements
- characteristics and growth rates of turf species and cultivars
- different soil preparations for construction
- effective and safe use of tools and machinery
- high performance uses of turf surfaces
- purpose of turf construction in maintaining turf presentation
- irrigation and/or drainage installation procedures and operational techniques
- principles and application of site and construction plans
- relationship between a well-constructed soil profile for the quality and appearance of the turf
- effect of adverse outdoor climatic conditions
- influences on the selection of tools, machinery and safety equipment
- potential public nature of turf renovation work sites
- hazards and responsibilities working near public access
- environmental impact of turf construction works.

**Evidence Guide**

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• work in a team on a turf construction project</li> <li>• use a range of turf construction machinery and equipment</li> <li>• follow procedures and sequence work during the course of the construction</li> <li>• clean, maintain and store turf construction machinery and equipment.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Turf species may include:	<ul style="list-style-type: none"> <li>• all high performance turf species and cultivars.</li> </ul>
Tasks may include:	<ul style="list-style-type: none"> <li>• supporting surveying</li> <li>• area measurement</li> <li>• marking out</li> <li>• peg placement</li> <li>• erection of signage and safety barriers.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Turf
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCTRF202A Prepare turf surfaces for play

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing turf surfaces for play and defines the standard required to: determine the condition of the existing surface with advice from senior greenkeepers for subsequent routine preparations; treatments and turf cultural practices; prepare a turf surface or sports playing field according to the rules of the game; use turf surface preparation machinery and equipment safely according to manufacturers' specifications to achieve the desired playing surface outcome.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of work undertaken by greenkeepers and sports turf curators in preparing turf surfaces for match play and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare the site to be mown	<p>1.1. Services affecting the turf surface are located using site plans and in consultation with the supervisor.</p> <p>1.2. Permanent obstacles and Occupational Health and Safety (OHS) hazards are identified, risks assessed and controls implemented.</p> <p>1.3. Movable obstacles are removed before and replaced after mowing.</p> <p>1.4. Abnormal conditions or changes in the appearance of the site are reported to the supervisor.</p>
2. Prepare equipment for mowing	<p>2.1. Tools, equipment and machinery are selected that are appropriate to the task being undertaken.</p> <p>2.2. The mower is calibrated and adjusted to height according to the manufacturer's guidelines and documented work procedures.</p> <p>2.3. Pre-operational checks of tools, equipment and machinery are completed according to manufacturer's specifications and documented work procedures.</p> <p>2.4. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p> <p>2.5. Suitable safety equipment is selected and erected at the work site during work periods.</p>
3. Mow playing surface	<p>3.1. Grass appearance is assessed against enterprise guidelines and changes in appearance are reported.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. The mower is matched to any implement attached to it according to manufacturer's guidelines and industry practice.</p> <p>3.3. Continuous oversight of mowing activities is maintained according to enterprise work procedures.</p>
4. Undertake final preparation of playing surface	<p>4.1. Mark out tools appropriate for the task being undertaken are selected.</p> <p>4.2. Lengths and angles are measured to locate markers and match play equipment according to enterprise work procedures and industry practice.</p> <p>4.3. Marking out is completed according to the intended playing surface use and enterprise work procedures.</p> <p>4.4. Markers and play equipment are placed where necessary according to enterprise work procedures.</p> <p>4.5. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- inspect and check machinery
- erect safety equipment
- handle manual loads correctly
- use turf machinery and equipment
- calibrate machinery
- measure quantities, area, volume, ratios and application rates
- measure distances, angles and calculate areas
- calculate material requirements
- participate in teams and contribute to team objectives
- read and interpret work procedures
- communicate effectively with team members and supervisor
- utilise proforma recording, reporting and work procedure documents
- co-ordinate own activities with the work group
- use literacy skills to follow sequenced written instructions and record information accurately and legibly



<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• various requirements of turf species and their cultural requirements</li> <li>• characteristics and growth rates of turf species and cultivars</li> <li>• different soil preparations for use of the turf playing surface</li> <li>• effective and safe use of tools and machinery</li> <li>• high performance uses of turf surfaces</li> <li>• purpose of turf surface preparation in maintaining turf presentation</li> <li>• competition playing requirements affecting preparation of the turf surface</li> <li>• irrigation and drainage system design and operational techniques</li> <li>• effect of adverse outdoor climatic conditions</li> <li>• influences on the selection of tools, machinery and safety equipment</li> <li>• potential public nature of turf renovation work sites</li> <li>• hazards and responsibilities working near public access</li> <li>• environmental impact of turf works.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the condition of the existing surface with advice from senior greenkeepers for subsequent routine preparations, treatments and turf cultural</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>practices</p> <ul style="list-style-type: none"> <li>• prepare a turf surface or sports playing field according to the rules of the game</li> <li>• use turf surface preparation machinery and equipment safely according to manufacturers specifications to achieve the desired playing surface outcome.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Turf species may include	<ul style="list-style-type: none"> <li>• all high performance turf species and cultivars.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Turf
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCTRF203A Renovate grassed areas

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process renovating of grassed areas and defines the standard required to: establish the purpose of turf renovation programs in maintaining turf presentation, particularly in relation to the end use of the turf; use turf renovation machinery and equipment to restore turf health and condition; transport, clean and store turf renovation machinery and equipment; record turf maintenance activities as required by the enterprise.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of basic seasonal renovation practices that are used to restore turf health and condition on a range of grassed areas and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare turf area for renovation	<p>1.1. Services are located using site and construction plans and in consultation with the supervisor.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified and reported to the supervisor.</p> <p>1.3. Suitable safety equipment is selected for the turf renovation program.</p> <p>1.4. The environmental implications of the turf renovation program are identified and reported.</p> <p>1.5. Preparation of turf area is carried out according to enterprise work procedures and site and construction plans.</p>
2. Prepare equipment for turf renovation	<p>2.1. Hand tools and renovation machinery are selected that are appropriate to the task being undertaken.</p> <p>2.2. Pre-operational and safety checks are carried out on hand tools and renovation machinery, according to manufacturers specifications and enterprise work procedures.</p> <p>2.3. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p>
3. Undertake turf renovation	<p>3.1. Safety equipment is erected around trench lines, holes and other disturbed surfaces during and between work periods.</p> <p>3.2. Correct manual handling techniques are used when lifting or moving heavy loads.</p> <p>3.3. The turf renovation program is undertaken according</p>

ELEMENT	PERFORMANCE CRITERIA
	to OHS requirements. 3.4. Turf renovation tools and machinery are operated safely and effectively.
4. Complete turf renovation	4.1. Plant debris and waste material removed from the site are disposed of in an environmentally aware and safe manner according to enterprise work procedures. 4.2. Tools and machinery are cleaned, maintained and stored according to enterprise work procedures. 4.3. A clean and safe area is maintained throughout and on completion of work. 4.4. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- inspect and check machinery
- erect safety equipment
- handle manual loads correctly
- use turf renovation machinery and equipment
- calibrate machinery
- measure quantities, area, volume, ratios and application rates
- measure distances and calculate depth
- calculate material requirements
- participate in teams and contribute to team objectives
- read and interpret instructions
- communicate effectively with team members and supervisor
- utilise proforma recording, reporting and work procedure documents
- co-ordinate own activities with the work group
- minimise environmental disturbance
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor</p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• various requirements of turf species and their cultural requirements</li> <li>• characteristics and growth rates of turf species and cultivars</li> <li>• different soil preparations for renovation</li> <li>• effective and safe use of tools and machinery</li> <li>• high performance uses of turf surfaces</li> <li>• purpose of turf renovation in maintaining turf presentation</li> <li>• principles and application of site and construction plans</li> <li>• irrigation and drainage system design and operational techniques</li> <li>• effect of adverse outdoor climatic conditions</li> <li>• influences on the selection of tools, machinery and safety equipment</li> <li>• potential public nature of turf renovation work sites</li> <li>• hazards and responsibilities working near public access</li> <li>• environmental impact of turf works.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p> <p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish the purpose of turf renovation programs in maintaining turf presentation, particularly in relation to the end use of the turf</li> <li>• use turf renovation machinery and equipment to</li> </ul>

<b>EVIDENCE GUIDE</b>	
	restore turf health and condition <ul style="list-style-type: none"> <li>• transport, clean and store turf renovation machinery and equipment</li> <li>• record turf maintenance activities as required by the enterprise.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Turf species may include:	<ul style="list-style-type: none"> <li>• all high performance turf species and cultivars.</li> </ul>
Renovation tasks may include:	<ul style="list-style-type: none"> <li>• scarifying, de-thatching</li> <li>• over-sowing, turf replacement (e.g. seeds, sods, stolons, plugs or hydro mulching)</li> <li>• checking surface and/or sub-surface drains</li> <li>• soil improvement, soil aeration and decompaction</li> <li>• fertiliser application and top dressing.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Turf
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### Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCTRF204A Support turf establishment

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of supporting the establishment of turf and defines the standard required to: work in a team on a turf establishment project; use a range of turf establishment machinery and equipment; follow procedures and sequence work during the course of the growing-in period and transport; clean, maintain and store turf establishment machinery and equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of supporting the establishment of turf by seed, sod or other methods and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to establish a planted area	1.1.The planting site , planting methods and turf plant species and cultivars are identified according to the site plan and enterprise work procedures. 1.2.Materials, tools, equipment and machinery are selected according to planted area design requirements and enterprise work procedures. 1.3.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures. 1.4.The environmental implications of the turf establishment program are identified and the likely outcomes assessed and reported to the supervisor. 1.5.Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor. 1.6.Suitable safety and Personal Protective Equipment (PPE) is selected, used and maintained.
2. Prepare the planting area	2.1.Layout of services is recognised, depths checked against the site plan and discrepancies are reported to the supervisor. 2.2.Earthworks are undertaken according to OHS requirements. 2.3.All competing plants are treated according to enterprise work procedures. 2.4.Soil is assessed for moisture, tilth, compactness, depth and decaying plant material according to enterprise work procedures.

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Soil additives are selected and applied according to enterprise work procedures.</p> <p>2.6. The entire surface is raked out evenly to achieve a consistent texture and the area is uniformly levelled to defined contour requirements according to enterprise work procedures.</p> <p>2.7. The planting site is watered according to the planting method and enterprise work procedures.</p> <p>2.8. Debris and pollutants are removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p>
3. Plant turf	<p>3.1. All turf plant material is inspected prior to being planted and material with major defects is discarded according to enterprise work procedures.</p> <p>3.2. Hygiene practices with use of tools and equipment are clarified with supervisor and observed in establishment work.</p> <p>3.3. Turf plant material with minor defects is trimmed or treated to maintain health and vigour according to enterprise work procedures.</p> <p>3.4. Seed spread by hand and mechanically is evenly distributed over the whole planting area with no overlap and no areas missed according to enterprise work procedures.</p> <p>3.5. The entire sown surface is evenly raked and thoroughly watered according to enterprise work procedures.</p> <p>3.6. Sods are correctly oriented, rolled evenly onto a moist surface and interlocked in the pattern and area according to enterprise work procedures.</p> <p>3.7. Newly laid turf is watered thoroughly to encourage establishment according to enterprise work procedures.</p>
4. Provide post-planting care	<p>4.1. The planted site is protected from animals, pedestrian and vehicular traffic according to enterprise work procedures.</p> <p>4.2. The planted site is rolled to a work pattern planned to cover the area evenly and efficiently and rolling is even, flat and uniform with no disturbance according to enterprise work procedures.</p> <p>4.3. Turf is mown according to a pattern and height specified in enterprise work procedures.</p> <p>4.4. Top dressing is applied evenly to the required depth</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>over the whole area and is worked or rubbed into the surface according to enterprise work procedures.</p> <p>4.5. New turf is watered according to irrigation system manufacturer's specifications and enterprise work procedures.</p> <p>4.6. Water is applied by hand to dry or under-watered plants according to the requirements of the turf species and cultivar, and according to enterprise work procedures.</p> <p>4.7. Watering patterns are checked for dry spots and blockages and faults are rectified according to manufacturer's specifications and reported to the supervisor.</p>
5. Monitor turf health	<p>5.1. Turf structure is observed for quality according to published data, enterprise work procedures and industry standards.</p> <p>5.2. Damaged turf is identified according to published data, supplier's specifications, historical data and enterprise work procedures.</p> <p>5.3. Plants incorrectly planted or situations that will prevent plants from reaching their full potential are identified, recorded and reported to the supervisor according to enterprise work procedures.</p>
6. Complete establishment of the planted are	<p>6.1. Waste material is removed from the planting site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.</p> <p>6.2. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.</p> <p>6.3. A clean and safe work area is maintained throughout and on completion of work.</p> <p>6.4. Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- inspect and check machinery
- erect safety equipment
- handle manual loads correctly
- use turf establishment machinery and equipment
- calibrate machinery
- interpret site plans and turf establishment specifications
- measure quantities, area, volume, ratios and application rates
- calculate material requirements
- participate in teams and contribute to team objectives
- read and interpret instructions
- communicate effectively with team members and supervisor
- utilise proforma recording, reporting and work procedure documents
- co-ordinate own activities with the work group
- minimise environmental disturbance
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- various requirements of turf species and their cultural requirements
- characteristics and growth rates of turf species and cultivars
- different soil preparations for establishment
- effective and safe use of tools and machinery
- high performance uses of turf surfaces
- purpose of turf establishment in maintaining turf presentation
- irrigation and drainage system design and operational techniques
- effect of adverse outdoor climatic conditions
- influences on the selection of tools, machinery and safety equipment
- potential public nature of turf renovation work sites
- hazards and responsibilities working near public access
- environmental impact of turf works.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• work in a team on a turf establishment project</li> <li>• use a range of turf establishment machinery and equipment</li> <li>• follow procedures and sequence work during the course of the growing-in period</li> <li>• transport, clean and maintain and store turf establishment machinery and equipment.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Turf species may include:	<ul style="list-style-type: none"> <li>• all high performance turf species and cultivars.</li> </ul>
Establishment methods may include:	<ul style="list-style-type: none"> <li>• seed or sod or other methods for sporting, recreational, landscaping, community and private use.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Turf
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCTRF301A Construct turf playing surfaces

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of constructing soil profiles for the establishment of high performance sports and recreational turf surfaces and defines the standard required to: determine turf construction requirements from plans; survey and create working plans for turf construction sites; excavate earthworks and establish working and finished levels; install drainage and irrigation systems; implement a turf construction project.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the construction of turf playing surfaces in new projects and in the complete renovation of existing soil profiles in sporting, commercial and public recreational open spaces such as golf greens and tees, cricket pitches and other turfed sporting surfaces in urban and regional areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for construction activities	1.1.The construction site for high performance turf playing surfaces and the construction method are identified according to the site and construction plans and enterprise work procedures. 1.2.Soil tests of existing soil are undertaken using representative samples, and according to testing instrument instructions and enterprise work procedures. 1.3.Locations and layout of services and utilities are identified, depths checked against the site or construction plan, and discrepancies are reported to the supervisor and the relevant authorities. 1.4.History of site is determined and taken into account in planning construction details. 1.5.Likely consequences of site aspect, features and run-off from adjacent sites are determined and incorporated in site and construction plans. 1.6.Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor. 1.7.Suitable safety equipment and Personal Protective Equipment (PPE) are selected, used and maintained.
2. Survey the construction site	2.1.Surveying equipment is set up and used according to industry standards.

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2.Existing levels are surveyed and temporary benchmark established. Details are recorded accurately and legibly according to industry standards.</p> <p>2.3.New levels are set according to specifications and pegs placed according to industry convention.</p> <p>2.4.Contour map with reduced levels and a cross section is developed and drawn using accepted industry symbols and mapping conventions.</p>
<p>3. Prepare for construction work</p>	<p>3.1.Enterprise work team, contractors and design consultants are identified and, where required, engaged.</p> <p>3.2.Work tasks are scheduled in a logical, timely and effective manner in consultation with the supervisor.</p> <p>3.3.Materials required are estimated and costed according to accepted industry practice and ordered.</p> <p>3.4.Plans for the new construction profile are obtained or developed.</p>
<p>4. Set out site for construction</p>	<p>4.1.Symbols and terminology are interpreted to ensure the concept of the construction plan is clearly understood according to industry practice.</p> <p>4.2.Boundaries and features contained in the site and construction plans are checked and verified against the actual site and existing features.</p> <p>4.3.Finishing levels, provision for drainage and irrigation, and drainage head of the site are identified and checked against the construction plan to ensure nominated levels are workable.</p> <p>4.4.Measurements are checked against the construction plan, the construction area is pegged out, and variances are notified to the supervisor according to enterprise work procedures.</p>
<p>5. Excavate the construction site</p>	<p>5.1.Excess soil is removed and the construction site cleared with the stockpile being placed in a designated area according to enterprise work procedures.</p> <p>5.2.The base is graded to the level and slope specified in the base design.</p> <p>5.3.The base of the profile is consolidated to achieve uniform compaction over the entire site according to the construction plan.</p> <p>5.4.Sub-surface irrigation system components and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p> fittings are installed to the required depth and design specified in the construction plan.</p>
<p>6. Install drainage system</p>	<p>6.1.Drainage trenches are dug to the required depth and design specified in the construction plan.</p> <p>6.2.Drainage material is laid on the base of the trench, pipes are laid/installed, and trenches are covered according to industry standards.</p>
<p>7. Install soil profile</p>	<p>7.1.Quantities of material required to be spread over the designated area are calculated and measured according to the construction plan.</p> <p>7.2.Equipment is calibrated according to manufacturer's guidelines to distribute the required amount of material over the designated area.</p> <p>7.3.Each profile layer is compacted to reflect the final contour.</p> <p>7.4.The interface between profile layers is uniform and unbroken according to the construction plan and enterprise work procedures.</p> <p>7.5.Soil amendments are prepared according to enterprise work procedures, mixed thoroughly and applied evenly over the designated area.</p> <p>7.6.The finishing soil surface is given a final levelling and consolidated, ready for planting, according to the construction plan and enterprise work procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate effectively with work team members, supervisors, contractors and consultants
- interpret existing site and construction plans and specifications
- draft basic working plans
- survey site levels and dimensions
- install drainage and irrigation systems
- measure materials, interpret , survey and assess site measurements, and interpret

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<p>and apply test results</p> <ul style="list-style-type: none"> <li>• coordinate work group, contractors and own activities to sequentially and effectively complete construction in a timely and cost effective manner</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• practical understanding of the range and use of materials, tools, equipment and machinery available to the enterprise for construction of soil profiles, including soil amendments and base construction materials</li> <li>• practical understanding of the range of construction methods that may be used to construct soil profiles for high performance turf surfaces, and the association of construction methods with site limitations, environmental implications, and end use of the turf surface</li> <li>• practical understanding of surveying principles and techniques</li> <li>• soil testing techniques and the application of results to the construction process</li> <li>• awareness of the comparative environmental implications associated with construction and excavation activity, drainage and irrigations systems, soil amendments and waste disposal procedures.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine turf construction requirements from plans</li> <li>• organise work and use tools and equipment for turf</li> </ul>

<b>EVIDENCE GUIDE</b>	
	construction project • implement a turf construction project.
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Playing surfaces may include:	<ul style="list-style-type: none"> <li>• sites for high performance sports and recreation such as:</li> <li>• golfing greens</li> <li>• cricket pitches</li> <li>• purpose built sporting facilities.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Turf
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCTRF302A Establish turf

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of establishing turf in sporting, public recreational open space, commercial and residential sites and defines the standard required to: determine turf establishment methods and requirements from plans, client's quotations or instructions; organise work and use tools, equipment and machinery for a turf establishment project; implement successful turf establishment works; operate and store turf establishment machinery and equipment; report in writing on completion.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the installation, establishment and maintenance of turf areas in new projects and in replacement and renovation of existing turf areas over the time period required for complete establishment in the horticulture, turf and landscaping industries. Turf establishment is likely to be under limited supervision from others, with checking only related to overall progress. This standard involves the application of horticultural knowledge with depth in some areas and a broad range of horticultural skills.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Sample soil for testing	<p>1.1. Soil samples are taken from a representative area and packaged, labelled and sent for laboratory testing.</p> <p>1.2. Testing results are used to guide soil preparations for turf establishment.</p>
2. Plant turf	<p>2.1. Tools and equipment are chosen appropriate to the task being undertaken, used according to documented guidelines, and safe working practices are employed according to enterprise Occupational Health and Safety (OHS) guidelines.</p> <p>2.2. Planting site is prepared according to enterprise guidelines.</p> <p>2.3. Placement and planting method of the plant material are consistent with the turf type.</p> <p>2.4. Newly planted turf is watered and top-dressing is applied according to plan and supervisors instructions.</p>
3. Maintain newly established turf	<p>3.1. Newly established turf is watered and where advised the new turf is fertilised according to need and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>method of planting.</p> <p>3.2. Turf is mowed according to a specified pattern and height according to the requirements of the enterprise.</p> <p>3.3. Newly established turf is monitored, problems identified, and any changes are reported to supervisor according to enterprise policy.</p> <p>3.4. Top dressing is applied according to the establishment plan.</p> <p>3.5. Tools and equipment chosen are appropriate to the task being undertaken, used according to documented guidelines, and safe working practices are employed.</p>
<p>4. Report and repair areas of damaged turf</p>	<p>4.1. Plants are observed for health properties, specifications and historical data.</p> <p>4.2. Turf condition is observed for quality according to enterprise practice and guidelines.</p> <p>4.3. Reports and recommendations are written and presented to the client or appropriate supervisor.</p> <p>4.4. Tools and equipment chosen are appropriate to the task being undertaken, used according to documented guidelines, and safe working practices are employed.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collect soil samples for analysis
- package, label and send soil samples for laboratory analysis
- implement turf establishment practices
- use turf establishment machinery and equipment
- use fertilisers and irrigation equipment
- repair areas of damaged turf
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <p>specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required</p> <ul style="list-style-type: none"> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• appropriate agricultural chemicals and concentrations</li> <li>• turf identification and growth characteristics</li> <li>• soils and turf nutrition</li> <li>• fertiliser use and application</li> <li>• watering practices</li> <li>• common weeds, pests and diseases</li> <li>• documented guidelines of enterprise.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine turf establishment methods and requirements from plans, clients, quotations or instructions.</li> <li>• organise work and use tools, equipment and machinery for a turf establishment project</li> <li>• implement successful turf establishment works</li> <li>• operate and store turf establishment machinery and equipment</li> <li>• report in writing on completion.</li> </ul>

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Turf areas may include:	<ul style="list-style-type: none"> <li>• all turf areas such as:</li> <li>• those found in public open space</li> <li>• parks and reserves</li> <li>• public and private gardens</li> <li>• playing fields.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Turf
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCTRF303A Implement a grassed area maintenance program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the process of implementing a grassed area maintenance program and defines the standard required to: determine the maintenance requirements for a turf area; conduct a risk assessment for work in a turf area; safely adjust and use turf maintenance machinery and equipment; write a report on the maintenance program activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the maintenance and repair of turf surfaces. This unit involves working under limited supervision, with checking only related to overall progress. It requires the application of horticultural knowledge and a broad range of grassed area maintenance skills. The work is usually done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for grassed area maintenance work	1.1. Requirements of the maintenance program are clarified with supervisor and enterprise guidelines. 1.2. Equipment and material resource requirements are identified according to the scope of the co-ordination work and supervisor's instructions. 1.3. The priorities for maintenance activities and time allocation is identified, documented and presented to the supervisor for verification. 1.4. The environmental implications of the proposed maintenance work are identified, and the likely outcomes assessed and reported to the supervisor. 1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor. 1.6. Personal Protective Equipment (PPE) is selected, used, maintained and stored according to the type of work site activities to be undertaken.
2. Maintain and repair grassed areas	2.1. Grassed areas are maintained and repaired as authorised by the supervisor and according to enterprise guidelines and work place priorities.

ELEMENT	PERFORMANCE CRITERIA
	2.2. Materials to assist in maintenance works are purchased, stored and/or used as required. 2.3. Delivery of materials to site is organised according to workplace priorities. 2.4. Machinery and equipment is organised to be on site in good order when they are required. 2.5. Grassed areas requiring specialist attention and work are identified and organised.
3. Coordinate and report on grassed area maintenance activities	3.1. Resources are coordinated and timed to suit the maintenance activities and priority of work. 3.2. Machinery operators are informed of appropriate use and their responsibilities in respect to operational maintenance requirements of machinery and equipment. 3.3. Personnel, activities, timelines and materials usage are monitored and documented according to enterprise guidelines. 3.4. Contingency situations are recognised and reported to the supervisor, and corrective actions taken according to enterprise guidelines. 3.5. A simple report is written to inform management of maintenance activities undertaken and completed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify the turf
- apply appropriate maintenance activities for specific turf type
- read and interpret documentation associated with work site activities
- calculate material and resource requirements
- coordinate a team to achieve optimum performance
- communicate with personnel at all levels
- document results clearly and concisely
- conduct a risk assessment
- use interpersonal skills to work with and relate to people from a range of cultural,



<b>REQUIRED SKILLS AND KNOWLEDGE</b>
social and religious backgrounds and with a range of physical and mental abilities.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• types of turf and specific maintenance requirements</li> <li>• growth rates and cultural requirements of specific turf types</li> <li>• methods and practices for maintaining grassed areas</li> <li>• turf grass physiology</li> <li>• work schedule programming</li> <li>• the range, use and availability of materials, equipment and machinery that may be required for the project.</li> <li>• environmental awareness associated with undertaking maintenance and repair work on grassed areas</li> <li>• OHS issues, legislative requirements and codes of practice.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• determine the maintenance requirements for a turf area</li> <li>• conduct a risk assessment for work in a turf area</li> <li>• safely adjust and use turf maintenance machinery and equipment</li> <li>• write a report on the maintenance program activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Maintenance activities may include:	<ul style="list-style-type: none"> <li>• mowing</li> <li>• slashing</li> <li>• minor weed control</li> <li>• watering</li> <li>• line marking</li> <li>• repairs to damaged/vandalised grassed areas</li> <li>• sourcing contractors for specialist turf renovation work.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Turf
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCTRF304A Monitor turf health

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring the health and condition of high performance sports turf playing surfaces and defines the standard required to: inspect and report on the condition of turfed surfaces; assess turf health; perform soil sampling and analyse results; identify deficiencies and diseases in turf; prepare turf maintenance recommendations according to the playing requirements and desired objectives of the enterprise.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the application of extensive horticultural knowledge and a broad range of horticultural skills. Monitoring is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions, and the achievement of outcomes within time and budgetary constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for monitoring activities	<p>1.1. The turf site to be monitored, nature and regularity of monitoring, and time constraints for delivering reports are identified according to enterprise work procedures.</p> <p>1.2. Plant tissue and soil analysis consultants are identified and their sampling specifications determined in consultation with the supervisor and/or consultants.</p> <p>1.3. Monitoring tools and equipment are selected according to enterprise work procedures.</p> <p>1.4. Pre-operational and safety checks are carried out on tools and equipment according to manufacturers specifications and enterprise work procedures.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p> <p>1.6. Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p>
2. Collect soil and plant tissue samples	<p>2.1. Samples for off-site testing are collected from a representative area and prepared, packaged, accurately labelled and dispatched according to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>consultant's requirements and enterprise work procedures.</p> <p>2.2. On-site soil tests are performed according to testing instrument instructions, industry codes of practice and enterprise work procedures.</p> <p>2.3. Divots are replaced from soil sampling sites and waste materials disposed of according to enterprise work procedures.</p> <p>2.4. Sampling tools and equipment are cleaned of all residues and returned to storage according to manufacturers' specifications and enterprise work procedures.</p> <p>2.5. Results of analysis are recorded and compared with acceptable parameters according to researched and experiential awareness.</p> <p>2.6. Recommendations are written to address identified deficiencies and to meet target chemical balances according to researched and experiential awareness.</p>
<p>3. Visually monitor turf health</p>	<p>3.1. Monitoring of turf health is undertaken according to OHS requirements.</p> <p>3.2. Health indicators of the turf are assessed visually with reference to researched and experiential awareness, site conditions, seasonal conditions, and according to enterprise work procedures.</p> <p>3.3. Deficiencies in turf quality and turf diseases are identified visually with reference to researched and experiential awareness, site conditions and seasonal conditions.</p> <p>3.4. Reports and recommendations are made to the supervisor according to the playing requirements and desired objectives of the enterprise.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with work team members, supervisors and consultants

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• utilise proforma reporting, analysis and work procedure documents</li> <li>• assess turf health</li> <li>• measure materials and interpret specifications and analytical results</li> <li>• perform soil sampling and analyse results</li> <li>• identify deficiencies and diseases in turf</li> <li>• make reports and recommendations</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>
<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• botany and turf physiology</li> <li>• practical understanding of soil and plant tissue analysis as a monitoring and turf management tool, the main elements of analysis, and their significance as indicators of nutritional deficiency and toxicity</li> <li>• awareness of the role of trace elements and nutrients required by turf grass plants, and symptoms of toxicities and deficiencies</li> <li>• turf grass diseases, including commonly occurring regional diseases, seasonality, history of site and visual disease symptoms</li> <li>• main, simple and compound fertiliser products available to the enterprise including analysis, solubility, salt index, rates and cost</li> <li>• rates and regularity of recommended fertiliser and pesticide application to achieve optimum plant health objectives, while minimising external environment impact through leaching, excessive spraying and overuse.</li> </ul>

## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• inspect and report on the condition of turfed surfaces</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• assess turf health</li> <li>• perform soil sampling and analyse results</li> <li>• identify deficiencies and diseases in turf</li> <li>• prepare turf maintenance recommendations according to the playing requirements and desired objectives of the enterprise.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Monitoring turf health may include:	<ul style="list-style-type: none"> <li>• multi-use and high performance sports turf playing surfaces.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Turf
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### Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCTRF305A Renovate sports turf

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of renovating sports turf and defines the standard required to: implement a sports turf renovation program; conduct a site hazard identification and risk control assessment; prepare check and calibrate turf renovation machinery and equipment; use turf renovation machinery and equipment to restore turf health and condition; renovate a sports turf for successful high performance use; record outcomes of renovation works.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of implementing renovation or remediation of a sports turf area for minor projects and seasonal renovations in the turf industry. Renovating sports turf requires the application of extensive horticultural knowledge and a broad range of horticultural skills. Turf renovation is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions, and the achievement of outcomes within time and budgetary constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to renovate turf	<p>1.1.The turf renovation site and extent of works are identified according to the renovation program.</p> <p>1.2.Turf and renovation materials are selected according to enterprise work procedures.</p> <p>1.3.Occupational Health and Safety (OHS) hazards are identified, risks assessed, controls implemented and reported to the supervisor.</p> <p>1.4.Suitable safety and Personal Protective Equipment (PPE) are selected, used and maintained.</p>
2. Prepare renovation equipment	<p>2.1.Tools, equipment and machinery are selected appropriate to the renovation works program.</p> <p>2.2.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</p> <p>2.3.Tools, equipment and machinery are calibrated and adjusted according to manufacturer's guidelines and enterprise work procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
3. Implement sports turf renovation	3.1. Renovation works are identified from the renovation program and schedule and work tasks are implemented in a sequential, timely and effective manner in consultation with the supervisor. 3.2. Renovation tasks are undertaken according to OHS requirements and with due consideration of the environmental implications. 3.3. Renovation tasks are reviewed and remedial action is undertaken where necessary. 3.4. A clean and safe work area is maintained throughout and on completion of work.
4. Complete renovation activities	4.1. Waste material is removed from the renovation site and disposed of in an environmentally aware and safe manner according to enterprise work procedures. 4.2. Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures. 4.3. Work outcomes are recorded and reported to the supervisor according to enterprise work procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with work team members, supervisors and contractors
- interpret and apply site plans and renovation program specifications
- operate specialised turf renovation equipment
- utilise proforma reporting, analysis and work procedure documents
- measure materials
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- detailed physical structure of a sports turf soil profile
- specialist turf renovation practices to achieve high performance turf

**REQUIRED SKILLS AND KNOWLEDGE**

- Field measurement techniques such as infiltration rate, organic fines, hardness, traction, surface smoothness, and turf sward height
- enterprise and industry standards for turf surface appearance and quality
- comparative environmental implications of renovation activities, turf and soil treatments and waste disposal procedures
- planting, care and renovation scheduling requirements of grass species and cultivars.
- nutrition and plant growth regulators.

**Evidence Guide**

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- implement a sports turf renovation program
- conduct a site hazard identification and risk control assessment
- prepare check and calibrate turf renovation machinery and equipment
- use turf renovation machinery and equipment to restore turf health and condition
- renovate a sports turf for successful high performance use
- record outcomes of renovation works.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Renovate turf materials may include:	<ul style="list-style-type: none"> <li>• cool or warm season turf seed</li> <li>• plants of the species and cultivar specified by the supervisor and/or the turf renovation program.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Turf
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCTRF401A Develop a sports turf maintenance program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing a sports turf maintenance program and defines the standard required to: use existing information and records to determine a comprehensive maintenance program; prepare an seasonal/annual program according to the requirements of the enterprise and the grounds maintenance budget; communicate a sports turf maintenance program to staff; document the sports turf maintenance program; monitor the implementation of the maintenance program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies greenkeepers and turf managers who develop and document a sports turf maintenance program.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine additives required by performing soil and plant testing	<p>1.1. Soil and plant tests are determined according to the requirements of the turf plant species and cultivars, climatic conditions, prevailing soil and plant conditions, enterprise guidelines and industry best practice.</p> <p>1.2. A soil and plant testing program is developed which defines field and off-site testing activities, task responsibilities, involvement of contractors, scheduling, and desired information outcomes.</p> <p>1.3. Testing tasks are implemented and monitored, liaison procedures with outside testing agencies are supervised and remedial action is undertaken where necessary.</p> <p>1.4. Data and readings are compiled and presented in a form that can be easily read and interpreted.</p> <p>1.5. Seasonal issues are determined from published data on the turf plant species and cultivars, historical records, own experience, and enterprise guidelines.</p> <p>1.6. Nutritional status of the turf plant species and cultivars is determined by analysing collected data and comparing to accepted standards.</p>
2. Identify the requirements of a sports turf maintenance program	<p>2.1. The standards for turf presentation are clearly defined according to client requirements, enterprise guidelines and industry best practice.</p> <p>2.2. The different maintenance requirements during a range of conditions over the growing cycle of the turf plant are identified according to published data on the species and cultivar, historical records, own</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>experience, and enterprise guidelines.</p> <p>2.3.Sports turf maintenance procedures are selected to achieve the appropriate plant condition according to the standards for turf presentation.</p> <p>2.4.Resources, tools, equipment and machinery required for the sports turf maintenance program are identified, costed, and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.5.The most cost-effective approach to maintaining the sports turf playing surface is determined.</p> <p>2.6.Occupational Health and Safety (OHS) hazards associated with the implementation of the sports turf maintenance program are identified, risks assessed and controls developed according to enterprise guidelines, costed and documented in the program.</p> <p>2.7.Environmental implications of sports turf maintenance activities are identified and documented in the program.</p>
<p>3. Prepare and document the sports turf maintenance program</p>	<p>3.1.Detailed plan, specifications and quotation are prepared based on the requirements of the program and presented to management for acceptance.</p> <p>3.2.Scaled site plan is produced which can be readily interpreted and understood by on-site personnel according to enterprise standards.</p> <p>3.3.Detailed on-site procedures and schedules required for the sports turf maintenance program are developed and documented.</p>
<p>4. Monitor the sports turf maintenance program</p>	<p>4.1.Implementation of the maintenance program is monitored to ensure enterprise standards for presentation of sports turf playing surfaces are achieved.</p> <p>4.2.The sports turf maintenance program is reviewed and monitored to ensure it remains responsive to changing conditions.</p> <p>4.3.Appropriate courses of action are implemented to alleviate or overcome identified shortcomings in the program.</p> <p>4.4.Remedial action undertaken is documented and reported to management according to enterprise policy.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and evaluate information
- assess site factors and evaluate their impact on the development of the sports turf maintenance program
- comply with legislative requirements
- document plans, specifications and work procedures, and write reports for the understanding of staff, managers and contractors
- calculate the cost and spatial and logistical requirements of components of the sports turf maintenance program
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the principles and practices of maintaining a range of sports turf playing surfaces in relation to client needs, and the standards required for the intended use of the surface
- growth habits and cultural requirements of specific turf plant species and cultivars under a range of soil and environmental conditions
- maintenance requirements and practices for specific turf plant species and cultivars after initial establishment
- site evaluation techniques including analysis of the condition of soils, plants, and the site for turf maintenance activities
- nutrients required by specific turf plant species and cultivars and the affects of nutrient deficiency and toxicity on individual plant species and cultivars, including visual symptoms
- plant diseases of specific turf plant species and cultivars
- the characteristics of soil and other growth media types, uses and additives to enhance the available nutrition for specific turf plant species and cultivars
- soil ameliorants commonly required to treat the soil problems experienced by the enterprise
- the main simple and compound fertiliser products available to the enterprise
  - legislation and regulations relating to sports turf sites and turf maintenance

**REQUIRED SKILLS AND KNOWLEDGE**

activities.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- use existing information and records to determine a comprehensive maintenance program
- prepare an seasonal/annual program according to the requirements of the enterprise and the grounds maintenance budget
- communicate a sports turf maintenance program to staff.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Maintenance may include:

- soil and turf plant tissue testing
- applying nutrients

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• watering</li> <li>• rolling</li> <li>• mowing</li> <li>• monitoring turf plant health</li> <li>• renovating where necessary</li> <li>• preparing the sports turf playing surface to presentation standards.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Turf
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCTRF402A Plan and implement sports turf renovation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the planning and implementation of sports turf renovation and defines the standard required to: plan a sports turf renovation program; conduct a site hazard identification and risk control assessment; develop a schedule of works and specifications for a sports turf renovation program; implement the schedule of works for sports turf surfaces; coordinate the work team and contractors; document a sports turf renovation program.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies greenkeepers and turf managers who plan, coordinate and supervise the renovation of a sports turf area for minor projects and seasonal renovations in the turf industry.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare the turf renovation program	<p>1.1.The turf renovation site is identified and field measurements and tests undertaken.</p> <p>1.2.Site hazards are identified, risks assessed and controls implemented.</p> <p>1.3.Renovation materials and resource requirements are selected and calculated.</p> <p>1.4.Renovation costs are checked to be within budget levels and are verified by client/manager.</p> <p>1.5.Existing design plans and documentation are interpreted or new design plans are developed.</p> <p>1.6.A renovation program is developed containing the site assessment report, results of field measurements and tests, risk controls, and material and resource calculations.</p> <p>1.7.Schedule of works and specifications are developed and recorded in the program.</p>
2. Prepare renovation equipment	<p>2.1.Machinery maintenance logs, maintenance plans and schedules are checked and machinery prepared for the program.</p> <p>2.2.Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturer specifications and enterprise work procedures.</p> <p>2.3.Tools, equipment and machinery are calibrated and adjusted according to manufacturer guidelines and documented work method statements.</p> <p>2.4.Records of checks, calibrations and adjustments are</p>

ELEMENT	PERFORMANCE CRITERIA
	entered into workplace documentation.
3. Implement the renovation program	<p>3.1. Enterprise work team and contractors are identified and work tasks are coordinated in a sequential, timely and effective manner in consultation with the client, superintendent or board.</p> <p>3.2. Work pattern is organised and directed according to the schedule of works.</p> <p>3.3. Works are supervised and executed according to Occupational Health and Safety (OHS) requirements and environmental implications.</p> <p>3.4. Renovation tasks are monitored and remedial action is undertaken where necessary.</p> <p>3.5. A clean and safe work area is maintained throughout and on completion of work.</p>
4. Complete renovation activities	<p>4.1. Site and surrounds are reviewed for completion of works and disposal of waste material.</p> <p>4.2. Tools, equipment and machinery are inspected and repair and maintenance requirements logged.</p> <p>4.3. Expenses are recorded and reviewed against budget.</p> <p>4.4. The renovation program is reviewed for costs, scheduling, works procedures and quality of work.</p> <p>4.5. A works report is documented and presented to the client/manager or board.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- interpret existing plans or develop new plans
- conduct a site hazard identification and risk control assessment
- apply renovation program specifications
- coordinate work group, contractors and own activities
- sequentially and effectively complete turf renovation in a timely and cost-effective manner
- develop and document a program of works
- use literacy skills to read, interpret and follow organisational policies and

**REQUIRED SKILLS AND KNOWLEDGE**

procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- specialist turf renovation practices to achieve high performance turf
- field measurements, such as infiltration rate, organic fines, hardness, traction, surface smoothness and turf sward height
- enterprise and industry standards for turf surface appearance and quality
- comparative environmental implications of renovation activities, turf and soil treatments, and waste disposal procedures
- planting, care and renovation scheduling requirements of grass species and cultivars.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- plan a sports turf renovation program
- conduct a site hazard identification and risk control assessment
- develop a schedule of works and specifications for a

<b>EVIDENCE GUIDE</b>	
	<p>sports turf renovation program</p> <ul style="list-style-type: none"> <li>• implement the schedule of works for sports turf surfaces</li> <li>• coordinate the work team and contractors</li> <li>• document a sports turf renovation program.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Turf materials include:	<ul style="list-style-type: none"> <li>• materials covering cool or warm season turf seed or plants of the species and cultivar specified by the supervisor and/or the turf renovation program.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Turf
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### Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCTRF501A Plan the establishment of sports turf playing surfaces

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the process of planning the establishment of sports turf playing surfaces and the development of a relevant design for the site, specifications and work procedures and defines the standard required to: develop or interpret construction documentation; develop specifications and prepare a bill of quantities; develop a schedule and a plan of the scope of works; design sectional and elevation plans of the turf establishment works; order and arrange for purchase and delivery of goods and services; identify and incorporate sub-contracted works into the turf establishment plan; prepare a maintenance program for turf establishment.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to the planning processes involved in the establishment of turf in new constructions and major renovations of existing sports turf surfaces.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Not Applicable

### Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Carry out preliminary planning activities for turf establishment	1.1. Client preferences and requirements for the sports turf playing surface are understood and confirmed. 1.2. The site is assessed for biophysical factors, services and site modifications. 1.3. Research is conducted into turf plant species and cultivars, legal attributes and local by-laws and restrictions that may affect the plan for turf establishment. 1.4. Environmental implications of the planned turf establishment works are identified and, if necessary, reported to relevant personnel for further research. 1.5. A concept plan that reflects client preferences and requirements, and takes into account site factors and any identified environmental requirements is developed and presented to the client for discussion and approval.
2. Determine requirements of turf establishment works	2.1. Plants that are appropriate to the site and consistent with the agreed concept plan are identified and the required quantity calculated, costed and availability confirmed with the supplier. 2.2. Turf establishment procedures consistent with the

ELEMENT	PERFORMANCE CRITERIA
	<p>agreed concept plan are selected according to the characteristics of available plant materials, site factors, the resources and equipment available and the environmental factors affecting the success of the turf establishment works.</p> <p>2.3.Design of the soil profile to support the playing surface takes into account the turf use, soil characteristics and other site and local environmental factors, and includes irrigation and drainage systems that accord with enterprise irrigation and drainage plans.</p> <p>2.4.Management of juvenile turf is provided for according to client requirements, site capabilities and enterprise standards and encourages optimal growth.</p> <p>2.5.Resources, tools, equipment and machinery required for the construction of soil profiles, planting and ongoing maintenance of the sports turf playing surface are identified, costed and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.6.Occupational Health and Safety (OHS) hazards associated with the turf establishment works are identified, risks assessed and controls developed according to industry standards, and are costed and documented in the plan.</p> <p>2.7.Staged implementation and development are outlined where appropriate, with access for future works provided for according to client, enterprise and site requirements.</p> <p>2.8.Timelines for preparations, construction of soil profiles, planting and maintenance are determined taking into account the needs of the turf species and cultivars, the softscape and hardscape components, site conditions and any other planning requirements.</p>
<p>3. Prepare and document the turf establishment plan and specification</p>	<p>3.1.Designs of the soil profile and detailed plans of the scope of works, specifications and quotation are prepared based on horticultural conventions and the requirements of the turf establishment work and presented to the client for acceptance.</p> <p>3.2.Scaled site plan is produced which can be readily interpreted and understood by on-site personnel according to enterprise standards.</p> <p>3.3.Detailed on-site procedures and schedules required for the establishment of the sports turf playing</p>

ELEMENT	PERFORMANCE CRITERIA
	surface and its ongoing maintenance are developed and documented.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and evaluate information
- design plans and elevations of turf establishment works
- document the plan of scope of works and record all relevant information
- comply with legislative requirements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the principles and practices of establishing and maintaining a range of sports turf playing surfaces in relation to client needs, and the standards required for the intended use of the surface
- construction procedures, plant selection and cultural practices for sports turf playing surfaces
- legislation and regulations relating to sports turf sites and turf establishment works
- site evaluation techniques including analysis of the condition of soils, plants and the site for turf establishment activities
- irrigation, drainage and the interrelationship of soil air, water and the physical structure of existing and manufactured soils and sports turf mixes
- growth habits and cultural requirements of specific turf plant species and cultivars under a range of soil and environmental conditions
- maintenance requirements and practices for specific turf plant species and cultivars prior to and after initial establishment

<p><b>REQUIRED SKILLS AND KNOWLEDGE</b></p> <ul style="list-style-type: none"> <li>• surveying principles and techniques</li> <li>• the role of project briefs and client consultation processes in planning turf establishment works.</li> </ul>
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## Evidence Guide

<p><b>EVIDENCE GUIDE</b></p>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop or interpret construction documentation</li> <li>• develop specifications and prepare a bill of quantities</li> <li>• develop a schedule and a plan of the scope of works</li> <li>• design sectional and elevation plans of the turf establishment works</li> <li>• order and arrange for purchase and delivery of goods and services</li> <li>• identify and incorporate sub-contracted works into the turf establishment plan</li> <li>• prepare a maintenance program for turf establishment.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Turf may include:	<ul style="list-style-type: none"> <li>all species and cultivars of turf.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Turf
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCTRF502A Manage sports turf renovation programs

### Modification History

Not applicable.

### Unit Descriptor

This Unit describes the performance outcomes, skills and knowledge required to identify and implement turf renovation programs appropriate to site requirements.

### Application of the Unit

This Unit applies to sports turf managers, such as golf course superintendents, bowling greenkeepers, sports ground curators and turf contractors who are responsible for the coordination of turf renovation programs.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

AHCTRF305A Renovate sports turf

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Identify turf renovation needs	1.1 Turf surfaces are inspected and visually evaluated to determine their condition 1.2 Soil tests are undertaken to determine their need for amelioration 1.3 Compaction, visual, physical and chemical tests are performed 1.4 Water quality tests are undertaken where appropriate to determine its effect on turf growth and development
2 Select appropriate renovation techniques	2.1 A range of renovation techniques and practices are considered based on past practices and existing condition of turf 2.2 Renovation records are referred to for information about previous practices and timing 2.3 Turf renovation techniques are selected according to the condition of the turf and the intended outcome of the program 2.4 The timing of the renovation program is determined according to the requirements of the turf species, requirements of the practice and the needs of players and use of the turf facility 2.5 An on-going turf maintenance program is prepared
3 Organise staff and resources for turf renovation project	3.1 The turf renovation program is recorded and programmed into greenkeeping program of works 3.2 Machinery and equipment for the renovation program are determined and checked for availability and working condition 3.3 Consumable requirements are calculated and ordered 3.4 Contractors and machinery are contacted and hired, if necessary, according to the requirements of the program
4 Review renovation outcomes and complete associated record keeping	4.1 Soil testing and water quality test results are recorded for future reference 4.2 Direct costs of consumables and contractors are recorded for future reference 4.3 Indirect costs of staff involvement are recorded for future reference 4.4 Renovation practices and outcomes are recorded for future reference

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- research industry turf renovation practices
- undertake a site assessment
- interpret existing soil conditions
- evaluate existing turf conditions
- interpret site water quality data
- recognise turf renovation requirements based on turf type and usage
- estimate and calculate quantities of materials and costs of renovation program resources
- read and interpret renovation product labels
- plan and schedule project works
- communicate in writing and verbally.

### Required knowledge includes:

#### Knowledge of:

- requirements of the turf's intended use
- soil physical and chemical properties for imported and existing soils
- schedule and intensity
- specialist turf renovation principles and practices
- field measurement techniques such as infiltration rate, organic fines, hardness, traction, surface smoothness and turf sward height
- enterprise and industry standards for turf surface appearance and quality
- comparative environmental implications of renovation activities, turf and soil treatments and waste disposal procedures
- planting, care and renovation scheduling requirements of turf grass species and cultivars.
- turf nutrition and plant growth regulators
- impact of climatic conditions on turf recovery.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and	The evidence required to demonstrate competency in

evidence required to demonstrate competency in this Unit	<p>this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• development of renovation documentation</li> <li>• development of program specifications</li> <li>• development of a schedule and a plan of the scope of works</li> <li>• ordering and arranging purchase and delivery of goods and services</li> <li>• identifying and incorporating sub-contracted works into the turf renovation plan</li> <li>• preparation of an on-going turf maintenance program.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some workplaces may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

### Range Statement

<p>The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Renovation consumables may include:	<ul style="list-style-type: none"> <li>• soil additives</li> <li>• fertilisers</li> <li>• wetting agents.</li> </ul>
Turf renovation	<p>Projects applying to:</p> <ul style="list-style-type: none"> <li>• race tracks</li> </ul>

	<ul style="list-style-type: none"><li>• bowling greens</li><li>• golf course fairways, aprons and greens</li><li>• lawn courts</li><li>• sports playing fields</li><li>• areas that are turfed for amenity purposes.</li></ul>
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## Unit Sector(s)

Turf

## AHCTRF503A Develop sports turf management programs

### Modification History

Not applicable.

### Unit Descriptor

This Unit describes the performance outcomes, skills and knowledge required to develop sports turf management programs including turf establishment programs, extension/redesign, turf surface upgrades and renovation programs based on the organisation's available resources.

### Application of the Unit

This Unit applies to sports turf managers, such as golf course superintendents, 'grow in' superintendents, project managers and turf contractors, who have a responsibility for developing short term, annual and on-going sports turf management and maintenance programs.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Research turf management principles and practices	1.1 Project briefs are established or developed 1.2 Principles underpinning sports turf growth and development are determined as appropriate for site conditions 1.3 Environmental impacts of the turf management programs are identified and considered
2 Determine turf management program scope and objectives	2.1 A site assessment is undertaken that includes the assessment of the turf growing environment, the resources available for on-going turf maintenance, the source of water and its quantity and quality, the type of turf and its condition, intended use and intensity 2.2 The program duration and resource requirements are estimated 2.3 A program schedule and budget are developed that reflects the approach taken to the turf management programs 2.4 The turf management program is reviewed and confirmed with others
3 Communicate turf management programs to others	3.1 Current turf management practices are identified and confirmed for the project requirements 3.2 The intended programs are recorded and communicated in an appropriate format to staff and management or client 3.3 Key parts of the turf management program that involve others are identified and communicated 3.4 Project schedules and timelines are developed
4 Record and review turf management programs for use by others	4.1 Turf is inspected regularly and changes to the management plan are implemented according to the monitoring process 4.2 The turf management program is monitored and changes to the program are considered and communicated 4.3 Information is recorded from team meetings 4.4 Information is reported and filed for future use

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- undertake a site assessment

- evaluate short and long term climatic conditions
- interpret soils and water test data
- recognise turf maintenance required based on type and usage
- use written and verbal communication skills
- provide for turf and usage needs through program development including fertility, renovation and maintenance practices
- calculate water usage requirements
- provide irrigation scheduling and management
- develop monitoring program to assess impact of program
- manage project timelines.

**Required knowledge includes:**

**Knowledge of:**

- turf varieties and characteristics
- nutritional requirements for different stages of turf development
- turf establishment techniques and requirements
- soil type and characteristics
- water quality and its impacts on soils and turf
- impact of intended usage on turf
- impact of climatic conditions on turf varieties
- requirements of intended use of turf
- renovation requirements and techniques
- project programming.

**Evidence Guide**

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this Unit</p>	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• development of turf management programs</li> <li>• development of specifications and bills of quantity for turf management programs</li> <li>• development of a works schedule and a plan of the scope of works</li> </ul>

	<ul style="list-style-type: none"> <li>• preparation of a turf maintenance program.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some workplaces may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Turf management programs include:	<ul style="list-style-type: none"> <li>• watering volume and frequency</li> <li>• fertiliser amounts and frequency</li> <li>• organic management practices</li> <li>• weed control programs</li> <li>• pest and disease monitoring</li> <li>• mowing settings and frequency</li> <li>• coring, slicing and other renovation practices.</li> </ul>
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## Unit Sector(s)

Turf



## AHCTRF504A Manage sports turf facility assets

### Modification History

Not applicable.

### Unit Descriptor

This Unit describes the performance outcomes, skills and knowledge required to manage infrastructure and other facilities at sports turf grounds.

### Application of the Unit

This Unit applies to sports turf managers, such as golf course superintendents, bowling greenkeepers and sports ground curators, who have a responsibility for the management of physical resources (other than the turf playing surfaces) at a sporting venue or club. The management of the turf machinery fleet and equipment is covered in AHCMOM501A Manage machinery and equipment.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop an asset database	<p>1.1 Physical resources and infrastructure are identified and recorded for management purposes</p> <p>1.2 Physical resources and infrastructure are classified according to their type and maintenance requirements</p>
2 Identify ongoing maintenance requirements for turf facilities	<p>2.1 Particular maintenance requirements of various resources are identified and programmed</p> <p>2.2 Resources and consumables for the maintenance of different types of facilities are purchased and stored</p> <p>2.3 User manuals and other operational or maintenance documents provided by suppliers are considered where necessary</p>
3 Schedule and monitor program of maintenance works	<p>3.1 Maintenance activities for enterprise's facilities are identified and programmed</p> <p>3.2 Staff responsible for maintenance activities are informed</p> <p>3.3 Record keeping requirements are developed and used to monitor ongoing maintenance and inform others</p> <p>3.4 Occupational Health and Safety issues associated with maintenance of turf facilities is considered and planned for</p> <p>3.5 Facilities that are unserviceable are dealt with accordingly</p> <p>3.6 Plans are made for replacement of facilities that are no longer serviceable</p>
4 Review maintenance works	<p>4.1 Maintenance schedules are reviewed in a timely manner and maintenance programs are updated accordingly</p> <p>4.2 Where appropriate, management is notified of status of turf facilities and plans for their upgrade or replacement are made</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

#### Ability to:

- use software application skills
- maintain turfed areas
- record workplace information
- use written and verbal communication skills.

**Required knowledge includes:****Knowledge of:**

- proprietary asset management software
- maintenance requirements of sports turf physical resources and infrastructure
- scheduling and programming of sports turf maintenance works
- staff management
- enterprise and industry standards for turf surface appearance and quality
- comparative environmental implications of turf and soil treatments and waste disposal procedures.

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• use asset databases</li> <li>• identify maintenance requirements for a range of turf facilities</li> <li>• schedule and monitor programmed works</li> <li>• record and review programmed works.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some workplaces may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Sports turf facilities include:	<ul style="list-style-type: none"> <li>• irrigation and drainage infrastructure and control systems</li> <li>• weather monitoring systems</li> <li>• associated plant and equipment</li> <li>• water sources</li> <li>• maintenance facilities – sheds, compounds, wash down bays and chemical, fuel and fertiliser storage</li> <li>• fuel dispensing equipment</li> <li>• greenkeeping hardware</li> <li>• mechanics workshops</li> <li>• paths, tracks, bridges, spectator seating</li> <li>• power sources including solar</li> <li>• roads, kerbs</li> <li>• furniture</li> <li>• lakes, ponds</li> <li>• electrical infrastructure</li> <li>• greenkeeping tools and equipment.</li> </ul>
Asset database may include:	<ul style="list-style-type: none"> <li>• propriety asset management software</li> <li>• other record keeping systems.</li> </ul>
Maintenance requirements may include:	<ul style="list-style-type: none"> <li>• repairs to building, sheds and stores</li> <li>• repairs and maintenance of paths and tracks</li> <li>• outsourced maintenance and repairs.</li> </ul>

## Unit Sector(s)

Turf

## AHCVPT201A Clear features that harbour pest animals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of clearing features and destruction of habitats that harbour pest animals without damaging native animal habitats and flora and defines the standard required to: interpret instructions for pest animal destruction; identify the natural areas and features that are part of pest animal habitat; clear areas infested by pests and destroy pest habitat; check for areas that can be reinfested; avoid disturbing protected or endangered plant and animal species; leave cleared areas in required state of repatriation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to clearing features that harbour pest animals and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine clearing work required	<p>1.1.Characteristics of the features that harbour the target pest are identified.</p> <p>1.2.Locations of the habitat of the target pest are identified.</p> <p>1.3.Approaches to work including estimated time required to clear features and destroy pest habitats are determined.</p> <p>1.4.Hazards associated with the job are identified in accordance with Occupational Health and Safety (OHS) standards.</p> <p>1.5.Environmental risks associated with the job are identified in accordance with statutory and local authority requirements.</p> <p>1.6.Vehicles, equipment and materials required to complete the habitat destruction are identified.</p>
2. Prepare for clearing and destruction work	<p>2.1.Location and boundaries for the clearing are mapped in accordance with the pest management strategy and monitoring program.</p> <p>2.2.Precautions to minimise hazards associated with the clearing are taken in accordance with OHS standards.</p> <p>2.3.Precautions to minimise environmental risks associated with the clearing are taken in accordance with statutory and local authority requirements.</p> <p>2.4.Vehicles, equipment and materials are checked for serviceability in accordance with manufacturer's</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>specifications and relevant policies.</p> <p>2.5.Actions to prevent interference with non-target species are taken as necessary.</p> <p>2.6.Appropriate licences, permits and clearances are obtained prior to commencement of work.</p>
3. Clear land and destroy pest habitats	<p>3.1.Areas containing pest habitat are dogged prior to commencing destruction procedures if required.</p> <p>3.2.Features and habitats which harbour target pest are cleared in accordance with industry practice.</p> <p>3.3.Habitats are destroyed using approved procedures and techniques in accordance with industry practice.</p> <p>3.4.Destroyed habitats are checked for remaining sites that can be accessed and restored by pest animals.</p> <p>3.5.Remaining sites that can be accessed and restored by pest animals are made inaccessible.</p> <p>3.6.Area is monitored over a prescribed period to detect signs of reinfestation.</p> <p>3.7.Native and other valued flora are protected as required in accordance with environmental statutory requirements.</p> <p>3.8.Debris is disposed of in accordance with industry practice.</p>
4. Clean and store equipment and material	<p>4.1.Equipment and materials are cleaned and stored in accordance with relevant standards and policies.</p> <p>4.2.Job completion is reported or recorded in accordance with relevant policies and procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with work colleagues
- assess risks to environment and take measures to control them
- use and maintenance of tools and equipment
- record and report task completion and, where necessary, observations of property

## REQUIRED SKILLS AND KNOWLEDGE

status

- prepare for the clearing job
- destroy habitats that harbour pest animals
- clean and store equipment and materials
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- legislation&regulations relating to environmental protection
- legislation&regulations relating to pest animals
- legislation&regulations relating to activities in nature reserves and heritage areas
- OHS legislative and enterprise requirements
- common law principles relating to property, stock, duty of care and due diligence
- risks to land users' posed by pest animals including exotic diseases and zoonoses
- pest life cycles and behaviours
- harbours used by pest animals
- harbours used by non-target species.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• interpret instructions for pest animal destruction</li> <li>• identify the natural areas and features that are part of pest animal habitat</li> <li>• clear areas infested by pests and destroy pest habitat</li> <li>• check for areas that can be reinfested</li> <li>• avoid disturbing protected or endangered plant and animal species</li> <li>• leave cleared areas in required state of repatriation.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Features may include:	<ul style="list-style-type: none"> <li>• food and water sources</li> <li>• physical cover such as warren, surface logs, refuse and vegetation clumps.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Vertebrate pests
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCVPT202A Muster pest animals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of mustering pest animals and defines the standard required to: confirm the species and type of pest animals to be mustered; plan the muster to optimise the catch and minimise stress and risk of breakouts of pest animals; carry out safe mustering as part of a team; handle and process mustered animals and collect equipment; and ensure environmental impacts of mustering are minimised.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to mustering pest animals and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess the scope of the mustering job	<p>1.1.Target pest animal range and behaviour are confirmed.</p> <p>1.2.Location for the muster is determined.</p> <p>1.3.Time required to complete the muster is estimated.</p> <p>1.4.Hazards associated with the muster are identified according to Occupational Health and Safety (OHS) standards.</p> <p>1.5.Environmental risks associated with the mustering job are identified according to statutory and local authority requirements.</p> <p>1.6.Resources required to complete the muster are identified.</p>
2. Prepare for mustering	<p>2.1.Location and boundaries for the muster are mapped to be consistent with the target pest animal behaviour and according to the pest animal management strategy and monitoring program.</p> <p>2.2.Time and duration of the muster are checked and relevant personnel notified.</p> <p>2.3.Precautions to minimise hazards associated with muster are identified according to OHS standards.</p> <p>2.4.Precautions to minimise environmental risks associated with the muster job are identified according to statutory and local authority requirements.</p> <p>2.5.Vehicles, equipment and materials are checked for serviceability according to manufacturer specifications and relevant policies.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.6. Central point of muster is established and agreed with all participants. 2.7. Holding yards are set up. 2.8. Horses and dogs, where used in the muster, are checked for fitness.
3. Muster pest animals	3.1. Muster is conducted at the appropriate time of day. 3.2. Actions are taken to minimise stress to animals during the muster. 3.3. Water and feed are provided to mustered animals and horses and dogs where they have been used in the muster. 3.4. Animals are treated in accordance with the Code of Practice for Care, Handling and Capture of Feral Animals. 3.5. Mustered animals are held, transported or destroyed according to enterprise guidelines.
4. Clean and store equipment and material	4.1. Animals used during the muster are cared for according to industry practices. 4.2. Equipment and materials are cleaned and stored according to relevant standards and policies. 4.3. Job completion is reported or recorded according to relevant policies and procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- assess the scope of the mustering job
- prepare for mustering
- conduct mustering operations
- clean and store equipment and materials
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for

**REQUIRED SKILLS AND KNOWLEDGE**

- clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- OHS, environmental and pest management legislative and enterprise requirements
- common law principles relating to property, stock, duty of care and due diligence
- risks to land users posed by pest animals, including exotic diseases and zoonoses
- pest animal life cycles and behaviours
- animal welfare codes of practice
- emergency procedures related to work in isolated and remote areas.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- confirm the species and type of pest animals to be mustered
- plan the muster to optimise the catch and minimise stress and risk of breakouts of pest animals
- carry out safe mustering as part of a team
- handle and process mustered animals
- collect equipment and ensure environmental impacts of mustering are minimised.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or

**EVIDENCE GUIDE**

enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Animals may include:

- kangaroos
- goats
- horses
- deer
- camels
- cattle
- water buffalos
- donkeys.

**Unit Sector(s)****Unit sector**

Vertebrate pests

**Co-requisite units**

Co-requisite units		

## Competency field

Competency field	
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## AHCVPT203A Use firearms to humanely destroy animals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of destroying animals humanely by shooting and defines the standard required to: confirm the details of animals to be shot; prepare and handle ammunition and weapons safely; ensure the shooting area is clear and notifications have been made where necessary; shoot the animal in a body site that causes instant death; handle or dispose of dead animals as required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to using firearms to humanely destroy animals and is usually conducted within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess the scope of the shooting job	<p>1.1. Anatomy and physical features identifying location of vulnerable organs of target animal are confirmed.</p> <p>1.2. Location of habitats, habits and range of movement of target animal is confirmed.</p> <p>1.3. Timing of the shoot is determined based on the activity patterns of the target animal.</p> <p>1.4. Time required to complete the shoot is estimated.</p> <p>1.5. Hazards associated with the shoot are identified in accordance with Occupational Health and Safety (OHS) standards.</p> <p>1.6. Environmental and public safety risks associated with the shoot are identified in accordance with statutory and local authority requirements.</p> <p>1.7. Vehicles, equipment and materials required to complete the shoot are prepared.</p>
2. Prepare for the shooting job	<p>2.1. Location and boundaries for the shoot are mapped in accordance with the animal management strategy and monitoring program.</p> <p>2.2. Time and duration of the shoot are checked and relevant personnel notified.</p> <p>2.3. Precautions to minimise hazards associated with the shoot are taken in accordance with OHS standards.</p> <p>2.4. Precautions to minimise environmental risks associated with the shoot are taken in accordance with statutory and local authority requirements.</p> <p>2.5. Vehicles, equipment and materials are checked for serviceability in accordance with manufacturer's</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>specifications and relevant policies.</p> <p>2.6.Firearm licences or exemptions are obtained or checked in accordance with statutory requirements.</p> <p>2.7.Firearm and ammunition types are selected to comply with those recommended for the target animal in accordance with industry practice and animal ethics guidelines.</p> <p>2.8.Firearm and ammunition are checked and prepared in accordance with statutory requirements and industry practice.</p> <p>2.9.Firearm is zeroed and test fired in accordance with industry practice.</p> <p>2.10. Firearm is stowed for transport unloaded and in safety mode.</p>
3. Shoot animals	<p>3.1.Personal protective and safety equipment is used in accordance with OHS standards and statutory requirements.</p> <p>3.2.Firearm is carried safely with muzzle pointing in safe direction at all times in accordance with statutory requirements and industry practice.</p> <p>3.3.Firearm is loaded, discharged and unloaded safely in accordance with statutory requirements and industry practice.</p> <p>3.4.Firearm is aimed at vulnerable sites, head or heart, on the animal.</p> <p>3.5.Each target animal is killed using a minimum of shots.</p> <p>3.6.Each target animal is checked to ensure it is dead prior to selecting the next target animal where possible.</p> <p>3.7.Target animals that have not been killed cleanly are destroyed in a humane manner in accordance with animal welfare regulations and statutory requirements.</p> <p>3.8.Carcases that are required for research or commercial use are handled as required in accordance with the animal management strategy and action plan.</p> <p>3.9.Animal carcasses that are not required for research or other purposes are disposed of as required in accordance with statutory requirements and industry practice.</p>
4. Clean and store	4.1.Carcases for research or commercial use are cleaned

ELEMENT	PERFORMANCE CRITERIA
equipment and material	<p>and stored in accordance with relevant policies and procedures and industry practice.</p> <p>4.2. Equipment and materials are cleaned and stored in accordance with relevant standards and policies.</p> <p>4.3. Firearms are cleaned, maintained and stored in accordance with manufacturer's instructions and statutory requirements.</p> <p>4.4. Ammunition is stored in accordance with statutory requirements.</p> <p>4.5. Job completion is reported or recorded in accordance with relevant policies and procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- plan own work activities
- manage own time
- maintain and store weapons
- handle weapons
- use weapons to shoot accurately
- minimise animal trauma
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- OHS, environment, public risk and animal welfare legislative and enterprise requirements
- common law principles relating to property, stock, duty of care and due diligence

**REQUIRED SKILLS AND KNOWLEDGE**

- risks to land users posed by animals including exotic diseases
- animal life cycles and behaviours
- anatomy and physical features of the animal
- firearms safety
- suitable firearms and ammunition for given pest problem
- emergency procedures appropriate to the firearms handling.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- confirm the details of animals to be shot
- prepare and handle ammunition and weapons safely
- ensure the shooting area is clear and notifications have been made where necessary
- shoot the animal in a body site that causes instant death
- handle or dispose of dead animals as required.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>all species determined to be pests of primary production, the environment or public health and lifestyle</li> <li>those requiring destruction for humane reasons</li> </ul> <p>Note: Appropriate firearms licences are required for those involved in training and assessment against this standard.</p>

## Unit Sector(s)

<b>Unit sector</b>	Vertebrate pests
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCVPT302A Implement vertebrate pest control program

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of planning and implementing a strategy for the control of vertebrate pests in a rural environment and defines the standard required to: use and handle hazardous substances; carry out inspections to assess infestations; identify species and nature of vertebrate pest; calculate vertebrate pest numbers and estimate resources and materials appropriate to implement control program; determine and implement control methods with due care and humane treatment; and dispose of carcasses according to established industry standards.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit involves applying well-developed skills with some discretion and judgement under routine supervision. It requires taking responsibility for own work output.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess requirements for pest control	<p>1.1. Vertebrate pest control requirements are assessed and clarified according to enterprise objectives.</p> <p>1.2. Inspections are carried out to ascertain type and severity of pest infestations.</p> <p>1.3. Control agents and methods of application to prevent, control or manage vertebrate pests are determined.</p> <p>1.4. Control program is developed for implementation according to enterprise requirements.</p>
2. Prepare to implement control program	<p>2.1. Suitable personal protective equipment (PPE) is selected, used and maintained according to Occupational Health and Safety (OHS) requirements.</p> <p>2.2. Equipment and materials required to support the implementation of control program are arranged.</p> <p>2.3. Relevant licences and permits are obtained according to legislative requirements.</p> <p>2.4. Safe working practices are observed and followed according to OHS and enterprise requirements.</p>
3. Control vertebrate pests	<p>3.1. Control program is implemented according to OHS, legislative and enterprise requirements.</p> <p>3.2. Safeguards are employed to ensure that targeted pests are controlled and all other species remain unharmed.</p> <p>3.3. Integrated health management is considered and</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>implemented as required.</p> <p>3.4.Environmental impacts are assessed and controlled according to legislative and enterprise requirements.</p>
4. Complete control program	<p>4.1.Carcasses and control agents are disposed of according to environmental and industry codes of practice.</p> <p>4.2.Control program and outcomes are reviewed and evaluated for future best practice and planning management.</p> <p>4.3.Equipment and work areas are cleaned and returned to operating order according to OHS and enterprise requirements.</p> <p>4.4.Relevant information is documented and maintained to industry standards and enterprise requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- use a first aid kit
- select and use agricultural chemicals safely
- communicate effectively in verbal and written form with enterprise personnel and suppliers
- read and interpret chemical labels, material safety data sheets (MSDS) and safety signage or decals
- calculate vertebrate pest numbers and estimate resources and materials appropriate to implement control program
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- legislative and industry requirements for the disposal of vertebrate pests and control agents
- types of vertebrate pests
- control methods and techniques

**REQUIRED SKILLS AND KNOWLEDGE**

- safety signage
- sustainable livestock management
- relevant provisions of Native Vegetation Acts with particular attention to potential soil degradation and destruction of flora and fauna
- relevant provisions of OHS and animal welfare legislation, codes of practice and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- use and handle hazardous substances
- carry out inspections to assess infestations
- identify species and nature of vertebrate pest
- calculate vertebrate pest numbers and estimate resources and materials appropriate to implement control program
- determine control methods with due care and humane treatment
- dispose of carcasses according to established industry standards.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Vertebrate pests may include:

- animal species, such as wild birds
- rats and mice
- feral cats
- feral pigs
- foxes
- those identified in biosecurity codes of practice.

## Unit Sector(s)

<b>Unit sector</b>	Vertebrate pests
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCVPT303A Survey pest animals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of surveying pest animal abundance by conducting ground and aerial counts and defines the standard required to: identify the target pest animal and its associated behaviours; define the geographical parameters for the count; apply survey principles and techniques; undertake accurate observations and recording.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to surveying pest animals which requires some judgement and discretion, and would be normally carried out under minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assess the scope of the count	<p>1.1.Target pest animal is confirmed.</p> <p>1.2.Location of habitats and range of movement of target pest animal is confirmed.</p> <p>1.3.Item(s) of direct evidence of pest animal to be counted are determined.</p> <p>1.4.Time required to complete the survey is estimated.</p> <p>1.5.Hazards associated with the survey are identified in accordance with Occupational Health and Safety (OHS) standards.</p> <p>1.6.Environmental risks associated with the survey are identified in accordance with statutory and local authority requirements.</p> <p>1.7.Resources required to complete the survey are identified.</p>
2. Prepare to conduct the count	<p>2.1.Location and boundaries for the count are mapped in accordance with the pest animal management strategy and monitoring program.</p> <p>2.2.Time and duration of the count are checked and relevant personnel notified.</p> <p>2.3.Precautions to minimise hazards associated with the count are taken in accordance with OHS standards.</p> <p>2.4.Precautions to minimise environmental risks associated with the count are taken in accordance with statutory and local authority requirements.</p> <p>2.5.Resources required to complete the count are checked for serviceability in accordance with manufacturer's specifications and relevant policies.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.6. Where the count involves aerial observation, precautions to minimise associated hazards are taken in accordance with industry practice.
3. Conduct count and record observations	3.1. Equipment is operated in accordance with the statutory requirements and industry practice. 3.2. Count is conducted within the boundaries of the specified location in accordance with the pest animal management strategy and monitoring program. 3.3. Precautions to minimise hazards associated with the count are implemented in accordance with OHS standards. 3.4. Precautions to minimise environmental risks associated with the count are implemented in accordance with statutory and local authority requirements. 3.5. Observations of direct evidence of target pest animal are recorded in accordance with the pest animal management strategy and monitoring program requirements.
4. Clean and store equipment and materials	4.1. Equipment and materials are cleaned and stored in accordance with relevant standards and policies. 4.2. Observation record documents are compiled and filed in accordance with relevant policies and procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- plan activities
- manage time
- count, add and record observations
- apply spotlighting techniques
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible

**REQUIRED SKILLS AND KNOWLEDGE**

information collected and select and apply procedures for a range of tasks

- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- pest behaviour and habitats
- relevant legislative and regulatory requirements
- environmental protection legislation
- zoonoses and exotic diseases.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify the target pest animal and its associated behaviours
- define the geographical parameters for the count
- apply survey principles and techniques
- undertake accurate observations and recording.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Surveying pest animals may include:	<ul style="list-style-type: none"> <li>ground and aerial counts of pest animals.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Vertebrate pests
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCVPT304A Conduct vertebrate pest activities from aircraft

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of conducting a range of pest control activities from the air and defines the required to: discuss arrangements with ground crew and pilot safely handle and use weapons while on an aircraft; carry out shooting or baiting of nominated pests according to directions, if applicable; maintain a high degree of accuracy and accountability in actions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working independently within own area of responsibility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Apply air safety procedures	<p>1.1. Location and boundaries for the activities are confirmed with the pilot.</p> <p>1.2. Time and duration of the flight are checked and relevant personnel notified.</p> <p>1.3. Flight plans and search and rescue operations are confirmed with the pilot and ground crew.</p> <p>1.4. On board emergency equipment is checked with pilot.</p> <p>1.5. Emergency landing procedures are checked with the pilot.</p> <p>1.6. Landing site requirements are checked.</p> <p>1.7. Intent to approach or leave the aircraft is confirmed with the pilot.</p> <p>1.8. Aircraft is approached in the recommended safe manner.</p>
2. Conduct activities from aircraft	<p>2.1. Equipment is stowed safely on the aircraft.</p> <p>2.2. Harnesses and helmet are worn as required during pest control activities.</p> <p>2.3. Route and location of activities are accurately plotted on property, local or regional map</p> <p>2.4. Vertebrate pest animals are shot according to legislative requirements and enterprise procedures if applicable</p> <p>2.5. Baits are distributed according to legislative requirements and enterprise procedures if applicable</p> <p>2.6. Observation and recording of pest numbers is carried out if applicable</p>

ELEMENT	PERFORMANCE CRITERIA
	2.7. Activities are documented and reported in accordance with enterprise procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- apply air safety principles
- read maps and plot locations
- use weapons in an aircraft
- shoot pest animals humanely
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant Occupational Health and Safety (OHS), environmental and animal welfare legislation
- legislation dealing with pest control
- pest behaviour and physiology
- air safety principals and emergency procedures appropriate to the firearms and/or bait handling
- common law principles relating to property, stock, duty of care and due diligence
- risks to land users posed by pests
- emergency procedures appropriate to the firearms and/or bait handling.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• discuss arrangements with ground crew and pilot</li> <li>• safely handle and use weapons while on an aircraft</li> <li>• carry out shooting or baiting of nominated pests according to directions, if applicable</li> <li>• maintain a high degree of accuracy and accountability in actions.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Vertebrate pests may include:	<ul style="list-style-type: none"> <li>• goats</li> <li>• horses</li> <li>• pigs</li> <li>• camels</li> <li>• cattle</li> <li>• water buffaloes</li> <li>• donkeys.</li> </ul>

## Unit Sector(s)

Unit sector	Vertebrate pests
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCVPT305A Tag and locate Judas animals

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of using Judas animals to locate isolated pest animals and defines required to: confirm arrangements for using Judas animals as part of vertebrate pest control program; use appropriate tagging techniques on Judas animals; locate Judas animals and track to mob after tagging; muster, harvest or destroy pest animals according to organisational requirements; report on pest control activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working independently within own area of responsibility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for 'judas' animal operation	<p>1.1.Target pest animal range and behaviour are confirmed.</p> <p>1.2.Time required to complete the location of target animals is estimated.</p> <p>1.3.Hazards associated with the procedures are identified in accordance with Occupational Health and Safety (OHS) standards.</p> <p>1.4.Environmental risks associated with the procedures are identified in accordance with statutory and local authority requirements.</p> <p>1.5.Resources required to complete the procedures are identified.</p> <p>1.6.Permission to release pest animal is obtained as necessary.</p> <p>1.7.Operation of radio-telemetry equipment is checked in accordance with manufacturer's instructions.</p> <p>1.8.Assistance is provided as tranquillising drugs are prepared and administered in accordance with veterinary procedures by authorised person.</p> <p>1.9.Appropriate animal is selected and tagged with radio transmitting collar in accordance with humane animal handling techniques.</p>
2. Locate isolated herd	<p>2.1.'Judas' animal is released in targeted location.</p> <p>2.2.Reasonable time lapse is allowed for 'judas' animal to join mob of same species.</p> <p>2.3.Radio-telemetry equipment is operated in accordance with manufacturer's instructions.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4.Herd is located and approached to optimise effectiveness of control method.
3. Control target species	3.1.Isolated mob is mustered, harvested or destroyed in accordance with statutory requirements and industry practice. 3.2.'Judas' animal is released or allowed to escape to join other mobs as required.
4. Clean and store equipment and material	4.1.Equipment and materials are cleaned and stored in accordance with relevant standards and policies. 4.2.Job completion is recorded or reported according to enterprise procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- prepare 'judas' animals
- locate isolated herds
- control target species
- clean and store equipment and materials
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- common law principles relating to property, stock, duty of care and due diligence
- risks to land users posed by pest animals including exotic diseases and zoonoses
- pest animal life cycles and behaviours
- OHS legislation and enterprise requirements



**REQUIRED SKILLS AND KNOWLEDGE**

- environmental and pest control legislative and enterprise requirements
- animal welfare
- relevant emergency procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- confirm arrangements for using Judas animals as part of vertebrate pest control program
- use appropriate tagging techniques on Judas animals
- locate Judas animals and track to mob after tagging
- muster, harvest or destroy pest animals according to organisational requirements
- report on pest control activities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

**RANGE STATEMENT**

Judas animals may include:

- goats
- horses
- pigs
- camels
- cattle
- water buffaloes
- donkeys.

**Unit Sector(s)**

<b>Unit sector</b>	Vertebrate pests
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCVPT306A Apply animal trapping techniques

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of live trapping and holding, releasing or humanely destroying animals and defines the standard required to: select trap sites and prepare traps; check traps and examine, relocate or destroy trapped animals; collect traps and ensure environmental impacts of trapping are minimised; record and report details of trapped animals if required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan animal capture	<p>1.1.Purpose of capture of animals is identified as determined from the management strategy and action plans.</p> <p>1.2.Target animal range and behaviour are confirmed.</p> <p>1.3.Trapping location and placement of equipment are determined.</p> <p>1.4.Time required to complete capture is estimated and trapping effort is determined.</p> <p>1.5.Materials and equipment for trapping are identified.</p> <p>1.6.Hazards associated with trapping are identified in accordance with Occupational Health and Safety (OHS) practices and procedures.</p> <p>1.7.Environmental risks associated with capturing animals are identified in accordance with statutory and local authority requirements.</p>
2. Prepare for trapping	<p>2.1.Locations for the trapping activity are mapped to be consistent with target animal behaviour and in accordance with the management strategy and relevant monitoring programs.</p> <p>2.2.Relevant licenses and permission to enter property are obtained.</p> <p>2.3.Precautions to minimise hazards are identified in accordance with OHS practices and procedures.</p> <p>2.4.Precautions to minimise environmental risks associated with capturing the target animal are identified.</p> <p>2.5.Precautions to minimise trapping of non-target</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>animals are considered.</p> <p>2.6.Vehicles, equipment and materials are checked for serviceability in accordance with manufacturer's specifications and relevant policies.</p>
3. Place and set traps	<p>3.1.Site for trapping is selected to maximise chance of trapping target animals and minimise chance of trapping non-target animals.</p> <p>3.2.Site for capturing animals is prepared in accordance with industry practice.</p> <p>3.3.Trapping equipment is constructed, positioned and secured in accordance with industry practice.</p> <p>3.4.Trapping equipment is set safely in accordance with manufacturer's instructions.</p> <p>3.5.Trapping equipment is checked for strength and security in accordance with industry practice.</p> <p>3.6.Trap mechanisms are set or calibrated in accordance with manufacturer's instructions.</p> <p>3.7.Lures or baits are applied in accordance with industry practice if required.</p> <p>3.8.Traps are camouflaged as required.</p> <p>3.9.Precautions to prevent trapping of non-target animals are applied in accordance with industry practice.</p>
4. Check and remove traps	<p>4.1.Traps are checked regularly in accordance with industry practice.</p> <p>4.2.Trapped animals are identified then released, killed or prepared for transport in accordance with industry practice.</p> <p>4.3.Captured animals are handled humanely according to enterprise requirements and animal welfare guidelines.</p> <p>4.4.Animals are checked according to supervisor instructions and enterprise guidelines.</p> <p>4.5.Animals are transported from site where required in a safe and appropriate manner according to legislative and enterprise requirements.</p> <p>4.6.OHS and public safety requirements are met prior to and during trapping activities.</p> <p>4.7.Trap mechanism is released safely and trap is removed in accordance with industry practice.</p> <p>4.8.Trap site is restored to prior condition.</p>
5. Report completion of	5.1.Results of trapping activities are reported according

ELEMENT	PERFORMANCE CRITERIA
work	<p>to enterprise guidelines.</p> <p>5.2. Incidents with animals are dealt with and reported according to legislative, enterprise, occupational health and safety and public safety requirements.</p>
6. Clean and store equipment and material	<p>6.1. Carcasses for research or other purposes are cleaned and stored in accordance with relevant policies and procedures and industry practice.</p> <p>6.2. Equipment and materials are cleaned and stored in accordance with relevant standards and policies.</p> <p>6.3. Target and non-target kills are recorded in accordance with statutory requirements and enterprise guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe operating procedures
- plan animal capture
- prepare for trapping
- place and set traps
- check and remove traps
- clean and store equipment and materials
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- OHS, environmental and pest control legislative and enterprise requirements
- common law principles relating to property, stock, duty of care and due diligence

**REQUIRED SKILLS AND KNOWLEDGE**

- animal life cycles and behaviours
- catching techniques, equipment and operation
- suitable traps for the given animal species
- animal welfare
- animal identification
- basic animal handling and care
- legislation applying to the capture and care of wildlife
- transportation methods of caught animals
- public welfare legislation, regulations, Codes of Practice and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify the species, purpose and target area for trapping
- select trap sites and prepare traps
- check traps and examine, relocate or destroy trapped animals
- collect traps and ensure environmental impacts of trapping are minimised
- record and report details of trapped animals if required.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Animals may include:	<ul style="list-style-type: none"> <li>• native animals</li> <li>• domestic species</li> <li>• species determined to be pests of primary production, the environment or public health and lifestyle.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Vertebrate pests
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCWAT201A Set up, operate and maintain water delivery systems for compost

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of setting up, operating and maintaining water delivery systems to maintain moisture levels in compost and defines the standard required to: establish the requirements for a water delivery system; set up and operate a water delivery system on a commercial-scale composting site; record water application data; observe faults and variations from required settings; observe and report any faults or variations from required settings.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to an employee of an enterprise engaged in commercial-scale composting operations. Tasks are likely to be performed by a yard hand or general hand under supervision of an operations team leader or site foreman. Work is likely to be performed as a part of a team. The work requires the application of basic operational knowledge and skills to a limited range of maintenance tasks and roles, most of which are routine and predictable.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Set up a water delivery system	<p>1.1. Requirements for set up of water delivery system and application methods to be used are obtained from supervisor and clarified if required.</p> <p>1.2. Details of location to which water is to be delivered are confirmed with supervisor and any regulations covering use of site are noted and observed.</p> <p>1.3. Hoses, tools and equipment and components appropriate to particular water delivery system being set up are selected and correctly used.</p> <p>1.4. Appropriate water sources on site are identified.</p> <p>1.5. Occupational Health and Safety (OHS) hazards associated with task are identified and appropriate action is taken to minimise risks to self and others.</p> <p>1.6. Water delivery lines, where required, are measured and marked out according to instructions.</p> <p>1.7. Water delivery system is set up according to instructions and enterprise procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
2. Operate a water delivery system	2.1. Water delivery is commenced as instructed. 2.2. Water application rate is set according to enterprise procedures. 2.3. Pipes, hoses and all joints are checked and confirmed to be secure and leak free. 2.4. Pumps are operated and checked according to manufacturer instructions and enterprise procedures. 2.5. Remedial action is taken if required and according to enterprise guidelines and supervisor instructions.
3. Check the efficiency of a water delivery system	3.1. Water application rate and distribution are checked according to enterprise procedures. 3.2. Water delivery system is visually inspected for operating faults and dry areas, and observations are recorded in maintenance log. 3.3. Variations from required rate or settings, or leaks, operating faults and dry areas observed at any stage in process are reported to supervisor. 3.4. Remedial action is carried out as directed by supervisor and according to enterprise procedures. 3.5. Amounts of water delivered to location are recorded according to enterprise procedures. 3.6. Work outcomes are reported to supervisor, feedback on performance is sought and any required improvements are noted for future action.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and adopt safe work practices
- interpret site water management plan and site operating plan or map
- use a tape measure
- observing faults and variations from required settings
- operating pumps
- recording water application data
- setting out and operating watering systems

## REQUIRED SKILLS AND KNOWLEDGE

- using Personal Protective Equipment (PPE) correctly
- using relevant equipment
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- characteristics and operation of joints, hoses, valves and sprinkler components
- components of water delivery system
- methods and techniques of water delivery
- procedures for safe use of equipment, such as powered and hand tools, as used in water delivery system maintenance
- standard industry risk-control measures to minimise risk associated with setting up and operating a water delivery system
- reporting and recording requirements
- OHS and environmental legislation and enterprise requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- establish the requirements for a water delivery system
- set up and operate a water delivery system on a

<b>EVIDENCE GUIDE</b>	
	commercial-scale composting site <ul style="list-style-type: none"> <li>• record water application data</li> <li>• observe faults and variations from required settings</li> <li>• observe and report any faults or variations from required settings.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Water delivery systems may include:	<ul style="list-style-type: none"> <li>• permanent overhead sprinklers</li> <li>• portable or travelling sprinklers</li> <li>• soaker hoses</li> <li>• spray and drippers</li> <li>• stand pipes</li> <li>• water tanker.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Water
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCWAT301A Monitor and operate water treatment processes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring, operating, measuring, adjusting and reporting water (including waste water) treatment performance and process control and defines the standard required to: carry out routine inspections and tests on water samples; identify control system faults; use water sampling and testing techniques; control chemical use in a safe and environmentally responsible manner; operate and control water treatment processes; compile records and reports.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under routine supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor water treatment plant performance	<p>1.1. Routine inspections of treatment equipment are carried out in accordance with manufacturer's recommendations, Occupational Health and Safety (OHS) and enterprise policy and procedures.</p> <p>1.2. Water samples are collected and standard tests are conducted, or samples are sent for analysis in accordance with enterprise policy and procedures and where applicable, the biosecurity and food safety codes.</p> <p>1.3. Data on treatment process is collected, recorded and reported in accordance with enterprise policy and procedures.</p>
2. Control chemical use	<p>2.1. Chemicals are used/handled/stored in accordance with enterprise policy and procedures and statutory requirements.</p> <p>2.2. Chemical dosing is prepared in accordance with enterprise policy and procedures and statutory requirements.</p> <p>2.3. Information related to chemical supply and usage is maintained in accordance with enterprise policy and procedures and statutory requirements.</p>
3. Operate and control water treatment processes	<p>3.1. Water and/or waste water treatment processes are monitored to maintain parameters of operation.</p> <p>3.2. Process faults and operational conditions of treatment equipment are identified and reported in accordance with enterprise policy and procedures.</p> <p>3.3. Basic equipment and process adjustments are initiated to enhance performance in accordance with</p>



ELEMENT	PERFORMANCE CRITERIA
	enterprise policy and procedures.
4. Compile records	4.1. Reports are compiled from equipment and water treatment processes to meet enterprise policy and procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work procedures
- identify control system faults
- identify adverse environmental impacts of irrigation activities and appropriate remedial action, and use water sampling and testing techniques
- prepare and apply chemical dosing
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- water treatment and water filtration techniques
- water quality monitoring methods and techniques
- environmental impacts of irrigation, using water from any ground or underground source
- hazardous materials handling
- chemical dosing processes
- enterprise policies and procedures
- biosecurity and food safety codes of practice
- environmental issues associated with water treatment

**REQUIRED SKILLS AND KNOWLEDGE**

- OHS procedures relating to the operation of machinery and the use of chemicals.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- carry out routine inspections and tests on water samples
- identify control system faults
- use water sampling and testing techniques
- control chemical use in a safe and environmentally responsible manner
- operate and control water treatment processes
- compile records and reports.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Treatment of water may include:

- primary, advanced and pre-treatment using

**RANGE STATEMENT**

	processes such as chemical addition, solids separation and disinfection.
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**Unit Sector(s)**

<b>Unit sector</b>	Water
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWAT501A Design water treatment systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of identifying design requirements, determining specifications for storage and treatment systems, and determining capital and operating expense budgets for the system designed and defines the standard required to: identify design requirements; determine specifications for suitable pumping and power systems; design treatment systems; determine capital and operating expense budgets for the system designed.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to water managers and involves a technical and self-directed role in developing and integrating resources and systems and covers the process of identifying design requirements, determining specifications for storage and treatment systems, and determining capital and operating expense budgets for the system designed.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine design requirements	<p>1.1. Quality of water to be treated and level of treatment is determined.</p> <p>1.2. Construction specifications define the work required to treat water for the enterprise in accordance with environmental and Occupational Health and Safety (OHS) requirements.</p> <p>1.3. Environmentally sensitive areas are identified and protected according to local, State and National legislation.</p> <p>1.4. Design calculations and decisions are documented to enterprise requirements.</p>
2. Define pumping and power systems	<p>2.1. Pumps are selected to treat water efficiently and effectively as required, to enable supply at the flow and the pressure required to operate the distribution system.</p> <p>2.2. The pump motor combinations are efficient and the pumps are reliable, functional, serviceable and flexible for the intended application.</p> <p>2.3. Energy requirements are determined and layout of electricity lines are determined and checked with local authority.</p> <p>2.4. The relationship between capital and operational costs are optimised including a comparison of energy sources.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Structures, valves and accessories are selected and integrated into a functional system that can be monitored and maintained according to enterprise guidelines.</p> <p>2.6. Performance indicators, design calculations and decisions are documented according to enterprise guidelines.</p> <p>2.7. Construction specifications define the work required to make a suitable pumping and power system available to enterprise.</p> <p>2.8. Power supply design specification is checked with power authorities</p>
3. Design an water treatment system	<p>3.1. Treatment systems are evaluated and designed with respect to a range of key variables.</p> <p>3.2. Pipes, valves and fittings are sized according to design system specifications so that capital cost is balanced against operation costs over the anticipated system life.</p> <p>3.3. Flows, water levels and pressures are calculated and documented to be within the acceptable tolerances for optimum performance.</p> <p>3.4. Flows, water levels and pressures are achievable by the pumps operating at optimum efficiency and according to enterprise standards.</p> <p>3.5. Mechanisms for controlling and adjusting pressure are included.</p>
4. Determine capital expense budget	<p>4.1. Design calculations and decisions are documented and relevant information is communicated clearly through plans, specifications and manuals.</p> <p>4.2. Design output is checked by a competent designer against enterprise objectives.</p> <p>4.3. Materials requirements are determined and documented from plans and specifications.</p> <p>4.4. Labour requirements are estimated based upon documented work schedule, with reasonable allowance for variances in work schedules.</p> <p>4.5. Costing attributed to each component is based upon quoted information from suppliers, or sound analysis of individual elements.</p>
5. Determine operating expense budget	<p>5.1. Operating expense budget indicates all expenses applicable to the completed irrigation system.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collect and analyse information
- identify adverse environmental impacts of water treatment activities and appropriate remedial action
- identify design requirements
- develop specifications
- develop and implement relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- design processes
- developments in water treatment technology
- automatic control and monitoring systems
- waste management and environmental issues
- budgeting, contractual development and obligations
- environmental protection agency regulations
- environmental impacts of water treatment
- cost/benefit analysis
- enterprise policies and procedures.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify design requirements</li> <li>• determine specifications for suitable pumping and power systems</li> <li>• design treatment systems</li> <li>• determine capital and operating expense budgets for the system designed.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Reuse systems may include:	<ul style="list-style-type: none"> <li>• disinfestation and filtering equipment</li> </ul>
Drainage systems may include:	<ul style="list-style-type: none"> <li>• surface drains</li> <li>• culverts</li> <li>• mole drains</li> <li>• sand slit</li> <li>• sub-surface traps</li> <li>• pit and trap systems</li> <li>• dune and swale systems</li> <li>• reed beds</li> <li>• water-recycling pumps and baffles.</li> </ul>



## Unit Sector(s)

<b>Unit sector</b>	Water
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCWAT502A Manage water systems

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers managing water systems and defines the standard required to: identify adverse environmental impacts of irrigation activities and appropriate remedial action; determine the feasibility of using or up-grading an irrigation system; install or modify an irrigation and drainage system as necessary; evaluate irrigation system outputs and performance and strategically manage irrigated production systems
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### Application of the Unit

<b>Application of the unit</b>	This unit of competency applies to water managers and covers the process of strategically managing an integrated system involving relationships between irrigation, drainage and environmental systems.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine the feasibility of using or up-grading irrigation system	<p>1.1. Water resources and drainage implications are assessed to determine suitability for irrigation.</p> <p>1.2. Water quality and treatment requirements are determined.</p> <p>1.3. Water requirements and most suitable application systems are determined for each crop/plant type and area, and for each soil type.</p> <p>1.4. Other water requirements, such as climate control, are determined.</p> <p>1.5. Soil types are assessed to determine suitability for irrigation and the range of crop/plant types that could be grown.</p> <p>1.6. Drainage requirements are determined in relation to each soil and crop/plant type and type of irrigation system.</p> <p>1.7. Performance data, audit reports, environmental and Occupational Health and Safety (OHS) data for existing systems are assessed if available.</p> <p>1.8. Information is obtained from irrigation specialists on all relevant aspects of irrigation design.</p> <p>1.9. Available irrigation system types and components are assessed and costed, and a decision is made on the particular system to be used or upgrades to existing system.</p>
2. Install or modify an irrigation and drainage system as necessary	<p>2.1. Materials and equipment making up the system are determined and acquired.</p> <p>2.2. Irrigation system is installed using advice, as</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>necessary, from irrigation specialists.</p> <p>2.3. Checking that irrigation and drainage systems are supervised to ensure there are no leaks or blockages; that the water is being evenly distributed; that drainage is effective and the system is in good working order.</p>
3. Evaluate irrigation system performance	<p>3.1. Plant growth /yield increases from irrigation are determined and valued.</p> <p>3.2. Costs of irrigation are calculated.</p> <p>3.3. Cost benefit of irrigation is determined and compared with alternative systems/approaches.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- analyse performance and audit data
- evaluate irrigation system performance
- strategically manage irrigated production systems
- develop and implement relevant enterprise OHS and environmental procedures
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- plant requirements
- water quality

**REQUIRED SKILLS AND KNOWLEDGE**

- environmental impacts of irrigation, using water from any ground or underground source
- cost/benefit analysis
- enterprise policies and procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- determine the feasibility of using or up-grading an irrigation system
- install or modify an irrigation and drainage system as necessary
- evaluate irrigation system outputs and performance
- strategically manage irrigated production systems.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Irrigation system types may include:	<ul style="list-style-type: none"> <li>• flood</li> <li>• furrow</li> <li>• micro-sprinklers</li> <li>• pop-ups</li> <li>• impact sprinklers</li> <li>• low-level lines</li> <li>• overhead sprinklers</li> <li>• drippers and micro-jets.</li> </ul>
Irrigated systems may include:	<ul style="list-style-type: none"> <li>• water harvesting</li> <li>• delivery</li> <li>• drainage collection</li> <li>• drainage storage and treatment as well as natural drainage and treatment systems involving the removal of pollutants through evaporation, and/or clearance by filtration through surface layers.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Water
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCWOL101A Support woolshed activities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers supporting woolshed activities and defines the standard required to: prepare basic tools and equipment; provide support to shearing and crutching; assist with wool handling and clean up woolshed.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of support to others during shearing operations.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Prepare materials, tools and equipment for woolshed activities</p>	<p>1.1. The required materials, tools and equipment are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2. Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3. Techniques used when loading and unloading materials demonstrate correct manual handling and minimise damage to the load and the vehicle.</p> <p>1.4. Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5. Support for woolshed activities is provided according to Occupational Health and Safety (OHS) requirements and according to workplace information.</p> <p>1.6. OHS hazards are identified and reported to the supervisor.</p>
<p>2. Undertake woolshed activities as directed</p>	<p>2.1. Instructions and directions provided by supervisor are followed and clarification sought when necessary.</p> <p>2.2. Work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3. Interactions with other workers and owner/classers are carried out in a positive and professional manner.</p> <p>2.4. Animals are moved into pens as directed.</p> <p>2.5. Board duties are undertaken as directed.</p> <p>2.6. Support is provided to wool sorting, replacing butts and wool pressing as directed.</p> <p>2.7. Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.</p>

ELEMENT	PERFORMANCE CRITERIA
	2.8. Problems or difficulties in completing work to required standards or timelines are reported to supervisor.
3. Handle materials and equipment	3.1. Waste material produced during woolshed activities is stored in a designated area according to supervisor's instructions. 3.2. Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines. 3.3. A clean and safe work site is maintained while completing woolshed activities.
4. Clean up on completion of woolshed activities	4.1. Materials are returned to store or disposed of according to supervisor's instructions. 4.2. Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions. 4.3. Work outcomes are reported to the supervisor.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safe work procedures
- prepare materials, tools and equipment for woolshed activities
- undertake woolshed activities as directed
- handle materials and equipment
- clean up on completion of woolshed activities
- use literacy skills to read and follow a range of basic instructions
- use oral communication skills/language competence to communicate effectively with others
- use numeracy skills to complete basic calculations
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- safe work practices

**REQUIRED SKILLS AND KNOWLEDGE**

- sheep breeds and wool types
- shearing tools and equipment
- basic wool handling practices
- relevant federal, state/territory industrial awards
- OHS, environmental protection and animal welfare legislative and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare basic tools and equipment
- provide support to shearing and crutching
- assist with wool handling
- clean up woolshed.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Woolshed activities may include:	<ul style="list-style-type: none"> <li>• assisting with crutching and shearing such as:               <ul style="list-style-type: none"> <li>• penning and catching sheep</li> <li>• cleaning up duties as directed by the shearer.</li> </ul> </li> </ul>
Wool handling may include:	<ul style="list-style-type: none"> <li>• assisting with wool handling and classing such as:               <ul style="list-style-type: none"> <li>• sorting crutchings</li> <li>• moving fleece</li> <li>• cleaning up duties as directed by the wool handler or classer.</li> </ul> </li> </ul>
General work may include:	<ul style="list-style-type: none"> <li>• assisting with general roustabout duties in a woolshed as directed.</li> </ul>
Tools and equipment may include:	<ul style="list-style-type: none"> <li>• brooms</li> <li>• knives</li> <li>• sack trucks.</li> </ul>
Hazards may include:	<ul style="list-style-type: none"> <li>• dust</li> <li>• noise</li> <li>• air -borne micro-organisms</li> <li>• sharp hand tools and equipment</li> <li>• manual handling</li> <li>• slippery surfaces</li> <li>• obstacles</li> <li>• tripping hazards</li> <li>• presses</li> <li>• overhead gear and other machinery</li> <li>• working shearers</li> <li>• electric leads and cables</li> <li>• changes in floor level</li> <li>• continual bending and reaching</li> <li>• fumes</li> <li>• smoke and exhaust gases from machinery</li> <li>• ammonia from animal urine</li> <li>• zoonoses.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wool
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWOL201A Pen sheep

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of penning up sheep and defines the standard required to: observe differences between mobs of sheep; observe workflow and estimate rates for refilling the catching pens and for mob cutout; move sheep in a shed and pen them up; monitor sheep density and check for contaminants in wool.
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### Application of the Unit

<b>Application of the unit</b>	This unit requires the application of some judgement and discretion, and would be carried out within enterprise guidelines and within specified timeframes. The continuous supply of sheep with uncontaminated wool to shearers is an essential factor towards the efficiency of a wool harvesting operation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Provide continuous supply of sheep to shearers	<p>1.1.Potential and existing hazards in the workplace are identified and reported to the supervisor.</p> <p>1.2.Suitable personal protective equipment is selected, used and maintained in line with Occupational Health and Safety (OHS) and workplace procedures.</p> <p>1.3.Sheep are penned in their separate mobs according to the instructions of the supervisor.</p> <p>1.4.Gates are secured to prevent sheep escaping on to the board.</p> <p>1.5.The speed of shearers is observed and numbers of sheep in catching pens arranged so that shearers all complete shearing at or near mob cutout.</p> <p>1.6.Sheep numbers are checked in catching pens and pens are filled as they empty to ensure continuous supply to shearers.</p> <p>1.7.Other pens are refilled as required.</p>
2. Keep mobs separate	<p>2.1.Gates are secured to prevent mixing of mobs.</p> <p>2.2.Pens are filled with sheep from only one mob at any given time to avoid mixing mobs and wool types.</p> <p>2.3.Mob cutout is communicated to shed supervisor.</p> <p>2.4.Sheep are moved to other catching pens to ensure that mob cutout is simultaneous.</p> <p>2.5.Safe workplace practices with regard to livestock handling are observed and implemented in line with OHS, animal welfare and organisation requirements.</p>
3. Prevent contamination of	<p>3.1.Pen density is arranged and monitored to avoid crushing, trampling or soiling of wool.</p>

ELEMENT	PERFORMANCE CRITERIA
wool	3.2.Pens are monitored to maintain sheep in standing position to avoid soiling of wool. 3.3.Potential contaminants within pens are minimised and removed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work procedures
- accept and interpret advice from the shed supervisor
- observe differences between mobs of sheep
- observe shearers workflow and estimate rates for refilling the catching pens and for mob cutout
- move sheep in a shed and pen them up
- use the accepted communications signals in the shed when shearing and sheep movement is in full force
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- types of shearing sheds, boards and catching pens
- gates and catches in shearing sheds
- safe handling techniques for catching, dragging, and releasing sheep
- animal welfare requirements in relation to sheep
- sheep behaviour in the shearing sheds and yards
- hazards associated with handling livestock
- personal protective equipment and clothing, and when and how it should be used
- industry awards and conditions
- relevant State/Territory legislation, regulations and codes of practice with regard to



**REQUIRED SKILLS AND KNOWLEDGE**

- workplace OHS, animal welfare, and the use and control of hazardous substances
- communication signals used in the particular shed when shearing and sheep movement is in operation.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- observe differences between mobs of sheep
- observe workflow and estimate rates for refilling the catching pens and for mob cutout
- move sheep in a shed and pen them up
- monitor sheep density and check for contaminants in wool.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Pens may include:

- front fill

**RANGE STATEMENT**

	<ul style="list-style-type: none"><li>• back fill</li><li>• or side fill pens.</li></ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWOL202A Perform board duties

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of handling wool from the board, throwing fleeces and placing wool into bins or press as directed, and defines the standard required to: remove fleeces and sweep board before the next sheep is dragged for shearing; pick up and throw fleeces; remove non-fleece wools from the board and place in correct bins; identify and accurately remove stain; use correct technique for skirting and rolling fleece; check quantities in bins; sweep floors and remove contamination; and work rapidly while meeting quality standards.
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### Application of the Unit

<b>Application of the unit</b>	This unit is carried out within a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. The imperative is to work at the required rate and maintain attention to detail in handling wool and other duties.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Remove contamination from the fleece	<p>1.1. Stained wool, black wool and contamination are removed on the shearing board according to the instructions of the supervisor.</p> <p>1.2. Suitable personal protective equipment (PPE) is selected and used.</p> <p>1.3. Any bending and lifting that is required is done according to safe working practices and using the available safety equipment.</p>
2. Remove fleeces and component parts from the shearing board	<p>2.1. Wool is picked up after the shearing handpiece has been disengaged and not before.</p> <p>2.2. Wet wool is identified and removed for drying.</p> <p>2.3. Belly wool is picked up and stained wool removed.</p> <p>2.4. Crutch wool is removed and the hind leg repositioned if necessary.</p> <p>2.5. The hind legs of the fleece are arranged to allow for the fleece to be picked up efficiently.</p> <p>2.6. Fleece is picked up in a controlled bundle and removed from shearing stand as soon as sheep is shorn.</p> <p>2.7. Fleece is carried to the wool table and thrown to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>land flat and spread out ready for skirting.</p> <p>2.8. Loose wool remaining in the let-out chute is collected.</p> <p>2.9. All wool removed from the fleece and from the shearing board is placed in the correct bins or on the correct table.</p> <p>2.10. All bending and lifting that is required is done according to safe working practices and using the available safety equipment.</p>
3. Handle non-fleece wool	<p>3.1. Locks are swept up and placed in correct bins.</p> <p>3.2. Board and table locks are kept separate, where directed.</p> <p>3.3. Shanks and jowls are removed, if directed, and placed in correct bin.</p> <p>3.4. Pizzle stain is removed from bellies and placed in stains line.</p> <p>3.5. Brisket wool is removed if directed by the wool classer.</p> <p>3.6. Crutchings are swept clear of the board, stain and dags are removed, and placed in correct bins.</p> <p>3.7. Lambs wool and prematurely shorn wools are carried to the wool table using boards or paddles, if required.</p> <p>3.8. Lambs wool is correctly placed on tables for sorting.</p>
4. Skirt fleeces under supervision	<p>4.1. Information is sought on wool classer requirements for mob.</p> <p>4.2. Fribs and sweats are removed and placed in correct bins.</p> <p>4.3. Short crutch wool and wiggings are removed and placed with locks.</p> <p>4.4. Wool carrying vegetable matter is removed under wool classer supervision.</p> <p>4.5. Feedback is sought on accuracy of skirting and fleece to skirtings ratio.</p> <p>4.6. Wool classer or wool roller is assisted in separating fleece wool, which has been identified as defective or lacking uniformity.</p>
5. Sweep the board and wool room	<p>5.1. Shearing boards, wool room and area beneath the wool table are swept regularly and when necessary during the shearing operation.</p> <p>5.2. The shearing boards and the wool room are kept free</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>of potential contamination.</p> <p>5.3. Waste is removed and appropriately placed in full consideration of environmental implications.</p> <p>5.4. All bending and lifting that is required is done according to safe working practices and using the available safety equipment.</p>
6. Empty bins and other wool containers	<p>6.1. Bins and other wool containers are emptied, as necessary, and replaced as directed by the person in charge.</p> <p>6.2. Waste is removed and appropriately placed in full consideration of environmental implications.</p> <p>6.3. All bending and lifting that is required is done according to safe working practices and using the available safety equipment.</p>
7. Perform cut-out duties	<p>7.1. All butts and bins are emptied and wool pressed.</p> <p>7.2. Bales are stacked.</p> <p>7.3. Wool working area is swept clean.</p> <p>7.4. Equipment is stored.</p> <p>7.5. Board is washed down and disinfected.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safety directions
- remove fleeces and sweep boards before the next sheep is dragged for shearing
- pick up fleeces safely
- remove non-fleece wools from the board and place in correct bins
- identify and accurately remove stains
- use correct technique for skirting and rolling fleece
- check quantities in bins
- sweep floors and remove contamination
- work rapidly within specified timeframes
- observe and report on adverse environmental impacts
- interpret verbal and visual signals within the woolshed given by the supervisor, the

**REQUIRED SKILLS AND KNOWLEDGE**

wool classer and the shearers

- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- the parts of a fleece and their names
- the shed layout
- duties and responsibilities of a board person
- sources of contamination of the fleece, and other aspects of the total quality management (TQM) systems in place for the clip
- methods of handling fleece that minimise risk to own health, including safe lifting and bending techniques.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- remove fleeces and sweep board before the next sheep is dragged for shearing
- pick up and throw fleeces
- remove non-fleece wools from the board and place in correct bins
- identify and accurately remove stains

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• use correct technique for skirting and rolling fleece</li> <li>• check quantities in bins</li> <li>• sweep floors and remove contamination</li> <li>• work rapidly while meeting quality standards.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Duties may include:	<ul style="list-style-type: none"> <li>• the full range of activities in all clip types, shed layouts and flock sizes.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wool
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## Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCWOL203A Carry out wool pressing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of pressing wool into bales and related tasks such as branding the bales, recording bale weights and numbers, and subsequently storing the wool bales and defines the standard required to: operate different types of wool presses; operate the various types of scales and manual handling devices; maintain bale weights for each line to minimise selling costs; brand bales clearly and accurately; handle and stack wool bales efficiently and without risk to self, other people or machinery; record bale information clearly and accurately.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking. It is usually within established routines, methods and procedures. Competency at this level requires the application of knowledge and skills to a range of wool handling and pressing duties.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for wool pressing	<p>1.1. The lines of wool to be pressed are identified and confirmed with the appropriate person.</p> <p>1.2. The wool press is checked for safe operation, with any required lubrication and maintenance carried out according to the manufacturer's instructions, and reported to the appropriate person.</p> <p>1.3. The work area is prepared in readiness for pressing as instructed.</p> <p>1.4. Scales to be used are checked for accuracy and calibrated if necessary, as instructed.</p> <p>1.5. The press and its location are checked for safety, and all other Occupational Health and Safety (OHS) requirements are adhered to.</p> <p>1.6. Any defective equipment is identified and reported to the appropriate person.</p>
2. Press wool	<p>2.1. All bending and lifting is done according to safe working practices and using the available safety equipment.</p> <p>2.2. Contamination is removed from the woolpack and placed in the appropriate location.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. All wool is placed correctly and evenly in the press, as directed.</p> <p>2.4. Bales are pressed safely for weight and length according to industry standards and organisation requirements, as directed.</p> <p>2.5. Work area is kept in a condition that avoids contamination of the wool.</p>
3. Close and stack bales	<p>3.1. Approved bale dividers are used according to instructions and flaps are correctly fastened according to industry standards.</p> <p>3.2. Bales are identified for branding before removing them from the press.</p> <p>3.3. All lifting required is done according to safe working practices and using the available safety equipment.</p> <p>3.4. Bales are stored safely, avoiding injury to presser, risk to other workers, and damage to bales and equipment.</p>
4. Complete recording requirement	<p>4.1. Bales are branded according to industry standards and organisational procedures, as directed.</p> <p>4.2. Bales are weighed according to industry standards and organisational procedures and checked with the appropriate person/ supervisor.</p> <p>4.3. Bale weights, numbers and descriptions are clearly and accurately recorded using the appropriate recording system, as directed and checked with the appropriate person/ supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- observe and report on OHS hazards and risks
- apply standard operating procedures for the press and equipment
- operate different types of wool presses
- operate the various types of scales and manual handling devices
- maintain uniform bale weights for each line

## REQUIRED SKILLS AND KNOWLEDGE

- brand bales clearly and accurately
- handle and stack wool bales efficiently and without risk to self, other people or machinery
- record bale information to be interpreted and used by other people
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- the sources of contamination of the fleece and other aspects of the quality management systems in place in the organisation
- methods of handling fleece and bales that minimise risk to own health, including safe lifting and bending techniques
- industry standards for weight, length of bales and type of pack
- industry standards for bale branding
- the recording system for bale details in use in the organisation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- operate different types of wool presses
- operate the various types of scales and manual handling devices

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• maintain bale weights for each line to minimise selling costs</li> <li>• brand bales clearly and accurately</li> <li>• handle and stack wool bales efficiently and without risk to self, other people or machinery</li> <li>• record bale information clearly and accurately.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Presses may include:	<ul style="list-style-type: none"> <li>• hydraulic</li> <li>• manual</li> <li>• self-pinning</li> <li>• electric wool presses.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wool
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCWOL204A Undertake basic skirting of alpaca fleece

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of undertaking basic skirting of alpaca fleece during and after shearing and defines the standard required to: collect a fleece after shearing; throw a fleece ready for skirting; carrying out skirting of alpaca fleece to industry standards; place skirted and removed wool in required butts or bags.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under supervision and according to enterprise procedures and industry guidelines for harvesting alpaca fleece.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for skirting	<p>1.1. Midside fleece samples are taken from each alpaca prior to shearing.</p> <p>1.2. All tools, equipment and materials required for basic skirting are assembled and checked for serviceability prior to beginning skirting and fleece handling.</p> <p>1.3. Existing and potential Occupational Health and Safety (OHS) hazards in the workplace are recognised and reported to supervisor, and actions are taken to minimise risks to self and others.</p> <p>1.4. Site quarantine and other biosecurity protocols are observed.</p>
2. Collect fleece during shearing	<p>2.1. Fleece is picked up as blanket, neck and pieces during shearing.</p> <p>2.2. Blanket, neck and pieces are kept and weighed separately, labelled and weight is recorded according to enterprise procedures.</p> <p>2.3. Severely contaminated fleece is discarded.</p> <p>2.4. Unavoidable bending, reaching and lifting are carried out in line with safe work practices.</p> <p>2.5. Blanket is carried to classing table to enable skirting.</p>
3. Skirt saddles under supervision and according to industry guidelines	<p>3.1. Blanket is lightly thrown onto classing table exposing entire fleece so as to enable loose sand or dirt to fall through without disturbing structure of saddle.</p> <p>3.2. Fleece with excessive medullation, or not consistent with general style, character, micron and length of staples, is removed and placed in pieces bag.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3.Fleece with major faults and of No Commercial Value (NCV) is discarded.
4. Process neck pieces and finalise operation	4.1.Individual pieces are separated into small bags. 4.2.Small bags containing pieces are placed into a larger bag regardless of colour, micron or length. 4.3.Neck pieces are placed in appropriate classing line. 4.4.Feedback on skirting outcomes and compliance with industry standards is sought from owner, classer or processor and any required improvements are noted for future action.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and follow safe work practices
- ability to lightly throw an entire fleece
- carrying out skirting of alpaca fleece to industry standards
- communicating faults, malfunctions and workplace hazards
- demonstrating safe and environmentally responsible workplace practices
- reporting and maintaining operational records
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- Alpaca Industry Best Practice Standards for Harvesting of Alpaca Fibre
- enterprise policies with regard to recording and reporting routines
- equipment and bag requirements for skirting and handling fleece to industry standards
- relevant state and territory legislation, regulations and codes of practice with regard

**REQUIRED SKILLS AND KNOWLEDGE**

to workplace OHS, environment and animal welfare.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- collect a fleece after shearing
- throw a fleece ready for skirting
- carrying out skirting of alpaca fleece to industry standards
- place skirted and removed wool in required butts or bags.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Animals may include:

- all types and strains of alpacas and all fleece types, including crossbred, huacaya, and suri.

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWOL301A Appraise wool using industry descriptions

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of appraising wool by applying the industry description system (AWEX-ID) to classed lines of wool and defines the standard required to: source and prepare information on wool to be appraised for industry description (AWEX-ID); apply an industry description (AWEX-ID) to lines in a clip; use an industry description (AWEX-ID) to establish a market value for lines made; review clip preparation strategies using an industry description.
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### Application of the Unit

<b>Application of the unit</b>	This unit is carried out by wool classers who are responsible for quality processes in clip preparation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Source and prepare information on wool to be appraised	<p>1.1.Sources of information on wool appraisal are identified and accessed.</p> <p>1.2.The industry description system is described.</p> <p>1.3.The visual characteristics to be appraised are identified and classified using the relevant descriptors.</p>
2. Apply the industry description to lines in a clip	<p>2.1.Wool clip classing lines are checked for compliance with the code of practice for the AWEX Quality System, Preparation of Australian Wool Clips.</p> <p>2.2.Wool clip classing lines are appraised and the AWEX-ID is recorded.</p> <p>2.3.The consistency of appraisal across a wool clip is evaluated against appraisals for the clip in the sale catalogue.</p>
3. Use the industry description to establish a market value for lines made	<p>3.1.Market information is accessed.</p> <p>3.2.Premiums and discounts for wool characteristics are identified.</p> <p>3.3.A value is determined for each line made.</p>
4. Review clip preparation strategies using an industry description	<p>4.1.Clip preparation strategies are checked and revised using the AWEX-ID descriptors, and the market value applied to the lines made.</p> <p>4.2.Feedback on market information, the effect of management on the wool clip and possible future selection strategies is provided to the woolgrower using the AWEX-ID descriptors applied to the lines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- source and prepare information on wool to be appraised for industry description (AWEX-ID)
- apply an industry description (AWEX-ID) to lines in a clip
- use an industry description (AWEX-ID) to establish a market value for lines made
- review clip preparation strategies using an industry description
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- code of practice for the AWEX Quality System, Preparation of Australian Wool Clips
- AWEX-ID Appraisal Guidelines
- Australian Wool Exchange Wool Selling Rules
- the wool sale catalogue
- interpreting wool testing data
- relevant sources of wool sale lot information
- subjective assessment of style, colour, type of vegetable matter fault, degree of stain and faults, and defects.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• source and prepare information on wool to be appraised for industry description (AWEX-ID)</li> <li>• apply an industry description (AWEX-ID) to lines in a clip</li> <li>• use an industry description (AWEX-ID) to establish a market value for lines made</li> <li>• review clip preparation strategies using an industry description.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Wool types may include:	<ul style="list-style-type: none"> <li>• all types drawn from both merino and crossbred, covering all types of wool sold through the Australian auction system under the AWEX Code of Practice.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wool
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWOL303A Prepare wool based on its characteristics

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to prepare wool based on its characteristics and defines the standard required to: assess the key characteristics of wool; separate wool that differs in processing performance; remove all stained fibre from clean wool; separate wool with differing levels and types of impurities.
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### Application of the Unit

<b>Application of the unit</b>	This unit covers skills and knowledge required to prepare lines of wool that are suitable for processing and meet the requirements of the industry Code of Practice.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Separate wools with characteristics outside the uniformity requirements of the Code of Practice.	1.1. Assessment of sheep breed and wool type is made. 1.2. Wools are separated into different lines based on: <ul style="list-style-type: none"> <li>1.2.1. fibre diameter</li> <li>1.2.2. length and strength</li> <li>1.2.3. colour and character</li> <li>1.2.4. handle and style.</li> </ul> 1.3. Staple formation and tip is checked. 1.4. Wool is examined for medullation and/or pigmentation.
2. Separate wool showing faults that impact on processing or fabric quality.	2.1. Wool is examined for dogginess that will impact on fabric quality. 2.2. Wool is checked for cotts that will require extra processing. 2.3. Skin pieces are identified and removed. 2.4. Wool is checked for dermatitis and kept separate. 2.5. Wool with a level and type of vegetable matter contamination that requires different processing is kept separate. 2.6. Mobs with high pigmented fibre risk are recorded according to the Code of Practice and their wool kept completely separate from low risk wool. 2.7. Wool from sheep with shedding characteristics is identified and kept completely separate from non-shedding white woolled sheep, with any risk of exposure documented on the classer's report. 2.8. Fleeces containing pigmented fibre in a white

ELEMENT	PERFORMANCE CRITERIA
	woolled flock are kept separate. 2.9. Wool containing stain is kept separate.
3. Recognise impurities of greasy wool and their effect on processing and yield.	3.1. Wool is examined for natural impurities. 3.2. Applied impurities are identified and their effect on processing is assessed. 3.3. Acquired impurities are identified and their effect on processing and yield of clean fibre is assessed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess key wool characteristics
- identify wool faults
- recognise impurities
- separate wool that does not meet Code of Practice requirements for uniform, predictable low risk lines of wool
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- breeds of sheep
- documentation of wool clips
- fleece measurement criteria - techniques used to measure wool characteristics
- Code of Practice for the Preparation of Australian Wool Clips
- processing methods - woollen and worsted, and stages of processing
- raw wool characteristics and their effect on processing and final product
- measurement of wool characteristics - diameter, length and strength, colour, yield, VM type, curvature and comfort factor

**REQUIRED SKILLS AND KNOWLEDGE**

- wool faults and their impact on processing and fabric quality
- impurities of wool and their impact on processing and yield of clean fibre after processing
- wool growth, skin and fibre biology, and effect of genetics and environment on fibre characteristics.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess the key characteristics of wool
- separate wool that differs in processing performance
- remove all stained fibre from clean wool
- separate wool with differing levels and types of impurities with due regard to required knowledge and skill, potential risks to human and animal health and the environment.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Types of wool may include:

- all wools that can be sold through the auction system.

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWOL304A Prepare fleece wool for classing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing fleeces in preparation for classing and defines the standard required to: separate wool from the fleece that lacks uniformity; check fleeces for wool faults and impurities; skirt fleeces, removing those portions that significantly affect the uniformity and value of the remaining fleece; roll fleeces ready for the wool classer; work at the required pace to maintain wool flow at shearing.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the wool roller working under the direction of the wool classer. The wool classer provides the overall direction for the level of preparation and skirting required while the wool roller must allow for differences between individual fleeces. It includes the requirement for the wool roller to work as a team member with other shed hands, and to do so at the required pace.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Characteristics of greasy wool are identified and related to processor requirements	<p>1.1.Characteristics of wool important in processing are identified and uniformity within the fleece is assessed.</p> <p>1.2.The portion of fleece to be removed is determined to ensure uniformity of the fleece with the other fleeces from the mob.</p>
2. Fleeces are checked for impurities	<p>2.1.Natural impurities of wool are identified, and portion of fleece to be removed is determined.</p> <p>2.2.Vegetable matter types are identified, and portion of fleece to be removed is determined.</p> <p>2.3.Mineral impurities are identified and related to yield potential identified, and portion of fleece to be removed is determined.</p> <p>2.4.Any contamination of the fleece is removed.</p> <p>2.5.Work is checked regularly with the wool classer and procedures adjusted if required.</p>
3. Fleeces are checked for presence of wool faults	<p>3.1.Hairy breeches and cotted wool are identified and portion of fleece to be removed is determined.</p> <p>3.2.Unscourable colour, water stain and dermatitis are identified and handled as directed.</p> <p>3.3.Skin pieces are removed and placed where directed.</p> <p>3.4.Work is carried out at a rate appropriate to the enterprise.</p>



ELEMENT	PERFORMANCE CRITERIA
4. Fleeces are skirted and rolled	4.1. Fleeces are skirted to remove those portions determined above that adversely affect the uniformity and value of the remaining fleece. 4.2. Fleeces containing clumpy vegetable matter are double skirted, or prepared as directed. 4.3. Necks and backs are assessed for soundness, dust and VM levels, and handled as directed. 4.4. Fleeces are rolled and presented to classer. 4.5. Skirtings are placed in the nominated bins. 4.6. Waste is removed and appropriately disposed of taking into account environmental implications. 4.7. All bending and lifting that is required is done according to safe working practices and using the available safety equipment.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- assess levels of vegetable matter and other impurities
- accurately skirt fleeces at commercial pace
- roll fleeces in preparation for classing
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- wool characteristics
- principles and requirements of wool processing

**REQUIRED SKILLS AND KNOWLEDGE**

- principles of wool growth
- identification of fleece parts
- diagnosing wool faults
- identification of impurities
- Occupational Health and Safety (OHS) legislative and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- separate wool from the fleece that lacks uniformity
- check fleeces for wool faults and impurities
- skirt fleeces, removing those portions that significantly affect the uniformity and value of the remaining fleece
- roll fleeces ready for the wool classer
- work at pace to maintain wool flow at shearing

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Fleece wools may include:

- the preparation of merino and crossbred fleece wools to the standards set out in the industry code of practice.

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWOL305A Prepare skirtings and oddments

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing non-fleece wool to comply with the requirements of the industry code of practice and defines the standard required to: prepare skirtings, belly wool, lambs wool, locks, crutchings, stain and other oddments; place skirtings and oddments into butts or bins according to the wool classer's directions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to shed hands and wool classers and is performed within a defined range of contexts in which the choice of actions required is usually clear, and there is some discretion in the range of options to be applied. It requires a speed and accuracy of work to maintain clip quality and work flow.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare skirtings	1.1. Identify types of skirtings and oddments. 1.2. Identify types of pieces and separate according to enterprise requirements, industry code of practice and quality procedures. 1.3. Prepare Merino skirtings in accordance with wool classer's directions. 1.4. Prepare Crossbred skirtings in accordance with wool classer's directions.
2. Prepare belly wool	2.1. Identify belly wool. 2.2. Separate belly wool according to enterprise requirements, code of practice and quality procedures. 2.3. Remove stains and briskets in accordance with wool classer's directions. 2.4. Prepare Crossbred and Merino belly wool in accordance with wool classer's directions.
3. Prepare lambs wool	3.1. Identify types of lambs' wool. 3.2. Separate lambs' wool according to enterprise requirements, code of practice and quality procedures. 3.3. Remove stains and trimmings in accordance with wool classer's directions. 3.4. Prepare Merino lambs wool in accordance with wool classer's directions. 3.5. Prepare Crossbred lambs wool in accordance with wool classer's directions.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
4. Prepare locks	4.1. Identify types of locks. 4.2. Separate board and table locks in accordance with wool classer's directions. 4.3. Prepare Crossbred and Merino locks in accordance with wool classer's directions.
5. Prepare crutchings	5.1. Identify types of crutchings. 5.2. Remove stains and other impurities in accordance with wool classer's directions. 5.3. Prepare Merino and Crossbred crutchings in accordance with wool classer's directions.
6. Prepare stain	6.1. Identify types of stain. 6.2. Prepare Merino and Crossbred stain in accordance with wool classer's directions.
7. Prepare other oddments	7.1. Define and identify other oddments. 7.2. Describe the preparation of other oddments.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- accurately skirt fleeces at commercial rates
- skirt and roll fleeces safely
- interpret verbal and visual signals within the wool shed given by the supervisor, the wool classers and the shearers
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

**REQUIRED SKILLS AND KNOWLEDGE**

- principles and requirements of wool processing
- principles of wool growth
- identification of fleece parts, skirtings, locks, crutchings, and stains
- recognition of contamination
- recognition of wool faults
- identification of impurities
- identification of stain
- identification of oddments
- methods of handling fleece that minimise risk to own health, including safe lifting and bending techniques
- requirements of the industry code of practice for preparation of skirtings and oddments
- Occupational Health and Safety (OHS) legislative and enterprise requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare skirtings, belly wool, lambs wool, locks, crutchings, stain and other oddments
- place skirtings and oddments into butts or bins according to the wool classer's directions.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Skirtings and oddments wools may include:	<ul style="list-style-type: none"> <li>the preparation of merino and crossbred clips to the standards set out in the industry code of practice.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wool
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCWOL306A Supervise clip preparation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to supervise board persons, wool handlers and the wool presser in preparing the wool clip, and defines the standard required to: perform shed staff roles including pen up, board person and wool handler; explain clip preparation requirements to shed staff and monitor their performance; ensure clip preparation produces stain free, uniform lines of wool that are of low risk to the processor; maintain wool flow and minimise the risk of contamination; provide training based on explanation and demonstration of work skills to staff; meet industry employment, award and legislative requirements.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to wool classer working in consultation with the grower or shed manager. Responsibility for the work of others is an important component. Supervising clip preparation requires a broad range of skills and knowledge and an ability to coordinate and monitor activities efficiently and effectively.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Explain organisation requirements for clip preparation	<p>1.1.The organisation's requirements for quality and standard of wool clip preparation are clearly explained to the wool handlers.</p> <p>1.2.The organisation's procedures for operating safely and for the use of personal protective equipment are clearly explained to the wool handlers.</p> <p>1.3.The impact of contamination in the wool is clearly explained to the wool handlers.</p> <p>1.4.The key personnel in the wool shed/room are introduced or indicated to the wool handlers.</p> <p>1.5.Responsibilities for specific functions or procedures are allocated and explained to wool handlers.</p> <p>1.6.Occupational Health and Safety (OHS) hazards are identified; risks assessed and suitable controls are implemented.</p>
2. Perform and supervise shed hand duties	<p>2.1.Board persons' duties are performed including picking up and throwing fleece, sweeping board and preparing non fleece wools.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2. Wool handlers are monitored to ensure they follow the set procedures for each of the clip preparation tasks.</p> <p>2.3. Pen up duties are performed including keeping mobs separate and monitoring and filling catching pens.</p> <p>2.4. Wool pressers' activities are performed including keeping wool press area clean, pressing, branding, weighing and recording bale details in the wool book.</p>
3. Oversee preparation of wool	<p>3.1. All personal protective equipment and clothing is selected, used and maintained appropriately by wool handlers.</p> <p>3.2. Shed staff are supervised to maintain a clear board and ensure fleeces are thrown correctly.</p> <p>3.3. Shed staff are supervised in removal and preparation of fleece wool.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- observe, identify and react appropriately to environmental implications and OHS hazards
- perform board and table duties
- perform wool presser duties
- perform penning up duties
- oversee shed staff to ensure quality clip preparation
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

## REQUIRED SKILLS AND KNOWLEDGE

- parts of fleece
- procedures for handling skirtings, bellies, lambs wool, premature shorn wool, locks and crutchings, and stained wool and oddments
- responsibilities of board and table staff
- characteristics of different wool types and parts of the fleece
- premiums and discounts for wool characteristics
- pressing and branding requirements
- skirting technique and appropriate skirting ratios for different clip types
- personal protective clothing and equipment requirements for shed staff
- training techniques
- staff supervision
- relevant State/Territory OHS and employment legislative and enterprise requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- perform shed staff roles including pen up, board person and wool handler
- explain clip preparation requirements to shed staff and monitor their performance
- ensure clip preparation produces stain free, uniform lines of wool that are of low risk to the processor
- maintain wool flow and minimise the risk of contamination
- provide training based on explanation and demonstration of work skills to staff
- meet industry employment, award and legislative

<b>EVIDENCE GUIDE</b>	
	requirements.
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Clip preparation may include:	<ul style="list-style-type: none"> <li>• consistency of clip preparation</li> <li>• limit of contamination in wool</li> <li>• segregation of lines and wool types.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Wool
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCWOL307A Document a wool clip

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of documenting a wool clip to national and organisational standards and defines the standard to: obtain signatures and/or registrations that are required and include on classers report; include details of wool bales with each consignment, and send the completed classers report to the appropriate authority at the conclusion of shearing; make suggestions for improved safety, conditions and fleece quality based on classers report, observations and discussions with operators within the wool shed; prepare and maintain records as required by enterprise or legislation.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit is likely to be conducted without supervision from others. It includes instructing others in the use of the system, maintaining the records, and advising the owner/manager of issues where appropriate. Documenting a wool clip is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time constraints. The documentation of a wool clip contributes to the wool harvesting operation by optimising efficiency for the grower.</p>
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish recording system and documentation	<p>1.1.The nature of documentation is selected according to the culture and facilities of the wool shed.</p> <p>1.2.Guidelines for the use of the recording system are established, including the type, frequency and format of recording.</p> <p>1.3.Those who are to use the recording system are clearly informed of their obligations and any specific instructions that are necessary.</p> <p>1.4.Checks are made regularly to ensure that documentation is accurately completed and updated at the proper times.</p>
2. Complete records for wool classing	<p>2.1.Documents and records required by the organisation and the market are completed clearly and accurately.</p> <p>2.2.The wool clip specification is completed prior to consignment, to ensure that the correct lotting advice is provided to the selling broker or buyer.</p> <p>2.3.Any additional notes or advice necessary on the</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>documents are made clearly and accurately.</p> <p>2.4.All signatures and/or registrations that are required are obtained and included on documentation.</p> <p>2.5.Wages statements for contractors are prepared according to the agreements reached in employment conditions.</p>
3. Provide information and advice to the woolgrower	<p>3.1.Suggestions for improved safety, conditions and fleece quality are derived from observations, smoothness of workflow, and discussions with operators within the wool shed.</p> <p>3.2.The wool clips specification is communicated to the appropriate authority at shed cutout.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop the recording system for wool clips and bales
- communicate recording requirements clearly to wool classers and pressers
- observe the work and identify area of the work or the facilities that could be improved
- prepare and maintain records as required by enterprise or legislation
- observe, identify and react appropriately to Occupational Health and Safety (OHS) hazards
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- quality assurance schemes used in the organisation and in the industry, and their documentation requirements
- correct clip specification
- employment conditions and agreements for a range of workers
- relevant national codes of practice for the industry.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- ensure that all relevant details are recorded accurately and clearly in a timely manner
- communicate recording procedures and requirements clearly to wool presser
- obtain signatures and/or registrations that are required and include on classers report
- include details of wool bales with each consignment, and send the completed classers report to the appropriate authority at the conclusion of shearing
- make suggestions for improved safety, conditions and fleece quality based on classers report, observations and discussions with operators within the wool shed
- prepare and maintain records as required by enterprise or legislation.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Wool clip documentation may include:

- advice notes
- waybills
- classers specification
- wool clip specification and/or wool classer's wages statement.

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWOL308A Prepare facilities for shearing and crutching

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of ensuring the safety and hygiene standards of facilities and equipment prior to shearing and crutching operations, and is undertaken by the growers with assistance from wool handlers, and defines the standard required to: maintain contamination free environment for shearing and wool handling; recognise and remedy health and safety hazards; carry out minor maintenance and repairs to equipment and facilities; pen sheep in preparation for shearing; communicate verbally with work team; supervise operations.
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### Application of the Unit

<b>Application of the unit</b>	This unit is applies to a grower with assistance from shed staff.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Inspect facilities and equipment	<p>1.1. Facilities are inspected and assessed for hygiene and safety according to industry standards and Occupational Health and Safety (OHS) requirements.</p> <p>1.2. Equipment faults or malfunctions are identified and reported for repair or replacement according to enterprise requirements.</p> <p>1.3. Potential and existing hazards are identified, controlled and reported according to OHS requirements.</p>
2. Prepare facilities	<p>2.1. Suitable Personal Protective Equipment (PPE) is selected, used and maintained according to OHS requirements.</p> <p>2.2. Shed staff are engaged in the removal of contaminating substances according to industry Quality Assurance (QA) enterprise and environmental requirements.</p> <p>2.3. Shed staff are directed/assisted in the cleaning of facilities and equipment to industry standards and hazards are eliminated according to OHS requirements.</p>
3. Prepare equipment and materials	<p>3.1. Shed staff are directed/assisted in the positioning of tables and equipment.</p> <p>3.2. Bins/wool pack holders are placed in strategic positions.</p> <p>3.3. Shed staff are directed/assisted in the positioning of brooms/scrapers.</p> <p>3.4. Discussions are held with the presser in relation to</p>

ELEMENT	PERFORMANCE CRITERIA
	their understanding of the property requirements.
4. Organise the supply of sheep to shearers	4.1. Order of shearing and information on mob cut-outs is conveyed to staff. 4.2. Sheep to be shorn first are placed in catching pens. 4.3. Supply of sheep in monitored and co-ordinated throughout shearing.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- maintain contamination and hazard-free environment for shearing and wool handling
- recognise and remedy health and safety hazards
- carry out minor maintenance and repairs to equipment and facilities
- disposal of waste in an environmentally responsible manner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- maintenance and hygiene requirements of shearing sheds, boards and catching pens
- sources and types of contamination
- principles of moving and penning animals
- animal welfare
- shearing requirements
- shed and board layouts
- environmental codes of practice with regard to shearing
- OHS and animal welfare legislation, codes of practice and enterprise requirements

**REQUIRED SKILLS AND KNOWLEDGE**

- National codes of practice for the Shearing Industry (Health, Safety and Welfare standards).

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- maintain contamination free environment for shearing and wool handling
- recognise and remedy health and safety hazards
- carry out minor maintenance and repairs to equipment and facilities
- pen sheep in preparation for shearing
- communicate verbally with work team, and supervise operations.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

**RANGE STATEMENT**

The facilities may include:

- the shearing and wool handling area of the shearing shed
- sheep pens
- bins for fleece and non-fleece types.

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWOL310A Press wool for a clip

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of pressing wool from large clips into bales and carrying out related tasks, such as branding the bales, recording bale weights and numbers, and subsequently storing the wool bales and defines the standard required to: check woolpacks and wool to ensure freedom from contamination; assess and monitor wool flow and build-up in bins; press and brand bales to industry requirements, maximising bale weights for each line; communicate with classer on order of pressing and mob cut-offs; handle and store wool bales efficiently and without risk to self or others; and record bale information in the wool book.
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### Application of the Unit

<b>Application of the unit</b>	This unit is performed by wool pressers who work in close cooperation with the wool classer and maintain a rate of pressing that ensures wool flow can be maintained. The work is carried out within established routines, methods and procedures
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for wool pressing	<p>1.1.The lines of wool are identified and confirmed with the wool classer.</p> <p>1.2.The wool press is checked for safe operation, lubricated and maintained according to manufacturer instructions.</p> <p>1.3.The work area is assessed as free of all contaminants in readiness for pressing.</p> <p>1.4.Supplies of wool packs, bale fasteners and hooks, stencils and bale-branding inks are ascertained and located in appropriate place.</p> <p>1.5.Recording system required by the enterprise and wool classer is identified.</p> <p>1.6.Scales to be used are checked for accuracy and calibrated if necessary.</p> <p>1.7.The press and its location are checked for safety, and all other Occupational Health and Safety (OHS) requirements are adhered to.</p> <p>1.8.Any defective equipment is identified and reported to the appropriate person.</p>
2. Press wool	2.1.Wool classer is consulted to determine mob cut-outs

ELEMENT	PERFORMANCE CRITERIA
	<p>and pressing requirements.</p> <p>2.2. All bending and lifting is done according to safe working practices and using available safety equipment.</p> <p>2.3. Contamination is removed from the woolpack and placed in the appropriate location.</p> <p>2.4. Woolpacks are checked for conformity with current industry standards.</p> <p>2.5. Directions for order of pressing and any special requirements are sought from the wool classer.</p> <p>2.6. All wool is placed correctly and evenly in the press to produce even density bales.</p>
3. Carry out the role and responsibilities of the wool presser	<p>3.1. Bales are pressed to optimal weights to reduce selling costs and within weight and length dimensions specified in industry codes of practice.</p> <p>3.2. Lines are pressed to avoid mixed bales.</p> <p>3.3. Wool flow and build-up in bins is monitored.</p> <p>3.4. Work area is maintained in a condition that avoids contamination of wool.</p> <p>3.5. Pressing is carried out according to the time restrictions and workflow of the wool room.</p>
4. Close and store bales	<p>4.1. Approved bale dividers are used according to instructions, and flaps are correctly fastened according to industry standards.</p> <p>4.2. Bales are identified for branding before removing them from the press.</p> <p>4.3. All lifting required is done according to safe working practices and using the available safety equipment.</p> <p>4.4. Bales are stored safely, avoiding injury to presser, risk to other workers, and damage to bales and equipment.</p> <p>4.5. Bales are stored to maximise shed space and to avoid weather damage.</p>
5. Complete recording requirements	<p>5.1. Bales are branded according to industry standards and organisational procedures.</p> <p>5.2. Bales are weighed according to industry standards and organisational procedures.</p> <p>5.3. Bale weights, numbers and descriptions are clearly and accurately recorded using the appropriate recording system.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify OHS hazards and implement safe work practices
- operate different types of wool presses and carry out basic lubrication and maintenance according to manufacturer instructions
- operate the various types of scales and manual handling devices
- check woolpacks and wool to ensure freedom from contamination
- assess and monitor wool-flow and build-up in bins
- maintain uniform bale weights for each line
- brand bales clearly and accurately
- handle and store wool bales efficiently and without risk to self, other people or machinery
- record bale information to be interpreted and used by other people
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- sources of contamination of the fleece and other aspects of the quality management system in place in the organisation
- operating requirements for different types of wool presses
- methods of handling fleece and bales that minimise risk to own health, including safe lifting and bending techniques
- industry standards for weight, length of bales and type of pack
- industry standards for bale branding
- the recording system for bale details in use in the organisation
- OHS and employment legislative and enterprise requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• check woolpacks and wool to ensure freedom from contamination</li> <li>• assess and monitor wool flow and build-up in bins</li> <li>• press and brand bales to industry requirements, maximising bale weights for each line</li> <li>• communicate with classer on order of pressing and mob cut-offs</li> <li>• handle and store wool bales efficiently and without risk to self or others</li> <li>• record bale information in the wool book.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Press wool may include:	<ul style="list-style-type: none"> <li>• pressing all types of wool clips using:             <ul style="list-style-type: none"> <li>• hydraulic</li> <li>• manual</li> <li>• self-pinning</li> <li>• electric wool presses.</li> </ul> </li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWOL311A Perform shed duties

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to perform shed duties covering the board and table, and to provide mentoring to less experienced staff, and defines the standard required to: monitor supply of sheep and fill pens; pick up and throw fleeces and sweep board; place non-fleece wool in correct bins and remove stain; use correct technique for skirting and rolling fleece; maintain wool flow and minimise the risk of contamination; provide mentoring and demonstration of work skills to less experienced staff.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in shearing shed teams who are experienced in working on both the board and table and are able to provide some mentoring and direction to less experienced staff.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Perform board duties	<p>1.1. Stained wool, black wool, and contamination are removed on the shearing board.</p> <p>1.2. Belly wool is picked up, and stained wool is removed.</p> <p>1.3. Crutch wool is removed and the hind leg repositioned if necessary.</p> <p>1.4. Fleece is picked up and thrown, or parked and retrieved later if wool table is not clear.</p> <p>1.5. Removal of wool and maintenance of the board is monitored and extra support provided when needed.</p> <p>1.6. Mentoring and demonstration of work skills is provided to inexperienced board staff as required.</p> <p>1.7. All bending and lifting that is required is done according to safe working practices and using the available safety equipment.</p>
2. Prepare wool	<p>2.1. Locks are swept up and board and table locks are kept separate where directed.</p> <p>2.2. Shanks and jowls are removed if directed and placed in correct bin.</p> <p>2.3. Pizzle stain is removed from bellies and placed in stains line.</p> <p>2.4. Brisket wool is removed if directed by the wool classer.</p> <p>2.5. Crutchings are swept clear of the board, stain and</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>dags are removed, and placed in correct bins.</p> <p>2.6.Lambs wool and prematurely shorn wools are carried to the wool table using boards or paddles if required.</p> <p>2.7.Mentoring and support is provided in wool handling to inexperienced staff as part of the work team role.</p>
3. Skirt fleeces	<p>3.1.Information is sought on wool classer requirements for mob.</p> <p>3.2.Fribs and sweats are removed and placed in correct bins.</p> <p>3.3.Short crutch wool and wiggings are removed and placed with locks.</p> <p>3.4.Wool carrying clumpy vegetable matter is removed if directed by the wool classer.</p> <p>3.5.Feedback is sought on accuracy of skirting and fleece to skirtings ratio.</p> <p>3.6.Fleece wool which is defective or lacks uniformity is removed if directed by the wool classer.</p>
4. Maintain wool flow and minimise contamination risk	<p>4.1.The immediate shearing area is swept after each sheep is shorn.</p> <p>4.2.Shearing boards, wool room, and area beneath the wool table are swept as regularly as necessary during the shearing operation.</p> <p>4.3.The shearing boards and the wool room are kept free of potential contamination.</p> <p>4.4.Waste is removed and appropriately placed in full consideration of environmental implications.</p> <p>4.5.Risk of mixing wool between lines is minimised through regular sweeping and maintaining bins, other containers and the wool area.</p> <p>4.6.All tasks are completed and contingencies covered through a professional, team-based approach.</p> <p>4.7.All bending and lifting that is required is done according to safe working practices and using the available safety equipment.</p>
5. Carry out tasks to support the shearing operation	<p>5.1.Rate of shearing is observed and frequency of refilling the catching pens and for mob cutout are estimated.</p> <p>5.2.Different mobs of sheep are kept separate.</p> <p>5.3.Directions from the wool classer are implemented and feedback provided on sheep supply and wool</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>flow.</p> <p>5.4.All butts and bins are emptied and wool pressed.</p> <p>5.5.Bales are stored as directed.</p> <p>5.6.Wool working area is swept clean.</p> <p>5.7.Equipment is stored at the end of shearing.</p> <p>5.8.Board is washed down and disinfected after shearing cutout.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- remove fleeces and sweep boards before the next sheep is dragged for shearing
- pick up fleeces safely
- remove non-fleece wools from the board and place in correct bins
- identify and accurately remove stain
- use correct technique for skirting and rolling fleece
- check quantities in bins
- sweep floors and remove contamination
- work rapidly within specified timeframes
- interpret verbal and visual signals within the wool shed given by the supervisor, the wool classer and the shearers.
- monitor sheep supply in pens and fill as necessary
- monitor wool flow and the wool working area to ensure risk of mixing between lines is minimised
- provide mentoring to less experienced staff
- anticipate tasks and apply forward planning
- deal with contingencies by supporting other staff in tasks as required
- observe and report on adverse environmental impacts
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures

**REQUIRED SKILLS AND KNOWLEDGE**

- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- maintenance and hygiene requirements of shearing sheds, boards and catching pens
- sources and types of contamination
- principles of moving and penning animals
- animal welfare
- shearing requirements
- shed and board layouts
- environmental codes of practice with regard to shearing
- Occupational Health and Safety (OHS) and animal welfare legislation, codes of practice and enterprise requirements
- National codes of practice for the Shearing Industry (Health, Safety and Welfare standards).

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor supply of sheep and fill pens
- pick up and throw fleeces and sweep board
- place non-fleece wool in correct bins and remove stain
- use correct technique for skirting and rolling fleece
- maintain wool flow and minimise the risk of contamination
- provide mentoring and demonstration of work skills to less experienced staff.

**EVIDENCE GUIDE****Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Duties may include:

- those associated with the range of clip types harvested and prepared including merino, crossbred and other breeds.

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWOL312A Class goat fibre

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing and carrying out the classing of goat fibre and defines the standard required to layout the shed and equipment for efficient operation; establish and maintain consistent methods of clip preparation to maximise returns; accurately assess fibre quality and types; maintain clean working conditions for clip preparation and classing procedures; identify and dispose of contaminated and wet fibre; communicate verbally with the work team.
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### Application of the Unit

<b>Application of the unit</b>	This unit is carried out unsupervised after consultation with the grower or shed manager. Responsibility for the work of others is an important component. Classing goat fibre requires a broad range of skills and knowledge and an ability to coordinate and monitor activities efficiently and effectively.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for fibre classing	1.1.Clip preparation methods and classing criteria are confirmed according to enterprise requirements. 1.2.Shed layout, facilities and equipment are arranged for efficient fibre flow and pressing. 1.3.Contaminants and sources of contaminants, are identified, removed and disposed of in an environmentally responsible manner.
2. Class goat fibre	2.1.Suitable personal protective equipment is selected, used and maintained according to Occupational Health and Safety (OHS) requirements. 2.2.Clip is prepared according to enterprise requirements and checked for contamination. 2.3.Fibre is classed according to classing criteria, industry standards, and relevant national codes of practice.
3. Complete classing activities	3.1.Fibre is placed in the correct bins in readiness for pressing. 3.2.Wet fibre is identified and dried according to enterprise requirements. 3.3.Work area is cleaned and waste disposed of according to OHS and enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and apply safe work procedures
- establish and maintain consistent methods of clip preparation
- class fibre to industry standards
- layout the shed and equipment for efficient operation
- maintain clean working conditions for clip preparation and classing procedures
- accurately assess fibre quality and types
- measure goat fibre
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- fleece measurement criteria
- appraisal types
- fleece handling procedures
- clip analysis reports and comparisons
- classing specifications
- code of practice for Preparation of Australian Cashmere, Cashgora Fleece and Mohair
- sources of fleece contamination
- requirements of the code of practice for animal welfare
- OHS legislative requirements including the National code of practice for the Shearing Industry (Health, Safety and Welfare standards).

## Evidence Guide

### EVIDENCE GUIDE



<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• layout the shed and equipment for efficient operation</li> <li>• establish and maintain consistent methods of clip preparation to maximise returns</li> <li>• accurately assess fibre quality and types</li> <li>• maintain clean working conditions for clip preparation and classing procedures</li> <li>• identify and dispose of contaminated and wet fibre</li> <li>• communicate verbally with the work team.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Goat fibre may include:	<ul style="list-style-type: none"> <li>• all breeds and types of goats producing cashmere, cashgora or mohair fibre.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wool
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWOL313A Class alpaca fleece

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of classing alpaca fleece, and defines the standard required to: arrange the layout of bins and the fleece table; label bins and containers to ensure optimum operational efficiency; check and prepare fleece to ensure freedom from contamination and stain and optimum skirting ratios; appraise fleece characteristics and class fleece to the Alpaca Industry Best Practice Standards for harvesting of Alpaca Fibre; identify fleece of higher and lower market value; set and maintain consistency in lines.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to a classing specialist or an alpaca stud farm owner or employee who will be classing the stud's animal fleece. Work will be carried out under minimal or no supervision according to a predetermined classing strategy.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for classing of alpaca fleece	<p>1.1. Equipment, facilities and layout of shed are arranged according to predetermined classing strategy for efficient fleece flow, quality management and pressing.</p> <p>1.2. Personal Protective Equipment (PPE) and clothing are selected and used.</p> <p>1.3. Occupational Health and Safety (OHS) requirements and hazards associated with task are identified and appropriate action is taken to minimise risks to self and others.</p> <p>1.4. Site quarantine protocols and enterprise and personal hygiene requirements are applied, followed and monitored as required by enterprise procedures or owner/manager instructions.</p> <p>1.5. Bins and containers are placed correctly and are clearly labelled according to classing strategy, quality management system and enterprise requirements.</p>
2. Carry out classing of alpaca fleece	<p>2.1. Unavoidable required bending and lifting are done using available safety equipment and according to safe work practices.</p> <p>2.2. Fleece is handled and skirted to standards outlined in classing strategy.</p> <p>2.3. Fleece is checked to ensure freedom from contamination and stain.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4. Fleece is checked to ensure adequate and optimum skirting.</p> <p>2.5. Different classes of fleece are kept separate as required.</p> <p>2.6. Fleece is appraised for its characteristics.</p> <p>2.7. Fleece is classed to standards of the enterprise classing strategy suggested by appropriate authority.</p> <p>2.8. Fleece of higher and lower market value is identified and lines are made that maximise return to fleece owner.</p> <p>2.9. Data about fleece is recorded according to enterprise requirements.</p>
3. Dispose of fleece and report on wet fleece	<p>3.1. Fleece is consistently placed in correct bins ready for pressing, ensuring that cross-contamination does not occur.</p> <p>3.2. Wet fleece is identified according to requirements of classing strategy.</p> <p>3.3. Existence of wet fleece is brought to the attention of appropriate authority.</p> <p>3.4. Unavoidable required bending and lifting are done using available safety equipment and according to safe work practices.</p>
4. Follow up classing outcomes	<p>4.1. Feedback on classing outcomes and compliance with industry standards is sought from owner or processor and any required improvements are noted for future action.</p> <p>4.2. Action is taken to ensure awareness of changes in classing techniques, standards, and processor and market requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and implement safe work practices
- arranging layout of bins and fleece table in a variety of sheds for optimum

## REQUIRED SKILLS AND KNOWLEDGE

- efficiency of fleece flow and pressing
- assessing pigmented fibre risk and separating fleece as required
- checking fleece to ensure freedom from contamination and stain
- checking fleece to ensure optimum and adequate skirting
- classing fleece to standards according to codes of practice or as required by alternative selling methods
- identifying and appraising fleece characteristics
- identifying fleece of higher and lower market value and ensuring lines are made that maximise return to grower
- labelling bins and containers correctly
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- classing requirements for the range of customers
- effect of genetics and environment on fibre characteristics
- fleece growth, skin and fibre biology
- fleece measurement criteria and techniques used to measure fleece characteristics
- inherent fleece characteristics (such as diameter, length and strength, colour, vegetable matter amount and type and yield)
- interpretation of test results
- preparation of documentation of fleece clips
- principles of classing
- raw fleece characteristics and their effect on processing and final product
- shed layouts that promote efficient fleece flow and handling.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• arrange the layout of bins and the fleece table</li> <li>• label bins and containers to ensure optimum operational efficiency</li> <li>• check and prepare fleece to ensure freedom from contamination and stain and optimum skirting ratios</li> <li>• appraise fleece characteristics and class fleece to the Alpaca Industry Best Practice Standards for harvesting of Alpaca Fibre</li> <li>• identify fleece of higher and lower market value</li> <li>• set and maintain consistency in lines.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Classing alpaca fleece may include:	<ul style="list-style-type: none"> <li>• all fleece types according to the requirements of processors and the Alpaca Industry Best Practice Standards for Harvesting of Alpaca Fibre.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWOL401A Determine wool classing strategies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of developing classing strategies to be used for classing a wool clip and defines the standard required to: source market and client information on clip preparation requirements; lay out a wool room for efficient operation; accurately assess wool quality and types; develop classing strategies that meet the requirements of codes of practice and seek to optimise returns for the grower; communicate specific and detailed requirements for clip preparation to shed staff; and review strategies and implement plans for improvement.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to wool classers working independently within their own area of responsibility. This involves accessing all sources of relevant information to allow appropriate decision-making, developing the strategy, communicating the strategy to shed staff and grower/manager and then evaluating the strategy for the clip.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Source information for input to classing strategies	<p>1.1. Information on previous year's clip preparation and sale results is obtained, including classer's specification, test results, skirting ratios, AWEX-ID, sale prices, and any grower or processor feedback.</p> <p>1.2. Information on growing and management history for the mobs over the last twelve months is obtained from the grower.</p> <p>1.3. Current market trends and premiums and discounts are researched.</p> <p>1.4. Current recommendations appropriate to the specific wool clip are identified in the Code of Practice for Preparation of Australian Wool Clips.</p> <p>1.5. Current specific exporter and processor requirements and limitations are obtained and relevant details recorded.</p> <p>1.6. Marketing and selling methods and end uses for the wool are identified from the marketing plan and their implications on clip preparation are determined.</p> <p>1.7. Estimated prices for specific lines are identified from market information.</p>

ELEMENT	PERFORMANCE CRITERIA
	1.8.Factors that will influence the classing process in the organisation are identified.
2. Develop strategies for classing this clip	<p>2.1.Fleece type is identified and suitable fleece, skirting and oddment lines are set up according to industry guidelines.</p> <p>2.2.Clip preparation methods and standards are selected to suit the fleece type and market requirements in consultation with the manager and other shed personnel.</p> <p>2.3.Operating procedures that eliminate contamination are selected and adopted.</p> <p>2.4.Wool classing procedures, methods and criteria are selected in line with fleece type, market requirements and industry standards.</p> <p>2.5.Shed layout and facilities are selected that will permit efficient workflow.</p> <p>2.6.Occupational Health and Safety (OHS) hazards are identified, risks assessed and suitable controls determined.</p> <p>2.7.Requirements for labelling and placement of bins and containers are selected.</p>
3. Communicate classing strategy	<p>3.1.The shed layout, equipment and facilities required are prepared and requirements for clip preparation are conveyed to shed staff.</p> <p>3.2.Clip preparation methods and classing procedures are clearly communicated to, and confirmed with, the wool handlers.</p>
4. Review the success of the strategies for the clip	<p>4.1.Classed clips are analysed and strategies reviewed based on lines made, AWEX-ID, test results, selling costs and prices obtained.</p> <p>4.2.Alternative clip preparation and classing strategies are compared for profitability of the clip.</p> <p>4.3.Conclusions and actions of review processes are incorporated into future classing decisions and instructions to shed staff.</p> <p>4.4.Review of classing and marketing alternatives is discussed with owner/manager.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- establish and maintain consistent methods of clip preparation
- analyse classed clips and test alternative classing strategies for profitability
- review classing strategies based on broker and buyer feedback
- adapt classing strategies for buyer requirements, marketing systems and owner manager
- value lines of wool using industry descriptions and test results
- incorporate review of classing strategies into instructions for shed staff
- discuss clip test results, prices and alternative classing strategies with owner/shed manager
- observe, identify and react appropriately to environmental implications and OHS hazards
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record information collected accurately and legibly, and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- industry descriptions (AWEX-ID)
- requirements of the organisation's wool marketing and production plans
- wool testing, broking and export organisations and practices
- clip preparation and analysis processes for the major wool types
- requirements and standards of the national wool processing industry
- methods used for processing wool and the impact on clip preparation and marketing
- marketing alternatives and implication for classing
- wool brokering services available
- efficient wool room layout
- sale catalogue and market reports
- specifications for classers
- industry description and premiums and discounts

**REQUIRED SKILLS AND KNOWLEDGE**

- relevant national codes of practice for the industry.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- source market and client information on clip preparation requirements
- lay out a wool room for efficient operation
- accurately assess wool quality and types
- develop classing strategies that meet the requirements of codes of practice and seek to optimise returns for the grower
- communicate specific and detailed requirements for clip preparation to shed staff
- review strategies and implement plans for improvement.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Clips may include:

- all types of merino and cross-bred clips that are to be sold through the Australian wool auction selling system.

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWOL402A Use individual fleece measurements to prepare wool for sale

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the process of using individual fleece measurements to prepare wool for sale in accordance with the enterprise classing strategy and marketing plan, and defines the standard required to: arrange wool room layout for efficient testing and data retrieval; understand and interpret the individual fleece measurements; class wool to standards in accordance with the Code of Practice, or as required by the enterprise classing strategy and marketing plan; communicate specific and detailed requirements for wool preparation and classing to wool handling staff; identify wool of higher and lower market value and make lines which maximise return to woolgrower.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit is likely to be carried out with limited or no supervision and within enterprise guidelines as part of the role of a wool classer or wool marketer.</p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Gather objectively measured data.	1.1. Available information is collated. 1.2. Tested sample is assessed to determine its appropriateness as a representative sample. 1.3. Requirements for additional information needed to validate measurements are determined.
2. Analyse collected data	2.1. Available data is reviewed and evaluated to determine possible lines. 2.2. Comparisons with previous measurements if available are undertaken.
3. Analyse market trends	3.1. Information produced by industry to determine market trends is reviewed. 3.2. Potential for movement in prices is evaluated against available data. 3.3. Extent to which discounts are applied is determined.
4. Prepare wool to meet requirements of the market	4.1. The impact on the market of variable quantities is analysed. 4.2. Available information is used to prepare the wool to



ELEMENT	PERFORMANCE CRITERIA
	<p>best advantage.</p> <p>4.3. Wool is packaged in the most appropriate manner.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- arrange wool room layout for efficient operation
- understand and interpret the individual fleece measurements
- class wool to standards in accordance with the Code of Practice, or as required by the enterprise classing strategy and marketing plan
- communicate specific and detailed requirements for wool preparation and classing to wool handling staff
- identify wool of higher and lower market value and make lines which maximise return to woolgrower
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- wool room layouts which promote efficient wool flow and handling
- breeds of sheep
- inherent wool characteristics , including fibre diameter, staple length and strength, colour, yield, VM type, curvature, comfort factor
- fleece measurement criteria - techniques used to measure wool characteristics.
- interpretation of test results
- principles of classing , including mob/flock concept, variability for fibre diameter and staple length, soundness, defects
- classing scenarios requiring detail of clip break-ups

**REQUIRED SKILLS AND KNOWLEDGE**

- clip analysis reports and comparisons
- Occupational Health and Safety (OHS) legislation, codes of practice and enterprise procedures.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- arrange wool room layout for efficient testing and data retrieval
- understand and interpret the individual fleece measurements
- class wool to standards in accordance with the Code of Practice, or as required by the enterprise classing strategy and marketing plan
- communicate specific and detailed requirements for wool preparation and classing to wool handling staff
- identify wool of higher and lower market value and make lines which maximise return to woolgrower.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Wool types may include:	<ul style="list-style-type: none"> <li>all wool types suitable for the Australian auction system.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wool
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	
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## AHCWOL403A Prepare for, implement and review wool harvesting, clip preparation and classing

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the functions required to prepare for, implement and review wool harvesting, clip preparation and classing, and defines the standard required to: determine and schedule staff and resources; implement relevant legislative requirements associated with the shearing industry including employment agreements and awards; monitor the supply of sheep and wool flow; review and evaluate operational performance and clip preparation standards; provide feedback to grower on the shearing operation and the preparation and classing of the clip.
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### Application of the Unit

<b>Application of the unit</b>	This unit covers the functions required for a wool classer to prepare for, implement and review wool harvesting and clip preparation in different sheds and clip types.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and implement wool harvesting and preparation operations	<p>1.1.Flock owner/manager is consulted about their requirements and informed of any planning issues taking into account weather and environmental issues.</p> <p>1.2.Order of mobs is determined for wool harvesting and preparation according to enterprise requirements.</p> <p>1.3.Staffing needs are determined by negotiation with grower/contractor according to clip type, enterprise requirements, legislative requirements, employment agreements and awards.</p> <p>1.4.Staff duties are allocated and staff given directions where necessary.</p> <p>1.5.The shed equipment and materials are arranged in accordance with shearing plan, Occupational Health and Safety (OHS) requirements and the quality management system.</p> <p>1.6.Wool harvesting and preparation plan is implemented and adjusted as required.</p>
2. Implement plan and monitor work flows	<p>2.1.Sheep numbers, mob cut outs and shearing speeds are monitored to match wool preparation capacity.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2. Shed staff are supervised to maintain a clear board and throw fleeces correctly.</p> <p>2.3. Non fleece wool is removed and prepared as directed.</p> <p>2.4. Shed staff are directed to use appropriate skirting strategies, and fleece to skirting ratios is monitored.</p> <p>2.5. Directions are issued to staff to close off bins and lines for mob cut outs.</p> <p>2.6. Wool harvesting and preparation team is managed to comply with quality management system requirements.</p> <p>2.7. Compliance with enterprise and legislative requirements including OHS, animal welfare, industrial, and environmental practices are monitored.</p> <p>2.8. Staff performance is managed and direction is provided where necessary.</p>
<p>3. Supervise wool pressing</p>	<p>3.1. Presser is instructed on pressing strategies to reduce mixed bales while meeting code of practice requirements for uniformity in bales.</p> <p>3.2. Presser is informed of order for pressing and procedures to minimize contamination.</p> <p>3.3. Rate of build up in lines is monitored by consulting with wool presser.</p> <p>3.4. Bale weights are monitored to ensure efficiencies are achieved for the grower without creating overweight bales.</p> <p>3.5. Bales are branded in line with code of practice requirements.</p> <p>3.6. Wool book is monitored to ensure it is up to date, accurate and legible.</p>
<p>4. Provide feedback to grower on classing strategies, clip performance and wool harvesting and preparation operations</p>	<p>4.1. Staff performance in clip preparation is reviewed.</p> <p>4.2. Feedback is provided on classing strategies, clip preparation in relation to mob characteristics, skirting ratios, bale weights and any workflow issues.</p> <p>4.3. Possible improvements to wool handling facilities are reported.</p> <p>4.4. Equipment effectiveness and maintenance requirements are reported.</p> <p>4.5. Lines made and bale details are explained in relation to mob characteristics.</p>

ELEMENT	PERFORMANCE CRITERIA
	4.6. Feedback is provided on lotting advice. 4.7. Wool clip documentation is completed and presented to grower for signature.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan and implement wool harvesting and preparation operations
- organise and schedule staff and work tasks
- supervise staff and monitor productivity
- identify and remove potential workplace hazards
- implement risk management strategies
- monitor environmental impacts and implement control measures
- use written and oral information about workplace and legislative requirements
- calculate resources and bale weights for mob cut outs
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- supervisory procedures with regard to operations and personnel
- staff management including team building and conflict resolution
- wool industry codes of practice and quality systems
- industry requirements with regard to hygiene and safety for wool harvesting and preparation facilities and equipment
- weather conditions and its effect on wool harvesting
- planning and implementation processes
- completing workplace documentation
- employment agreements, awards, processes and requirements

## REQUIRED SKILLS AND KNOWLEDGE

- legislative requirements including OHS, industrial, animal welfare and environment.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

In order to confer competency, evidence must prove that the candidate is able to:

- determine and schedule staff and resources,
- implement relevant legislative requirements associated with the shearing industry including employment agreements and awards
- monitor the supply of sheep and wool flow
- review and evaluate operational performance and clip preparation standards
- provide feedback to grower on the shearing operation and the preparation and classing of the clip.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Clip types may include:

- those that are harvested and prepared including:
  - merino



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• crossbred</li> <li>• other breeds.</li> </ul>
Activities may include:	<ul style="list-style-type: none"> <li>• preparing for, implementing and reviewing wool harvesting</li> <li>• clip preparation and classing</li> <li>• the range of scale of operation may vary from one stand to greater than 10 stands and applies to all wool that can be offered through the auction system.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Wool
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### Co-requisite units

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCWOL404A Establish work routines and manage wool harvesting and preparation staff

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the establishment of work routines and management of wool harvesting and preparation staff and defines the standard required to: allocate and communicate staff roles and responsibilities; provide information on industrial arrangements to staff; perform shed staff duties including pen up, board person, wool handler; explain clip preparation requirements to shed staff; provide training to overcome capability shortfalls in individuals and the team; implement strategies to foster teamwork and trust and deal with conflict; monitor team and individual work performance and provide confirmatory or corrective feedback; implement environmental policies in the shearing workplace.
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### Application of the Unit

<b>Application of the unit</b>	This unit covers the functions required for a wool classer to establish shearers' work routines and manage shed staff and clip types.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Define work roles for shed staff	<p>1.1.Roles and responsibilities of shed staff are clearly defined.</p> <p>1.2.Skills of shed staff are accurately identified and matched with available tasks and duties.</p> <p>1.3.Requirements of job duties and Code of Practice are clearly identified and communicated to shed staff.</p> <p>1.4.Occupational Health and Safety (OHS) policy and procedures are effectively communicated and implemented.</p>
2. Induct shed staff	<p>2.1.OHS hazards are identified, risks assessed and suitable controls are implemented.</p> <p>2.2.The details of shearing, including flock and mob details, are communicated to staff</p> <p>2.3.New staff are briefed on relevant awards, enterprise agreements, pay rates and related administration.</p> <p>2.4.New staff are advised of terms and conditions and signed on.</p> <p>2.5.New staff are familiarised with the workplace and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>colleagues.</p> <p>2.6. Enterprise environmental policy and procedures are effectively communicated and implemented.</p>
<p>3. Perform shed hand duties</p>	<p>3.1. Board persons' duties are performed including picking up and throwing fleece, sweeping board and preparing non fleece wools.</p> <p>3.2. Wool handlers' duties are performed including skirting and rolling a fleece, preparing non fleece wools and keeping wool area clean.</p> <p>3.3. Pen up duties are performed including keeping mobs separate and monitoring and filling catching pens.</p> <p>3.4. Wool pressers' activities are performed including keeping wool press area clean, pressing, branding, weighing and recording bale details in the wool book.</p>
<p>4. Support on-the-job training</p>	<p>4.1. Individuals are encouraged to self-evaluate performance and identify areas for improvement.</p> <p>4.2. Training needs are determined through appraisal of staff and the monitoring of work performance.</p> <p>4.3. Practical skills are analysed and then explained and/or demonstrated as required.</p> <p>4.4. Workplace learning opportunities are provided, with coaching and mentoring to support learning.</p> <p>4.5. Staff responsibilities are adjusted to allow for practice and skills development where required.</p>
<p>5. Performance manage shed staff</p>	<p>5.1. Performance standards for clip preparation are established and communicated to individuals and the team.</p> <p>5.2. Skirting requirements are explained, accurate and efficient technique demonstrated and skirtings ratio is monitored.</p> <p>5.3. Requirements for separating specific parts of the fleece are clearly described to wool handlers and justified by Code of Practice or processor requirements.</p> <p>5.4. Motivation strategies are used for shed staff to maintain a consistent focus on clip preparation standards and timing of operations.</p>
<p>6. Maintain effective working relations with the team</p>	<p>6.1. Problems are recognised and addressed through discussion with work group.</p> <p>6.2. Assistance is sought from work group members</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>when difficulties arise in achieving allocated tasks.</p> <p>6.3. Discussion and information sharing is routinely used to communicate requirements of work activities through a participative approach.</p> <p>6.4. Disagreements and conflicts are managed constructively using appropriate conflict management strategies.</p>
<p>7. Provide feedback to shed staff</p>	<p>7.1. Feedback is clear, constructive and provided promptly to individuals to maintain high quality clip preparation.</p> <p>7.2. Confirmatory feedback is provided to emphasise good performance and technique and its importance for clip quality.</p> <p>7.3. Corrective feedback is provided in a constructive way, including an explanation of the effects of poor performance or incorrect technique and strategies for improvement.</p> <p>7.4. Under performance is addressed both on an individual and team basis.</p> <p>7.5. Clip data is used to share feedback on clips prepared with team members.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- supervise and instruct staff to achieve work activities
- delegate and allocate tasks
- identify and provide training requirements
- plan and monitor ongoing training needs
- demonstrate effective time management
- demonstrate safe workplace and environmentally responsible practices
- solve problems (staffing, resources)
- motivate and performance manage staff
- pen up sheep
- monitor penned sheep

## **REQUIRED SKILLS AND KNOWLEDGE**

- identify contaminants
- pick up fleeces
- handle non fleece wools
- skirt fleeces
- operate the wool press
- weigh, brand and stack bales safely
- record bale details
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

## **Required knowledge**

- shearing industry Awards and personnel processes
- principles of team work, negotiation and time management
- instruction and coaching techniques
- conflict management
- communication for feedback and motivation
- enterprise training requirements and processes.
- relevant State/Territory legislation, regulations and Codes of Practice with regard to workplace OHS, environmental protection, and the use and control of hazardous substances and machinery and equipment
- hazard identification, assessment and control
- maintaining records
- sheep behaviour
- animal welfare
- board duties
- contamination
- parts of the fleece
- non fleece wools
- wool press operating procedures
- bale requirements.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• allocate and communicate staff roles and responsibilities</li> <li>• provide information on industrial arrangements to staff</li> <li>• perform shed staff duties including pen up, board person, wool handler</li> <li>• explain clip preparation requirements to shed staff</li> <li>• provide training to overcome capability shortfalls in individuals and the team</li> <li>• implement strategies to foster teamwork and trust and deal with conflict</li> <li>• monitor team and individual work performance and provide confirmatory or corrective feedback</li> <li>• implement environmental policies in the shearing workplace.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Clip types may include:</p>	<ul style="list-style-type: none"> <li>• merino</li> <li>• crossbred</li> </ul>

<b>RANGE STATEMENT</b>	
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- |  |   |
|--|---|
|  | <ul style="list-style-type: none"><li>• other breeds.</li></ul> |
|--|---|

### Unit Sector(s)

<b>Unit sector</b>	Wool
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCWOL405A Class fleece wool

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of classing fleece wool from merino and crossbred sheep and defines the standard required to: arrange layout of bins and wool table; label bins and containers to ensure optimum operational efficiency and quality management; check and prepare wool to ensure freedom from contamination and stain and optimum skirting ratios; assess pigmented fibre risk; identify wool of higher and lower market value and different processing requirements; class fleece into lines that meet the requirements of the Code of Practice for the Preparation of Australian Wool.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to wool classers who class wool as a professional service after consultation with the grower or shed manager. Responsibility for the work of others is an important component. Classing fleece wool requires the ability to adjust strategies to different clip types and market requirements and to coordinate and monitor activities efficiently and effectively.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for wool classing	<p>1.1.The layout of the shed, equipment and facilities are arranged according to the determined classing strategy for efficient wool flow, quality management and pressing.</p> <p>1.2.All personal protective equipment and other safety requirements are selected, used and maintained according to Occupational Health and Safety (OHS) guidelines.</p> <p>1.3.Bins and containers are placed correctly and clearly labelled according to the classing strategy, quality management system and enterprise requirements.</p> <p>1.4.Ensure sufficient staffing ratio is established and maintained.</p>
2. Carry out classing of fleece wool	<p>2.1.Any bending and lifting that is required is done according to safe working practices and using the available safety equipment.</p> <p>2.2.Fleece wool is handled and skirted to the standards outlined in the classing strategy.</p> <p>2.3.Wool is checked to ensure freedom from</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>contamination and stain.</p> <p>2.4. Wool is checked to ensure adequate and optimum skirting.</p> <p>2.5. Pigmented fibre risk is assessed and wool is kept separate as required.</p> <p>2.6. Wool is appraised for its characteristics.</p> <p>2.7. Wool is classed to standards of the enterprise classing strategy in accordance with codes of practice, or as required by alternative selling methods.</p> <p>2.8. Wool of higher and lower market value and processing requirements is identified and lines made, which maximise return to the wool owner.</p>
3. Place wool in bins for pressing	<p>3.1. Wool is correctly and consistently placed in the correct bins ready for pressing, ensuring that cross contamination does not occur.</p> <p>3.2. Wet wool, stain and coloured wool is identified and kept separate according to the requirements of the organisation and code of practice.</p> <p>3.3. Any bending and lifting that is required is done according to safe working practices and using the available safety equipment.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and apply safe work procedures
- arrange layout of bins and wool table for optimum efficient wool flow and pressing in a variety of sheds
- label bins and containers correctly
- monitor clip preparation and skirting
- assess pigmented fibre risk and separate wool as required
- identify and appraise wool characteristics
- class wool to standards in accordance to Code of Practice or as required by alternative selling methods

## REQUIRED SKILLS AND KNOWLEDGE

- identify wool of higher and lower market value and lines made which maximise return to grower.
- separate wools of different processing or end user requirements
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- shed layouts which promote efficient wool flow and handling
- breeds of sheep and their characteristics
- types and sources of contamination
- wool production areas of Australia and clip characteristics
- inherent wool characteristics - diameter, length and strength, colour, yield, VM type, curvature, and comfort factor
- Fleece Measurement Criteria - techniques used to measure wool characteristics
- processing methods - woollen and worsted, stages of processing
- raw wool characteristics and their effect on processing and final product
- wool growth, skin and fibre biology, and effect of genetics and environment on fibre characteristics
- requirements for handling shedding and pigmented fibres
- interpretation of test results
- principles of classing (mob/flock concept, variability for fibre diameter and staple length, soundness, defects, etc.)
- classing scenarios requiring detail of clip break-ups
- clip feedback and reports
- understanding of and preparation of documentation of wool clips
- Code of Practice for the Preparation of Australian Wool Clips and other relevant quality standards.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• arrange layout of bins and wool table</li> <li>• label bins and containers to ensure optimum operational efficiency and quality management</li> <li>• check and prepare wool to ensure freedom from contamination and stain and optimum skirting ratios</li> <li>• assess pigmented fibre risk</li> <li>• identify wool of higher and lower market value and different processing requirements</li> <li>• class fleece into lines that meet the requirements of the Code of Practice for the Preparation of Australian Wool.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competence requires evidence of the ability to apply work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Classing may include:	<ul style="list-style-type: none"> <li>• the classing of Merino and Crossbred wools to the standard required for the Australian auction system.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Wool
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWRK101A Maintain the workplace

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers maintaining the workplace and defines the standard required to: prepare and use maintenance tools and equipment; clean and maintain the workplace; identify and report problems; record maintenance activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the maintenance of a range of work areas such as workshops, depots, tool sheds, and planted areas.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Use tools, equipment and machinery	<p>1.1. Maintenance tools, equipment and machinery are identified, collected and prepared for use according to supervisor's instructions.</p> <p>1.2. Unsafe or faulty tools, equipment and machinery are identified and segregated for repair or replacement according to supervisor's instructions.</p> <p>1.3. Tools, equipment and machinery are cleaned, maintained and stored according to manufacturers specifications, workplace procedures and supervisors instructions.</p>
2. Maintain a clean and safe workplace	<p>2.1. Services are located using site plans and in consultation with the supervisor.</p> <p>2.2. Occupational Health and Safety (OHS) hazards and environmental implications are identified and reported to the supervisor.</p> <p>2.3. Suitable Personal Protective Equipment (PPE) is selected, used, maintained and stored according to best practice.</p> <p>2.4. Floors, benches and other flat work surfaces are swept, washed and treated according to supervisor's instructions.</p> <p>2.5. Tools, equipment and materials not in use are stored neatly, and waste and used materials are removed and placed in disposal containers according to supervisor's instructions.</p> <p>2.6. Maintenance activities are undertaken according to OHS requirements.</p>
3. Maintain structures	3.1. Maintenance requirements of structures and



ELEMENT	PERFORMANCE CRITERIA
and workplace surroundings	<p>workplace surroundings are identified according to supervisor's instructions.</p> <p>3.2.Maintenance of structures and workplace surroundings is undertaken according to supervisor's instructions and OHS requirements.</p> <p>3.3.Structural damage and deterioration in the workplace are identified and reported to the supervisor.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow safe work practices
- participate in teams and contribute to team objectives
- understand instructions
- read labels, site plan measurements and OHS symbols
- communicate effectively with team members and supervisor
- tally work hours, calibrate tools and equipment, measure volumes to apply cleaning agents, measure quantities of materials and estimate areas
- minimise noise, dust and water run-off to prevent nuisance-level environmental disturbance
- use literacy skills to read and follow a range of basic instructions
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds.

#### Required knowledge

- enterprise standards for presentation of buildings, structures and surroundings
- the effect of outdoor climatic conditions (e.g., rain, hail, extreme heat and/or wind, or very high ultraviolet radiation), which may prevent or impede maintenance activities, or influence the selection of tools, equipment and safety equipment to minimise the hazards presented
- awareness of the relationship between specific maintenance activities and the external environment, and reasons for procedures that help to minimise the impact that these activities may have on the environment
- workplace hazards, OHS legal rights and responsibilities, and OHS safety symbols and signs
- environmental protection and animal welfare legislative and workplace

**REQUIRED SKILLS AND KNOWLEDGE**

requirements.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare and use maintenance tools and equipment
- clean and maintain the workplace
- identify and report problems
- record maintenance activities.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Type of work may include:

- assisting maintenance of workshops, depots, tool sheds, and planted areas.

Tools, equipment and machinery may include:

- hand tools
- pedestrian and ride-on rotary mowers
- cylinder mowers

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• blower vacs</li> <li>• ride-on sweepers</li> <li>• turf edging machines</li> <li>• brush-cutters</li> <li>• high pressure air and water cleaners.</li> </ul>
Hazards may include:	<ul style="list-style-type: none"> <li>• disturbance or interruption of services</li> <li>• solar radiation</li> <li>• dust</li> <li>• air and soil-borne organisms</li> <li>• noise</li> <li>• sharp tools and equipment</li> <li>• manual handling</li> <li>• moving vehicles</li> <li>• machinery and machinery parts</li> <li>• uneven surfaces</li> <li>• flying objects.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Work
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCWRK201A Observe and report on weather

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of observing and reporting on weather and climate conditions for an agricultural, horticultural or land management enterprise and defines the standard required to: monitor and interpret weather information; communicate warnings and concerns; identify weather and climate conditions and its impact upon farming and grazing activities; follow directions to minimise loss and damage to staff, livestock, crops, property; produce and review farm enterprises and operations for weather risk.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to all workers in agricultural, horticultural and land management industries. It is normally carried out while working with limited supervision, within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Check weather and climate information	<p>1.1. Weather and climate information is checked to determine likely conditions.</p> <p>1.2. Changed weather and climate situations are recognised.</p> <p>1.3. Likely impact of changes in weather and climate are anticipated in respect to work tasks, safety of others, property, natural resources and local environment.</p> <p>1.4. Report is made to supervisor of anticipated impact of weather and climate.</p>
2. Carry out preventative action	<p>2.1. Information and advice is promptly disseminated to relevant personnel.</p> <p>2.2. Preventative action is determined according to the known effects on livestock, crops and work tasks.</p> <p>2.3. Actions to minimise loss and damage are implemented.</p> <p>2.4. Livestock, horticultural or crop management program or schedule of work tasks are adjusted and revised according to weather and climatic changes.</p>
3. Monitor weather and climate	<p>3.1. Regular updates are accessed to determine ongoing suitability of current programs.</p> <p>3.2. Viability of livestock, horticultural or crop management practices are reviewed to ensure suitability within meteorological conditions.</p> <p>3.3. Research on forecasting techniques is undertaken to</p>

ELEMENT	PERFORMANCE CRITERIA
	maintain currency of information. 3.4.Relevant information is documented and recorded according to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- monitor physical signs of weather in the context of available information
- relate forecasts to impact on current operations and activities
- communicate information on weather and situations that may be impacted
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- effects of wind and rain on wind chill
- effects of wind shear and wind chill exposure
- enterprise and industry policies for monitoring weather and climate conditions, and recording and reporting weather and climate conditions.
- weather and climate conditions impact upon farming and grazing activities
- working knowledge of climate and weather
- effects of wind chill on metabolism of animals
- effects of prolonged dry periods on pastures and animal production, and natural resources
- effects of extreme heat on animals, including during birthing, and effects of heat stress on neonates
- relevant legislative health and OHS requirements, especially as they relate to weather and climate monitoring and preparations for hazardous weather.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• monitor and interpret weather information</li> <li>• communicate warnings and concerns</li> <li>• identify weather and climate conditions and its impact upon farming and grazing activities</li> <li>• follow directions to minimise loss and damage to staff, livestock, crops, property and produce</li> <li>• review farm enterprises and operations for weather risk.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Weather information may include:	<ul style="list-style-type: none"> <li>• reports</li> <li>• warnings</li> <li>• data collected from property weather stations</li> <li>• internet research</li> <li>• grazier alerts.</li> </ul>



## Unit Sector(s)

Unit sector	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK202A Observe environmental work practices

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of observing and contributing to positive environmental work practices and defines the standard required to: follow workplace procedures to minimise environmental impacts; minimise and dispose of waste in an environmentally responsible way; use non renewable resources responsibly and reuse where possible; record data relating to environmental risks, impacts and management if required.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to all workers in agricultural, horticultural and land management industries. It describes the process of observing and contributing to positive environmental work practices and requires active participation in improving environmental outcomes at work under clear reporting lines and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Follow environmental workplace practices	<p>1.1. Workplace practices and work instructions relating to potential environmental impacts are recognised and followed, and clarification is sought where necessary.</p> <p>1.2. Changes to work practices and procedures are responded to positively and promptly in accordance with enterprise requirements.</p> <p>1.3. Relevant legislation, codes and national standards that impact on workplace environmental practices are recognised and followed.</p>
2. Contribute to improved environmental work practices	<p>2.1. Suggestions are made to designated personnel for improvements to workplace practices where possible.</p> <p>2.2. Information is gathered and improvements are suggested to support the development of improved workplace approaches to environmental practices.</p> <p>2.3. Environmental issues and their relationship to workplace practices are discussed in the workplace with colleagues and designated personnel.</p> <p>2.4. Contributions to the review of environmental practices and policies are made within limits of responsibility.</p>
3. Recognise and report on a potential environmental threat	<p>3.1. Signs or symptoms of the potential environmental threat are recognised.</p> <p>3.2. Information about or observations of a potential</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>environmental threat are reported to supervisors and/or appropriate authorities.</p> <p>3.3. Location and extent of the potential environmental threat is accurately recorded.</p> <p>3.4. Reports on the potential environmental threat are completed according to enterprise guidelines.</p>
4. Maintain environmental records	<p>4.1. Environmental records are accurately prepared as required according to enterprise policies and procedures.</p> <p>4.2. Environmental records are stored securely in a form accessible for reporting purposes.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communicate with supervisors and workplace colleagues
- recognise basic environmental hazards and threats
- follow workplace directions and instructions related to environment
- keep simple environmental records
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- relevant legislation from all levels of government on environmental issues
- relevant environmental policies and workplace/industry practices and procedures
- good practice approaches relevant to work area particularly in regard to minimising environment hazards and risks, and improving environmental performance
- environmental issues, especially in regard to water catchments, air, noise, ecosystems, habitat, efficient use of resources, sustainability and waste

**REQUIRED SKILLS AND KNOWLEDGE**

minimisation

- potential environmental threats and problems relevant to a given region and occupation
- general work place practices and their potential impact on the environment.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- follow workplace procedures to minimise environmental impacts
- minimise and dispose of waste in an environmentally responsible way
- use non renewable resources responsibly and reuse where possible
- record data relating to environmental risks, impacts and management if required.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Issues may include:

- all environmental issues in regard to water catchments, air, noise, ecosystems, habitat
- efficient use of resources
- sustainability
- carbon emissions
- waste minimisation.

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWRK203A Operate in isolated and remote situations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the ability to plan, prepare for and work safely in isolated and remote situations and defines the standard required to: develop and maintain operating and emergency plans for working remotely; source and interpret maps of the area; implement workplace procedures for notifying management of location, activities and travel in remote areas; prepare provisions to cover essential and emergency needs; prepare for emergencies and carry communication equipment to send a request for help; use bushcraft skills to modify the living environment and reduce risk of mishap in remote areas.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to all workers in agricultural, horticultural and land management industries that have to work in remote areas. Work is carried out under routine supervision and may involve operating in a team environment.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan for operating in remote environments	<p>1.1.Information relating to the operating environment and location is collated and recorded to meet established enterprise policy.</p> <p>1.2.Detailed operating and travel plans, including a disaster plan and fallback position requirements are established in consultation with supervising staff.</p> <p>1.3.Appropriate authorities are notified of the action plans and time schedules according to enterprise policy.</p> <p>1.4.Relevant maps are identified and sourced.</p>
2. Prepare for operating in remote environments	<p>2.1.Personal needs are prepared for activities or travel in remote areas.</p> <p>2.2.Transportation and equipment are prepared for use in prescribed work location or along prescribed routes.</p> <p>2.3.Relevant maps are obtained and studied prior to departure.</p> <p>2.4.Planned activities and itinerary are accurately reported and recorded prior to departure in accordance with enterprise requirements.</p>
3. Prepare for	3.1.Provisioning meets expected operational and



ELEMENT	PERFORMANCE CRITERIA
emergency situations	<p>possible emergency needs.</p> <p>3.2. Initial planning and regular monitoring ensures structured usage of available provisions and resources.</p> <p>3.3. Operating plan is structured to include training in remote area survival techniques prior to operating in remote situations.</p> <p>3.4. Emergency management procedures are included as an integral part of operating plans and enterprise policy.</p>
4. Operate in remote environment	<p>4.1. Activities are completed according to instructions and established time schedules.</p> <p>4.2. All activities carried out in remote situations are executed in accordance with prescribed procedures.</p> <p>4.3. Emergency situations are handled in accordance with prescribed procedures and enterprise policy.</p> <p>4.4. Established reporting procedures are followed on completion of planned activities and on return to base in line with enterprise policy.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- plan for operating in remote environments
- prepare for operating in remote environments
- prepare for emergency situations
- operate in remote environments
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

- map reading and navigation skills including direction finding (e.g., GPS, use of compass, stars or watch)
- local topography, nearby inhabitants and locations within that area
- survival techniques and human needs relating to survival situations
- clothing requirements for sun or heat protection
- basic first aid
- bush craft including making a fire, cooking and wild food gathering
- water supplies, sources and generation methods
- emergency vehicle and mechanical equipment repair
- the operation of communication equipment (e.g., field communications by two-way, satellite telephony and HF radio), and distress signalling including use of signalling mirrors
- weather and weather indicators
- basic rope skills including useful knots (reef, clove hitch, truckie's hitch, bowline); simple lashings and tying down loads.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- develop and maintain operating and emergency plans for working remotely
- source and interpret maps of the area
- implement workplace procedures for notifying of location, activities and travel in remote areas
- prepare provisions to cover essential and emergency needs

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>prepare for emergencies and carry communication equipment to send a request for help</li> <li>use bushcraft skills to modify the living environment and reduce risk of mishap in remote areas.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Workplaces may include:	<ul style="list-style-type: none"> <li>any workplace where the ability to get help because of distance is such that personal safety may be at risk.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCWRK204A Work effectively in the industry

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the process of working effectively on an individual basis and with others and defines the standard required to: meet the standards required in the industry for dress and work practices; implement the quality standards for workplace products or services; interpret instructions and establish work tasks and priorities; demonstrate communication skills with supervisors and co workers.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working on an individual basis, and also includes the ability to work within a hierarchy of management and with others.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Obtain information about the industry	<p>1.1.Sources of information about the industry are correctly identified and accessed.</p> <p>1.2.Information to assist effective and safe work performance within the industry is collected.</p> <p>1.3.Specific information on sector of work is obtained and updated.</p> <p>1.4.Industry and Occupational Health and Safety (OHS) information is correctly applied to day-to-day work activities.</p> <p>1.5.Employment terms and conditions are defined.</p> <p>1.6.Career pathways within the industry are identified.</p>
2. Observe employment requirements	<p>2.1.Industry developments are used in workplace context to improve quality, productivity and conditions.</p> <p>2.2.Work practices comply with Codes of Practice and workplace expectations.</p> <p>2.3.Faults and abnormalities in workplace practices are recognised and remedial action is taken to enterprise requirements.</p> <p>2.4.Dress and personal requirements comply with workplace standards.</p> <p>2.5.Punctuality in work attendance is observed.</p> <p>2.6.Employer's expectations are met through completion of workplace routines and specific instructions within enterprise policies and procedures.</p>
3. Accept responsibility for quality of own work	<p>3.1.Personal work space is kept in a well organised and safe condition, and is in accordance with relevant standards and policies.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Workplace code of conduct is adhered to.</p> <p>3.3. Variations in the quality of service and/or products from required standards are detected and reported in accordance with workplace procedures.</p>
4. Plan and conduct own work	<p>4.1. Instructions are interpreted correctly and observed.</p> <p>4.2. Factors affecting work requirements are identified and appropriate action is taken.</p> <p>4.3. Work load is assessed and prioritised within allocated timeframes.</p> <p>4.4. The need for assistance to improve performance is communicated clearly to the appropriate person.</p>
5. Promote workplace cooperation	<p>5.1. Responsibilities and duties are undertaken in a positive manner to promote co-operation and good relationships.</p> <p>5.2. Co-operation with others is conducted in a courteous manner and is appropriate to culture, special needs and linguistic background and position in the organisation.</p> <p>5.3. Problems and conflict are recognised and resolved, where possible, through personal communication and/or are referred to a supervisor, manager or employer for resolution.</p>
6. Contribute to a productive work environment	<p>6.1. Commitments to undertake work or assist colleagues/co-workers are fulfilled.</p> <p>6.2. Information relevant to work is shared with colleagues/co-workers to ensure designated work goals are met.</p> <p>6.3. Knowledge and skills are shared with colleagues/co-workers through conversations and meetings.</p> <p>6.4. Contribution of individuals of different gender and social and cultural backgrounds is recognised and sought.</p> <p>6.5. The principles of equal employment opportunity are observed and implemented.</p> <p>6.6. Work is consistent with workplace standards relating to anti-discrimination and workplace harassment.</p>
7. Undertake an activity to workplace requirements	<p>7.1. Interpretation of work schedules is consistent with the schedule and tasks defined.</p> <p>7.2. Knowledge and skills required for task are discussed with supervisors and co-workers.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>7.3. Availability of materials and equipment are checked to ensure they are consistent with work schedules and the requirements of the tasks.</p> <p>7.4. A daily schedule for completing workplace activities and allocated tasks including priorities, allocated start times, estimation of completion times and materials, equipment and assistance required for completion is decided upon.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- collate information on the industry
- observe employment requirements
- accept responsibility for quality of own work
- manage own work
- maintain safety of others
- contribute to a productive work environment
- interpret work schedules
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- industry/workplace awards and conditions
- employer's expectations
- relevant legislation and Codes of Practice applying to the industry
- OHS policies and procedures
- workplace policies and procedures including those relating to quality systems
- emergency procedures



**REQUIRED SKILLS AND KNOWLEDGE**

- organisational structure
- workplace communication channels.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- meet the standards required in the industry for dress and work practices
- implement the quality standards for workplace products or services
- interpret instructions and establish work tasks and priorities
- demonstrate communication skills with supervisors and co workers.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

<b>RANGE STATEMENT</b>	
Work may include:	<ul style="list-style-type: none"> <li>all aspects of individual performance in the workplace.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWRK205A Participate in workplace communications

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of effectively participating in workplace communications and defines the standard required to: follow routine spoken messages; perform workplace duties by following routine written notices; obtain and provide information in response to workplace requirements; complete relevant work related documents; participate in workplace meetings and discussions.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of effectively participating in workplace communications and applies to all occupational roles and levels in the workplace.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Follow routine spoken messages	<p>1.1.Required information is gathered by listening and is correctly interpreted.</p> <p>1.2.Instructions and procedures are followed in an appropriate sequence for the task and in accordance with the information received.</p> <p>1.3.Clarification is sought from the workplace supervisor on all occasions when any instruction or procedure is not understood.</p>
2. Perform workplace duties following routine written notices	<p>2.1.Written notices and instructions are read and interpreted correctly.</p> <p>2.2.Routine written instructions and procedures are followed in sequence.</p> <p>2.3.Clarification is sought from the workplace supervisor on all occasions when any instruction or procedure is not understood.</p>
3. Obtain and provide information in response to workplace requirements	<p>3.1.Specific, relevant information is obtained.</p> <p>3.2.Information is interpreted correctly.</p> <p>3.3.Information is written completely, accurately and legibly.</p> <p>3.4.Sources of required information are identified and appropriate contact is established.</p> <p>3.5.Personal interaction is courteous and enquiries are made clearly and concisely.</p> <p>3.6.Defined procedures for the location and storage of information are used.</p>
4. Complete relevant work-related	<p>4.1.A range of forms relating to conditions of employment is completed accurately and legibly.</p>

ELEMENT	PERFORMANCE CRITERIA
documents	<p>4.2. Workplace data is recorded manually or electronically using standard workplace forms and documents.</p> <p>4.3. Basic mathematical processes are used for routine calculations.</p> <p>4.4. Errors in recording information on forms and documents are identified and rectified.</p> <p>4.5. Reporting requirements to supervisor are completed according to organisational guidelines.</p>
5. Participate in workplace meetings and discussion	<p>5.1. Team meetings are attended on time.</p> <p>5.2. Own opinions are clearly expressed and those of others are listened to without interruption.</p> <p>5.3. Meeting inputs are consistent with the meeting purpose and established protocols.</p> <p>5.4. Workplace interactions are conducted in a courteous manner.</p> <p>5.5. Questions about routine workplace procedures and matters concerning conditions of employment are asked and responded to.</p> <p>5.6. Meeting outcomes are interpreted and implemented.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- ability to follow simple spoken messages
- ability to perform routine workplace duties following simple written instructions
- ability to gather and provide information in response to workplace requirements
- ability to complete relevant work-related documents
- ability to estimate, calculate and record routine workplace measures
- ability to use basic mathematical processes of addition, subtraction, division, multiplication, percentages, decimal points and ratios
- ability to participate in workplace meetings and discussions literacy skills to read, select and follow organisational policies and procedures including Occupational Health and Safety (OHS); follow sequenced written instructions; and record the information accurately and legibly

**REQUIRED SKILLS AND KNOWLEDGE**

- interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
- oral communication skills / language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- numeracy skills to complete basic arithmetic calculations and measure volumes
- problem-solving skills to use available resources and prioritise daily tasks.

**Required knowledge**

- effective communication, including the role of body language
- different modes of communication (e.g. written and non-verbal)
- effective communication in a work team
- communication procedures and systems, and technology relevant to the organisation and the individual's work responsibilities
- OHS legislative requirements and codes of practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- follow routine spoken messages
- perform workplace duties by following routine written notices
- obtain and provide information in response to workplace requirements
- complete relevant work related documents
- participate in workplace meetings and discussions.

**Context of and specific resources for**

Competency requires the application of work practices under work conditions. Selection and use of resources

**EVIDENCE GUIDE****assessment**

for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Communications may include:

- all modes and methods of communication relevant to the place of work.

**Unit Sector(s)****Unit sector**

Work

**Co-requisite units****Co-requisite units**


**Competency field****Competency field**

## AHCWRK206A Observe enterprise quality assurance procedures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of observing enterprise quality assurance procedures in agricultural production and defines the standard required to: identify critical control points in the production process; implement quality assurance procedures; check quality of own work against standards; keep records that are required under enterprise quality assurance.
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### Application of the Unit

<b>Application of the unit</b>	This unit is carried out under supervision, within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Apply basic quality assurance practices	<p>1.1.Elements of the enterprise quality assurance system in relation to food safety and quality, Occupational Health and Safety (OHS), animal welfare and biosecurity are recognised.</p> <p>1.2.Information about quality or problems is communicated to appropriate personnel.</p> <p>1.3.Hazards to food safety and quality are identified for work area according to enterprise guidelines.</p> <p>1.4.Steps in producing eggs or meat or harvesting milk are identified.</p> <p>1.5.Critical control points for immediate work area are identified according to workplace procedures.</p> <p>1.6.Basic record-keeping is completed according to enterprise guidelines.</p>
2. Follow work instructions	<p>2.1.Work instructions related to the immediate work areas are identified and followed in accordance with workplace requirements.</p> <p>2.2.Work instructions are followed for documenting the quality process.</p>
3. Check quality of product	<p>3.1.The quality of the product is checked as prescribed in work instructions.</p> <p>3.2.Problems that affect or could potentially affect quality are reported to supervisor.</p> <p>3.3.Actions are taken to correct the problem under supervision or workplace instruction.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- apply basic quality assurance practices
- follow work instructions
- check quality of work
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- animal production processes
- HACCP (Hazard Analysis Critical Control Point) approach to Quality Assurance (QA)
- enterprise QA policies, guidelines and standard operating procedures relating to food safety and quality, animal welfare and biosecurity
- enterprise OHS requirements.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify critical control points in the production process</li> <li>• implement quality assurance procedures</li> <li>• check quality of own work against standards</li> <li>• keep records that are required under enterprise quality assurance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Products may include:	<ul style="list-style-type: none"> <li>• all farm food and fibre products that are covered by quality assurance schemes.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCWRK207A Collect and record production data

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of collecting and recording agricultural or horticultural production data obtained from a variety of sources, such as stock counts, vaccination or medication records, germination rates, quantities harvested and defines the standard required to: implement requirements to collect data as part of the work role or job function; enter data accurately into specified written or electronic/ computerised formats; store data in the prescribed location; format and refer to data to complete work duties if necessary.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under routine supervision with intermittent checking. Responsibility for some roles and coordination within a team may be required. Data collection and recording activities are usually carried out within established routines, methods and procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify data to be collected	<p>1.1. Specific requirements of the data to be collected are determined by discussion with the supervisor or by reading work instructions.</p> <p>1.2. Materials or tools required for data collected are obtained, and where necessary, calibrated.</p> <p>1.3. Difficulties that may be encountered in collecting the data are identified and advice sought from the supervisor if needed.</p> <p>1.4. Advice about proposed data collection is communicated to others as required.</p> <p>1.5. Suitable Personal Protective Equipment (PPE) is selected, used and maintained where required.</p> <p>1.6. Checks are made to determine whether notices relating to site quarantine are in effect and, where required, site quarantine procedures are followed.</p>
2. Record production data	<p>2.1. Production data is recorded in the correct format and to meet specific requirements.</p> <p>2.2. Records are legible, accurate and complete.</p>
3. Present and store production data	<p>3.1. Production data is presented in the correct format and to meet specific requirements.</p> <p>3.2. Production data sheets are stored according to enterprise procedures.</p> <p>3.3. Production data is downloaded or entered into a computer where required, using specified formats</p>

ELEMENT	PERFORMANCE CRITERIA
	and applications.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- enterprise recording methods
- purposes for which the recorded data might be used
- software programs used for recording or storing data
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- counting moving animals in paddocks, pens or in races
- operating data loggers
- entering data accurately into specified written or electronic/computerised formats
- calibrating tools and equipment.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• implement requirements to collect data as part of the work role or job function</li> <li>• enter data accurately into specified written or electronic/computerised formats</li> <li>• store data in the prescribed location and format</li> <li>• refer to data to complete work duties if necessary.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Data may include:	<ul style="list-style-type: none"> <li>• production data obtained from a variety of sources.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCWRK208A Provide information on products and services

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of providing information on products and services in a range of rural merchandising settings and defines the standard required to: respond to client requests for information; use questioning to identify customer requirements; refer or seek advice from supervisors and appropriate personnel; represent the enterprise in a professional manner when dealing with customers.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to working under supervision, within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify information requirements	<p>1.1.Appropriate interpersonal skills are used to accurately identify customer's information needs.</p> <p>1.2.Initial customer enquiries are handled courteously and promptly in accordance with enterprise and industry requirements.</p> <p>1.3.Knowledge and understanding of products and services are actively updated via authoritative sources and appropriate personnel.</p> <p>1.4.Personal and professional limitations in addressing customer information needs are identified, and assistance is sought from appropriate personnel when required.</p>
2. Provide information	<p>2.1.Information that addresses customer requirements is provided to customers in a timely and professional manner.</p> <p>2.2.Product and services that may meet customer requirements are appropriately exhibited to customer as required.</p> <p>2.3.Enquiries that fall outside own areas of responsibility/knowledge are appropriately referred within enterprise for follow up and completion.</p>

## Required Skills and Knowledge

**REQUIRED SKILLS AND KNOWLEDGE**

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- engage customer, especially in relation to giving and receiving information
- handle equipment and small machinery
- relate to people from a range of social, cultural and ethnic backgrounds, and of varying physical and mental abilities
- assess initial customer needs
- calculate quantities and prices
- access and research product information
- seek assistance as required
- recommend products
- encourage repeat business
- use literacy skills to follow sequenced written instructions and record information accurately and legibly
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

### Required knowledge

- customer service techniques
- how to effectively engage and communicate with a range of customers from culturally diverse backgrounds, and of varying physical and mental abilities
- legal requirements in sales environments, particularly Fair Trading, Trade Practices and Sale of Goods legislation, and public liability
- customer requirements in various rural and horticultural settings
- enterprises business values, structure, products and services
- basic working knowledge of products and services.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• respond to client requests for information</li> <li>• use questioning to identify customer requirements</li> <li>• refer or seek advice from supervisors and appropriate personnel</li> <li>• represent the enterprise in a professional manner when dealing with customers.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Information may include:	<ul style="list-style-type: none"> <li>• specific needs for a range of products and services available.</li> </ul>
Services may include:	<ul style="list-style-type: none"> <li>• specific needs of customer depending on job requirements and specifications or the need for specialised or technical assistance.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK209A Participate in environmentally sustainable work practices

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the performance outcomes, skills and knowledge required to effectively measure current resource use and to carry out improvements including reducing the negative environmental impact of work practices. This unit requires the ability to access industry information, and applicable legislative and Occupational Health and Safety (OHS) guidelines.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to operators/team members under supervision or guidance, who are required to follow workplace procedures and instructions, and to work in an environmentally sustainable manner. It covers efficient resource use; potential environmental hazards; regulatory compliance; improving environmental performance (within the scope of competency, authority and own level of responsibility). It addresses the knowledge, processes and techniques necessary to participate in environmentally sustainable work practices.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify current resource use	1.1. Identify workplace environmental and resource efficiency issues. 1.2. Identify resources used in own work role. 1.3. Document and measure current usage of resources using appropriate techniques. 1.4. Record and file documentation measuring current usage, using technology (such as software systems) where applicable. 1.5. Identify and report workplace environmental hazards to appropriate personnel.
2. Comply with environmental regulations	2.1. Follow workplace procedures to ensure compliance. 2.2. Report breaches or potential breaches to appropriate personnel.
3. Seek opportunities to improve resource efficiency	3.1. Follow organisational plans to improve environmental practices and resource efficiency. 3.2. Work as part of a team, where relevant, to identify possible areas for improvements to work practices in own work area.



ELEMENT	PERFORMANCE CRITERIA
	3.3. Make suggestions for improvements to workplace practices in own work area.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analytical skills to comply with all relevant legislation associated with job specifications and procedures
- communication and problem-solving skills to question, seek clarification and make suggestions relating to work requirements and efficiency
- communication and teamwork skills to recognise procedures; to follow instructions; to respond to change, such as current workplace environmental/sustainability frameworks; and to support team work and participation in a sustainable organisation
- literacy, numeracy and technology skills to interpret workplace information in relation to work role, and to document and measure resource use
- technology skills to select and use technology appropriate for a task
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- environmental and resource hazards/risks
- environmental or sustainability legislation, regulations and codes of practice applicable to own work role
- OHS issues and requirements
- organisational structure, and reporting channels and procedures
- relevant environmental and resource efficiency systems and procedures
- sustainability in the workplace
- terms and conditions of employment including policies and procedures, such as daily tasks, employee and employer rights, equal opportunity.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• accessing, interpreting and complying with a range of environment/sustainability legislation and procedural requirements relevant to daily responsibilities</li> <li>• accurately following organisational information to participate in and support an improved resource efficiency process and reporting as required</li> <li>• developing and/or using tools such as inspection checklists, to collect and measure relevant information on organisation resource consumption, within work role</li> <li>• identifying organisational improvements by applying efficient resource use to daily activities</li> <li>• knowledge of environmental and resource hazards/risks.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Environmental and resource efficiency issues may include:	<ul style="list-style-type: none"> <li>• maximising opportunities to improve business environmental performance</li> <li>• minimising environmental risks</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• promoting more efficient production and consumption of natural resources, for example minimising waste by participating in or using a waste management system</li> <li>• using resources efficiently such as material usage, energy usage (seeking alternative sources of energy or energy conservation) or efficient water usage.</li> </ul>
Appropriate techniques may include:	<ul style="list-style-type: none"> <li>• examining and documenting resources in work area</li> <li>• examining invoices from suppliers</li> <li>• examining relevant information and data</li> <li>• measuring resource usage under different conditions</li> <li>• reports from other parties involved in the process of identifying and implementing improvements.</li> </ul>
Compliance may include:	<ul style="list-style-type: none"> <li>• meeting relevant laws, by-laws and regulations or best practice to support compliance in environmental performance and sustainability at each level as required (such as Environmental Protection or Biodiversity Conservation Act): <ul style="list-style-type: none"> <li>• international</li> <li>• commonwealth</li> <li>• state/territory</li> <li>• local government</li> <li>• industry</li> <li>• organisation.</li> </ul> </li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK301A Collect samples for a rural production or horticulture monitoring program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of collecting samples as part of a rural production or horticulture monitoring program or while conducting post-mortem examination of livestock or other animals and defines the standard required to: plan to collect samples and move equipment to the site; collect and preserve samples for a given site according to prescribed enterprise procedures, standards and principles; collecting schedules and industry best practice; record sampling results and observations accurately on data sheets.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to collecting samples for a rural production or horticulture monitoring program. Samples collected will usually be analysed by laboratory staff, although collection staff may undertake some tests.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan for collection of samples	<p>1.1.Purpose and scope of sample collection activity is confirmed from discussion with supervisor or work instructions.</p> <p>1.2.Sample collection schedule is read/heard and confirmed with supervisor.</p> <p>1.3.Sampling site location is confirmed and, where required, approval obtained for site access following enterprise guidelines.</p> <p>1.4.Samples to be collected and preserved are identified in conjunction with supervisor or by reference to enterprise guidelines.</p> <p>1.5.Range of likely operating conditions, hazards and difficult/sensitive environments are assessed for impact on sampling and testing.</p>
2. Prepare equipment and resources	<p>2.1.Equipment required for sampling and preserving is sourced according to sampling procedures.</p> <p>2.2.Equipment is checked for availability and serviceability in accordance with enterprise procedures.</p> <p>2.3.Data or record sheets/books are collected for use.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4. Equipment, data sheets and personnel are moved to sampling sites without injury or damage and readied for use.</p>
<p>3. Carry out sampling and preserving procedures</p>	<p>3.1. Samples are collected in accordance with sampling plan and enterprise procedures and industry protocols/guidelines.</p> <p>3.2. Samples are preserved and recorded in accordance with sampling standards and guidelines.</p> <p>3.3. Samples for external analysis are prepared, packaged and sent to laboratory in accordance with sampling schedule and laboratory standards.</p> <p>3.4. Hazardous materials are packaged and transported in accordance with legislative requirements.</p> <p>3.5. Observations including information on the surrounding area and environmental conditions are made in accordance with monitoring schedule.</p> <p>3.6. Equipment operation and work practices conform to Occupational Health and Safety (OHS) requirements.</p> <p>3.7. Collection outcomes including presentation of samples are reported and delivered in accordance to enterprise guidelines.</p>
<p>4. Complete sample collection activities</p>	<p>4.1. Equipment and clothing is cleaned, sanitised, repaired and stored in accordance with enterprise procedures.</p> <p>4.2. Damaged or malfunctioning equipment is repaired on site or sent to manufacturer or specialist.</p> <p>4.3. Sampling results and observations are accurately recorded on data sheets and forwarded in accordance with enterprise procedures.</p> <p>4.4. Changes in field conditions and equipment are conveyed to supervisor according to enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

<b>REQUIRED SKILLS AND KNOWLEDGE</b>	
<b>Required skills</b>	
<ul style="list-style-type: none"> <li>• understand and carry out instructions</li> <li>• distinguish atypical circumstances</li> <li>• prepare samples</li> <li>• package samples for transport to laboratory.</li> <li>• use and operate relevant tools and equipment</li> <li>• use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks</li> <li>• use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required</li> <li>• use numeracy skills to estimate, calculate and record routine workplace measures</li> <li>• use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.</li> </ul>	
<b>Required knowledge</b>	
<ul style="list-style-type: none"> <li>• hydrological cycle</li> <li>• field procedures for sampling and preservation</li> <li>• collecting equipment and methods</li> <li>• preservation equipment and processes</li> <li>• basic habitat assessment</li> <li>• water quality issues</li> <li>• fauna and flora recognition relevant to sampling activities</li> <li>• relevant legislation.</li> <li>• topographical, climatic and/or environmental influence on material or sampling procedure.</li> </ul>	

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and</b>	The evidence required to demonstrate competency in this



<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• plan to collect samples and move equipment to the site</li> <li>• collect and preserve samples for a given site according to prescribed enterprise procedures, standards and principles, collecting schedules and industry best practice</li> <li>• record sampling results and observations accurately on data sheets.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole.</p>	
<p>Sample collection may include:</p>	<ul style="list-style-type: none"> <li>• animal tissue or fluids</li> <li>• plants</li> <li>• moulds</li> <li>• pests</li> <li>• water</li> <li>• soil</li> <li>• manures</li> <li>• artificial growth media</li> <li>• fertilisers</li> <li>• hydroponic solutions</li> <li>• effluent</li> <li>• emissions.</li> </ul>

## Unit Sector(s)

Unit sector	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK302A Monitor weather conditions

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring and interpreting weather and climate conditions and assessing its likely impact on staff, crops, livestock, produce, property, natural resources, equipment and work tasks and defines the standard required to: monitor and interpret weather and climate information; communicate warnings and concerns; identify resource requirements and dangers; minimise loss and damage to staff, livestock, crops, natural resources, property, and produce; implement alternative livestock or other programs; continue to monitor weather changes.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in agricultural, horticultural and land management industries. The work is likely to be carried out with limited or minimal supervision within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Interpret weather and climate information	<p>1.1. Weather and climate information and warnings are regularly monitored to determine likely conditions.</p> <p>1.2. Potential variations in weather and climate conditions are anticipated and assessed according to warnings, weather patterns and historical experience.</p> <p>1.3. Possible impacts of weather and climate on crops, livestock and work tasks are identified to determine appropriate preventative action.</p> <p>1.4. Suitable preventative actions are reviewed to ensure availability of appropriate resources and responses.</p>
2. Carry out preventative action	<p>2.1. Information and advice is promptly disseminated to relevant personnel.</p> <p>2.2. Preventative action is determined according to the known effects on livestock, crops and work tasks.</p> <p>2.3. Actions to minimise loss and damage are implemented.</p> <p>2.4. Livestock or crop management program and work schedules are adjusted and revised according to climatic changes.</p>
3. Monitor weather and climate	<p>3.1. Regular updates are accessed to determine the ongoing suitability of current programs.</p> <p>3.2. Viability of livestock and crop management practices and scheduling of work tasks are reviewed to ensure suitability within meteorological conditions.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. Research on forecasting techniques is undertaken to maintain currency of information. 3.4. Relevant information is documented and recorded according to enterprise requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- relate forecasts to impact on current operations and activities
- relate weather and climate conditions and changes to decision-making and prevention of loss and damage
- monitor physical signs in the context of available information
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- working knowledge of climate and weather
- weather and climate conditions and its impact upon farming and grazing activities
- effects of wind and rain on wind chill
- relevant legislative health and Occupational Health and Safety (OHS) requirements especially as they relate to weather and climate monitoring and preparations for hazardous weather
- enterprise and industry policies for monitoring weather and climate conditions and recording and reporting weather and climate conditions
- if applicable, effects of shearing and/or parturition and wind chill exposure
- if applicable, effects of wind chill on metabolism of animals
- if applicable, effects of prolonged dry periods on pastures and animal production and natural resources.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• monitor and interpret weather and climate information</li> <li>• communicate warnings and concerns</li> <li>• identify resource requirements and dangers</li> <li>• minimise loss and damage to staff, livestock, crops, natural resources, property, and produce</li> <li>• implement alternative livestock or other programs and continue to monitor weather changes.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Interpreting weather and climate conditions may include:	<ul style="list-style-type: none"> <li>• all situations, techniques and sources of evidence for monitoring and assessing its likely impact.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWRK303A Respond to emergencies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of recognising and responding to emergencies and defines the standard required to: implement emergency preparation procedures; put in place and maintain safety equipment and aids for emergencies; report and record near misses and hazards; document and distribute procedures for evacuation; follow directions in the threat or event of an emergency; apply essential first aid techniques.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to all workers in agricultural, horticultural and land management industries. It may have to be performed independently but as part of a workplace emergency plan.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for emergency situations	<p>1.1.Appropriate actions are taken to maximise safety and minimise health hazards in the workplace.</p> <p>1.2.Options for action in cases of emergency are identified and evaluated.</p> <p>1.3.Organisational emergency procedures and policies are correctly implemented as part of the workplace procedures.</p> <p>1.4.Occupational Health and Safety (OHS) procedures and safe working practices are applied including the selection of Personal Protective Equipment (PPE) to suit the emergency situation.</p> <p>1.5.Regular checks of the workplace are carried out to minimise potential hazards.</p> <p>1.6.Emergency procedures are carried out as required by established workplace procedures.</p> <p>1.7.Safety equipment and aids required for emergencies are selected, used, maintained and stored in good order.</p> <p>1.8.Near misses and potential hazards are reported to supervisor and/or documented according to enterprise guidelines.</p>
2. Implement fire prevention and control on site and in the workshop	<p>2.1.Fire hazards are minimised as specified in workplace and/or fuelling procedures.</p> <p>2.2.Appropriate fire extinguishers and fire fighting equipment are used in fire situations, and appropriate authority notified according to established procedures.</p> <p>2.3.Evacuation procedures are followed according to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>enterprise policy and plan including nominated assembly points.</p> <p>2.4. Where required, specific safety procedures for the handling and use of industrial gases are carried out in line with standard industry practice and regulations.</p>
3. Evaluate the emergency	<p>3.1. Emergency and potential emergency situation reports and signals are promptly recognised and assessed.</p> <p>3.2. Advice is sought from relevant people in evaluating the emergency.</p> <p>3.3. The possible development of the emergency situation is assessed and further potential hazards to staff and/or clients are evaluated.</p> <p>3.4. Needs, including those for assistance, are prioritised promptly and accurately.</p>
4. Act in an emergency	<p>4.1. The plan of action is implemented using techniques appropriate to the situation and available resources and abilities.</p> <p>4.2. Equipment is operated safely and, where necessary, equipment and techniques are improvised.</p> <p>4.3. Strategies for group control are identified and implemented, and clients and other individuals are removed from danger.</p> <p>4.4. The condition of all staff and others assisting is constantly monitored.</p> <p>4.5. The information required to assist emergency services, where relevant, is acquired and documented.</p> <p>4.6. Emergency services are notified as necessary.</p> <p>4.7. The plan of action is changed to accommodate changes in the situation variables.</p> <p>4.8. Casualty evacuation methods are demonstrated where relevant to the context.</p> <p>4.9. Organisational procedures and policies and legal requirements are correctly implemented in the event of a major injury or death.</p>
5. Apply essential first aid techniques	<p>5.1. Immediate risk to self and casualty's health and safety are minimised by isolating the hazard.</p> <p>5.2. The casualty's injuries and vital signs are assessed.</p> <p>5.3. Casualty is reassured in a caring and calm manner and made comfortable using available resources.</p>

ELEMENT	PERFORMANCE CRITERIA
	5.4. First aid care is provided in accordance with established first aid procedures. 5.5. First aid assistance is sought from others as appropriate.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- accurately evaluate the emergency
- avoid/control escalation of the emergency
- develop a plan of action decisively
- efficiently implement a plan of action
- render first aid care
- deal with contingencies
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- the use of safe working practices
- the emergency network and contacts
- enterprise plan and evacuation procedures
- OHS legislative requirements and Codes of Practice
- legal responsibilities and duty of care
- use of communications equipment
- organisational and legal policies and procedures in the event of an accident/incident
- local call out procedures to access emergency services personnel
- practical first aid skills using prepared and improvised materials

**REQUIRED SKILLS AND KNOWLEDGE**

- hazard identification, risk assessment and control.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- implement emergency preparation procedures
- put in place and maintain safety equipment and aids for emergencies
- report and record near misses and hazards
- document and distribute procedures for evacuation
- follow directions in the threat or event of an emergency
- apply essential first aid techniques
- Element 5 and First Aid components of the underpinning knowledge in the Evidence Guide of this competency standard can be satisfied through successful completion of St Johns Basic Life Support (Level 2) Certificate, the Australian Red Cross Senior First Aid Certificate or equivalent.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Emergencies may include:

- fire
- hazardous releases
- fuel spillage
- gases
- chemical spills
- injury from machinery and equipment
- climbing accident
- snake bite or poisoning
- respiratory or cardiac arrest
- electrocution
- injuries
- equipment failure.

## Unit Sector(s)

Unit sector	Work
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## Co-requisite units

Co-requisite units	

## Competency field

Competency field	
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## AHCWRK304A Respond to rescue incidents

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers responding to emergency and rescue incidents and defines required to: investigate the circumstances and logistics for the emergency; carry out preparation and move to the rescue site; assess the situation and establish communication with additional or specialist help; carry out the required rescue or response to emergency; implement post incident responses.
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### Application of the Unit

<b>Application of the unit</b>	This unit relates to responding to rescue incidents within the person's own area of responsibility.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for response	1.1. Equipment checked to ensure availability and serviceability. 1.2. Task and operational instructions are obtained in accordance with enterprise procedures. 1.3. Location details of incident is obtained in accordance with enterprise procedures.
2. Respond to incident	2.1. Travel to incident location is undertaken in a safe and efficient manner. 2.2. Communication with base station and other personnel is maintained at all times in accordance with enterprise procedures. 2.3. On site search activities are carried out as necessary in accordance with enterprise procedures and Occupational Health and Safety (OHS) requirements.
3. Rescue is effected	3.1. Incident scene is assessed and monitored for hazards and appropriateness of planned procedures. 3.2. Planned procedures are modified where necessary in response to local circumstances in accordance with enterprise procedures, safety and OHS requirements. 3.3. Support to other rescue services is provided as appropriate in accordance with enterprise procedures. 3.4. Access to casualties is gained safely in accordance with enterprise procedures and OHS requirements. 3.5. Protective equipment and clothing is used as appropriate in accordance with enterprise procedures, manufacturer's guidelines and OHS requirements. 3.6. Equipment is operated safely and appropriately in



ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with enterprise procedures, manufacturer's guidelines and OHS requirements.</p> <p>3.7. Progress of rescue is communicated in accordance with enterprise procedures.</p> <p>3.8. Casualties are treated, monitored and moved to safety in accordance with first aid and OHS procedures.</p>
4. Implement post incident responses	<p>4.1. Equipment recovered, cleaned and serviced in accordance with enterprise procedures, manufacturer's guidelines and OHS requirements.</p> <p>4.2. Documentation is completed in accordance with enterprise requirements.</p> <p>4.3. Incidents are reported in accordance with enterprise procedures.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- prepare for response
- respond to incident
- effect the rescue
- implement post-incident responses
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- local environmental conditions
- search and rescue methods

## REQUIRED SKILLS AND KNOWLEDGE

- operation and characteristics of rescue equipment, tools and vehicles
- environmental, public health and safety issues
- types of hazards and how they should be handled
- enterprise procedures, legislative and OHS requirements
- first aid, life preservation.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- investigate the circumstances and logistics for the emergency
- carry out preparation and move to the rescue site
- assess the situation and establish communication with additional or specialist help
- carry out the required rescue or response to emergency
- implement post incident responses.

#### Context of and specific resources for assessment

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Rescue incidents may include:

- fires
- drowning
- accidents
- vehicle
- boating
- accidents
- exposure to hazardous materials
- injury
- damage to equipment
- environment
- significant sites
- stranding
- exposure
- lost persons
- vehicle, boating and aircraft accidents.

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCWRK305A Coordinate work site activities

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of coordinating work site activities for small-scale projects and defines the standard required to: prepare and plan worksite activities; identify and allocate resources required; schedule activities and allocate tasks and responsibilities; use communication and team supervision strategies; monitor activities and record costs and production levels; convey issues and suggested improvements to management.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers in agricultural, horticultural and land management industries that are responsible for small small-scale projects. It is likely to be under limited supervision with checking only related to overall progress.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for work site activities	<p>1.1. Requirements of the work are clarified with supervisor of the project.</p> <p>1.2. Personnel, equipment and material resource requirements are identified according to the scope of the project and supervisors instructions.</p> <p>1.3. The order of activities and time allocation is identified, documented and presented to the supervisor for verification.</p> <p>1.4. The environmental implications of the proposed work site activities are identified and the likely outcomes assessed and reported to the supervisor.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified, risks assessed and risk controls are implemented.</p> <p>1.6. Personal Protective Equipment (PPE) is selected, used, maintained and stored according to the type of work site activities to be undertaken.</p>
2. Organise resources	<p>2.1. Materials are purchased and equipment/machinery is hired as authorised by the supervisor and according to enterprise guidelines.</p> <p>2.2. External agency permits are gained in the correct order as necessary.</p> <p>2.3. Neighbours and affected parties are notified of works to be undertaken as necessary.</p> <p>2.4. Delivery of materials and equipment/machinery to site is organised according to documented order of activities.</p> <p>2.5. Personnel are organised to be on site when they are</p>

ELEMENT	PERFORMANCE CRITERIA
	required.
3. Coordinate and report on activities	3.1.All resources are coordinated and timed to suit the scope of the project and order of activities. 3.2.Personnel are directed in activities for each period of work. 3.3.Personnel, activities, timelines and resource usage are monitored and documented according to enterprise guidelines. 3.4.Contingency situations are recognised and reported to the supervisor, and corrective actions taken according to enterprise guidelines. 3.5.A simple project report is written to inform management of work site activities undertaken and completed.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- read and interpret documentation associated with work site activities
- calculate material and resource requirements
- coordinate a team to achieve optimum performance
- communicate with personnel at all levels
- document results clearly and concisely
- perform an OHS risk assessment
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- environmental awareness associated with undertaking project works to ensure the impact on the environment is minimal
- work schedule programming
- hiring and subcontracting of labour
- possible causes of disruption to work activities and their effect on quality and time schedules
- responsibilities and requirements for obtaining external agency permits as

**REQUIRED SKILLS AND KNOWLEDGE**

necessary

- the range, use and availability of materials, equipment and machinery that may be required for the project
- OHS issues, legislative requirements and Codes of Practice.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- prepare and plan worksite activities
- identify and allocate resources required
- schedule activities and allocate tasks and responsibilities
- use communication and team supervision strategies
- monitor activities and record costs and production levels
- convey issues and suggested improvements to management.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.



## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Work site activities may include:	<ul style="list-style-type: none"> <li>all materials, equipment and personnel used for small-scale projects.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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## AHCWRK306A Comply with industry quality assurance requirements

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of complying with industry quality assurance requirements in the production of food and fibre products and defines the standard required to: follow quality assurance practices on food safety and quality, biosecurity and animal welfare; identify and report issues that impact on product quality; contribute to review of work output against quality standards; and keep records that are required under enterprise quality assurance procedures.
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### Application of the Unit

<b>Application of the unit</b>	This unit is applied within routines, methods and procedures. Some discretion and judgement is required in the organisation and supervision of work, services, actions and the achievement of quality outcomes within time constraints.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Follow quality assurance practices on food safety and quality, biosecurity and animal welfare	<p>1.1.Elements of the industry quality assurance requirements are determined.</p> <p>1.2.Hazards to food safety and quality are identified for work area according to enterprise guidelines and standard operating procedures.</p> <p>1.3.Critical control points for work area are determined according to workplace procedures.</p> <p>1.4.Record keeping is completed according to industry quality assurance requirements.</p>
2. Implement standard operating procedures	<p>2.1.Standard operating procedures are implemented according to enterprise requirements.</p> <p>2.2.Non-conforming or defective product reported to supervisor according to enterprise/industry requirements.</p> <p>2.3.Corrective action is taken according to enterprise policy and procedures.</p>
3. Report problems that affect quality	<p>3.1.Potential or existing quality problems are recognised.</p> <p>3.2.Instances of variation in quality from specifications or work instructions are identified.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. Variations and potential problems are reported to supervisor/manager according to enterprise guidelines.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- implement quality assurance practices on food safety and quality, biosecurity and animal welfare
- implement standard operating procedures
- report problems that affect quality
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- industry quality assurance requirements, such as the Australian Pig Industry Quality Program (APIQ)
- animal production processes
- Hazard Analysis and Critical Control Point (HACCP) approach to quality assurance
- enterprise policies, guidelines and standard operating procedures relating to food safety and quality, biosecurity and animal welfare
- enterprise Occupational Health and Safety (OHS) requirements and environmental procedures.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• follow quality assurance practices on food safety and quality, biosecurity and animal welfare</li> <li>• identify and report issues that impact on product quality</li> <li>• contribute to review of work output against quality standards</li> <li>• keep records that are required under enterprise quality assurance.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Quality assurance may include:	<ul style="list-style-type: none"> <li>• quality assurance systems for food safety and quality, biosecurity, environmental management and animal welfare</li> <li>• systems can be developed at an industry or enterprise level.</li> </ul>

## Unit Sector(s)

Unit sector	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK307A Develop and apply fertiliser and soil ameliorant product knowledge

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit covers the process of developing and applying fertiliser and soil ameliorant product knowledge and defines the standard required to: identify fertiliser and soil ameliorant products using information about their characteristics; provide information to customers about fertiliser and soil ameliorant products; refer customers to other appropriate sources of information about products.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit is carried out for the purpose of accurately identifying products and providing accurate information to customers about products and services. The unit includes providing information on environmentally responsible application and use of products. The standard applies to contractors and employees working in a number of roles within the fertiliser and soil ameliorant industry, including those involved in fertiliser and soil ameliorant spreading or application, warehousing, wholesale and retail sales and transport, and the storage of fertiliser and soil ameliorants. The functions may also be performed by people engaged in other agriculture, horticulture and land management activities.</p>
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify fertiliser and soil ameliorant products and associated Occupational Health and Safety (OHS), food safety and environmental issues	1.1.Information about fertiliser and soil ameliorant product is provided to customers. 1.2.OHS, food safety and environmental issues relating to particular products are explained to customers, with particular reference to their safe storage, handling and application according to industry code of practice. 1.3.Bulk fertiliser and soil ameliorant product is identified using a combination of visual and physical examination of product characteristics. 1.4.Correct terminology is used when distinguishing between different products and services.
2. Work with fertiliser and soil ameliorant products	2.1.Storage and handling requirements of products are identified and applied consistently and according to industry codes of practice, enterprise quality assurance requirements, OHS procedures, environmental best practice and other relevant



ELEMENT	PERFORMANCE CRITERIA
	<p>legislative and regulatory requirements.</p> <p>2.2.OHS hazards associated with particular products are identified and appropriate action is taken to minimise risks to self and others.</p> <p>2.3.Environmental risks associated with particular products are identified and appropriate action is taken to minimise any likely risks to self and others.</p> <p>2.4.Suitable Personal Protective Equipment (PPE) is used and maintained in good condition.</p> <p>2.5.Inventory and labelling systems are used to locate products within the workplace or store.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- observing product characteristics
- working safely with products
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- characteristics and key label components (e.g. product analysis, impurities and warnings) of the range of fertiliser and soil ameliorants sold or handled in the workplace
- key environmental, OHS and food safety risks associated with the use, spreading, storage, handling and transport of fertilisers and soil ameliorants.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify fertiliser and soil ameliorant products using information about their characteristics</li> <li>• provide information to customers about fertiliser and soil ameliorant products</li> <li>• refer customers to other appropriate sources of information about products.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Fertiliser and soil ameliorants may include:	<ul style="list-style-type: none"> <li>• chemical and organic fertilisers, composts, lime, gypsum and dolomite.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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### Co-requisite units

Co-requisite units		

### Competency field

Competency field	
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## AHCWRK308A Handle bulk materials in storage area

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of receiving, moving and sampling bulk materials in a storage area and defines the standard required to: check equipment and storage facilities and identify current or impending faults; test bulk materials for moisture, contamination and quality; conduct silo readings; identify bulk materials pests and damage; handle and manoeuvre equipment; record bulk materials stocks and movements.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out under limited supervision. It includes the use of safety equipment and procedures, and the repair of the facility and equipment used to store the bulk materials. Bulk materials are handled to industry standards in relation to segregation and storage conditions ensuring minimum loss or damage and optimum returns. Overall progress may be checked periodically. The handling of bulk materials in storage areas will usually follow set routines, methods and procedures. Some discretion and judgement is required in the selection of equipment and materials, organisation of work, and services. The outcomes should be achieved within specified timelines.
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to work in bulk materials storage area	<p>1.1. Work undertaken is interpreted from the work program where necessary, and confirmed with the management.</p> <p>1.2. Occupational Health and Safety (OHS) hazards are identified, risks assessed and suitable controls implemented.</p> <p>1.3. Suitable personal protective clothing and equipment is selected, used and maintained.</p> <p>1.4. Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.</p> <p>1.5. Environmental implications of undertaking work in the bulk materials storage area are identified, likely outcomes assessed and if necessary responsible action taken.</p>
2. Sample bulk materials for testing	2.1. Representative samples of bulk materials are taken for testing in line with the requirements of the bulk

ELEMENT	PERFORMANCE CRITERIA
	<p>materials storage program.</p> <p>2.2.Sampling is undertaken safely, following the prescribed guidelines for the activity.</p> <p>2.3.Representative bulk materials samples are prepared for dispatch, accurately and clearly labelled, and packaged according to the guidelines of the organisation and the analysing body.</p> <p>2.4.Samples are dispatched to the analysing body, according to the requirements of the bulk materials storage program.</p>
3. Move bulk materials into and out of storage	<p>3.1.Bulk materials for handling and storage are correctly identified from the written or verbal instructions.</p> <p>3.2.Bulk materials are segregated according to type, variety and quality characteristics according to the requirements of the organisation as stated in the bulk materials storage program.</p> <p>3.3.Measures are taken to minimise insect and weed infestation and contamination during the movement of the bulk materials.</p> <p>3.4.Bulk materials are regularly checked for insect infestation and contamination during movement according to enterprise requirements.</p> <p>3.5.Any storage and handling equipment that is used is thoroughly cleaned after emptying, and dismantled if necessary, according to the procedures of the organisation and the nature of the equipment.</p> <p>3.6.Bulk materials are moved into and out of storage according to the procedures of the organisation, and following the prescribed OHS procedures.</p> <p>3.7.Silo types and handling equipment are selected for each bulk material type in relation to their storage characteristics and flow properties and according to the requirements of the bulk materials storage program.</p> <p>3.8.Suitable measures are implemented to minimise the affect of desiccant dusts on the flow properties of bulk materials.</p> <p>3.9.Records are clearly and accurately updated and stored as and when required by the bulk materials storage program.</p>
4. Repair and maintain storage facility	<p>4.1.The need for repairs to the facility is identified through observation or instruction.</p> <p>4.2.Maintenance and repairs are conducted according to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>the requirements of the organisation and following the prescribed OHS procedures and taking into account environmental considerations.</p> <p>4.3. Completed maintenance records and other appropriate information are documented in accordance with enterprise requirements.</p> <p>4.4. Workshop and work areas are cleaned and maintained to OHS and enterprise requirements.</p> <p>4.5. Maintenance and repairs, damage, malfunctions or irregular performance in machinery, tools and equipment are reported in line with organisational requirements.</p> <p>4.6. Tools and equipment are cleaned, secured and stored in line with OHS and organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- record bulk materials stocks and movements
- conduct silo readings
- identify bulk materials pests and damage
- use communication systems
- sample and conduct a simple analysis of bulk materials
- check equipment and storage facilities and identify current or impending faults
- handle and manoeuvre equipment
- test bulk materials for moisture, contamination and quality
- complete pre-operational checks on basic tools and equipment
- perform routine safety, service and maintenance procedures on tools, equipment and machinery
- operate hand and independently powered tools and cleaning equipment to industry standards
- clean, secure and store machinery and equipment
- perform basic trouble shooting
- recognise and rectify minor operational faults
- handle hazardous substances (fuels) safely

## REQUIRED SKILLS AND KNOWLEDGE

- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets (MSDSs)
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
- measure and calculate volumes, consumption and lubrication requirements
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- the client's sampling and classification requirements
- bulk materials types and characteristics
- common bulk materials pests and problems
- appropriate legislative requirements, manufacturers instructions and enterprise procedures/instructions
- appropriate action in contingency situations
- silo operations and configuration, machinery and operating practices
- organisation requirements for protective equipment and safe practices in relation to OHS
- organisation and industry guidelines for segregation of bulk materials quality assurance principles
- pre-operational and safety checks, servicing and maintenance procedures for tools and equipment
- potential hazards associated with the operation of basic tools and equipment
- general machine maintenance procedures
- machinery operating principles and operating methods
- machinery storage and protection methods
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, and the use and control of machinery and equipment
- environmental impacts associated with the operation of machinery and equipment
- personal protective clothing and equipment and when and how it should be used
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment



<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• check equipment and storage facilities and identify current or impending faults</li> <li>• test bulk materials for moisture, contamination and quality</li> <li>• conduct silo readings</li> <li>• identify bulk materials pests and damage</li> <li>• handle and manoeuvre equipment</li> <li>• record bulk materials stocks and movements.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Handling may include:	<ul style="list-style-type: none"> <li>• bulk materials from any crop harvested in the organization (e.g., cereals, legumes, pulse crops, oilseeds and pasture seeds)</li> <li>• animal feed or fertilisers</li> <li>• safety equipment and procedures</li> <li>• the repair of the facility and equipment used to store the bulk materials.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWRK310A Provide on-job training support

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of providing on-job training support within an enterprise and defines the standard required to: identify needs for on-the-job training support; set up on-job training support; provide follow-up and support to learner; apply a range of approaches to on-job training support; support has been successfully and appropriately provided in an enterprise.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be carried out as part of a supervisory role within enterprise guidelines.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify needs for on-the-job training support	1.1. Training needs are determined in consultation with supervisor and employee/trainee. 1.2. Extent and scope of training support to be provided is agreed with the supervisor. 1.3. Outcomes from training are defined prior to commencement. 1.4. Methods of providing on-job training support is clarified and agreed with supervisor.
2. Support on-the-job training	2.1. Training outcomes are clearly indicated to the learner. 2.2. Training is delivered as directed and in accordance with workplace procedures and relevant legislation. 2.3. Practice opportunities are provided to re-enforce the training.
3. Provide follow-up and support to learner	3.1. Opportunities to apply competencies on-the-job are provided. 3.2. Constructive feedback and coaching are provided to assist learning. 3.3. Feedback of employee's progress is given to the supervisor in the workplace.

## Required Skills and Knowledge

**REQUIRED SKILLS AND KNOWLEDGE**

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- identify hazards and provide a safe learning environment
- determine training needs and required outcomes
- deliver training in work skills
- identify needs for on-the-job training support
- provide follow-up and support to learner
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- adult learning principles
- setting up on-job training support
- approaches to on-job training support
- resources required for on-job training support
- reviewing and reporting on on-job training support
- Occupational Health and Safety (OHS) issues related to on-job training support.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance

<b>EVIDENCE GUIDE</b>	
	<p>criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify needs for on-the-job training support</li> <li>• set up on-job training support</li> <li>• provide follow-up and support to learner</li> <li>• apply a range of approaches to on-job training support</li> <li>• provide support in an enterprise successfully and appropriately.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Training techniques may include:	<ul style="list-style-type: none"> <li>• demonstrations, explanations, problem-solving, mentoring, experiential learning, group work, on-the-job coaching, job rotation or a combination of the above.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

### Competency field

<b>Competency field</b>	
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## AHCWRK311A Conduct site inspections

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of undertaking a site inspection and defines the standard required to: verify details of the location, ownership, orientation and boundaries of a site; perform hazard identification and risk control procedures; observe and record site information details and features; inspect vegetation and soil types, health, condition and location; carry out a site inspection; develop and document a site inspection report and/or a base plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the preliminary tasks leading to the commencement of work on a site or project. It covers the process of inspecting a work site and recording the site information in document form such as Occupational Health and Safety (OHS) inspections, toolbox meeting inspections, chemical application records, landscape and site analysis plans, hazard identification and risk control assessment forms.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Collect information	<p>1.1.Site location and relevant details are provided or acquired.</p> <p>1.2.Site maps and plans are sourced where available and reviewed.</p> <p>1.3.Scope of inspection is identified in line with client-stakeholder needs and local regulations.</p> <p>1.4.Climate and weather conditions are ascertained from historical data.</p> <p>1.5.Where required, formal approval is sought to visit site.</p> <p>1.6.Covenants are identified and recorded.</p> <p>1.7.Remote sensing systems are checked for status.</p>
2. Prepare for a site visit	<p>2.1.All requirements for inspection are identified and prepared.</p> <p>2.2.Methods and forms for recording inspection are planned and available for use.</p> <p>2.3.Scope of proposed work is evaluated and field notes prepared to checklist specific concerns.</p> <p>2.4.Environmental conditions are evaluated in</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>preparation for likely site conditions.</p> <p>2.5. Traffic management requirements are considered where required.</p>
3. Conduct site inspection	<p>3.1. Site orientation is undertaken and ownership and site boundaries are verified.</p> <p>3.2. Site hazards for a site inspection are identified, risk assessed and appropriate controls implemented.</p> <p>3.3. Site dimensions and gradients are identified, estimated and recorded.</p> <p>3.4. Soil types are identified from soil identification reference chart guidelines.</p> <p>3.5. Soil samples are field tested and detailed notes recorded for analysis of potential problems.</p> <p>3.6. Relevant vegetation is inspected to determine the identity, health, condition and location.</p> <p>3.7. Observable signs of fauna are investigated.</p> <p>3.8. Existing on-site services and adjacent site features are identified and recorded.</p>
4. Document information	<p>4.1. Base plan is prepared of the site.</p> <p>4.2. Site inspection information is documented in an inspection/site inventory report and/or on the base plan.</p> <p>4.3. Documents are completed and forwarded to client/supervisor/manager.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify a wide range of vegetation common to the region
- recognise plant health problems and defects
- perform hazard identification and risk control procedures
- conduct soil field tests
- estimate dimensions and gradients
- advise client-stakeholder

## REQUIRED SKILLS AND KNOWLEDGE

- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- plan and map interpretation
- soil pH, texture, structure and type
- plant identification and plant physiology
- basic measuring and estimating methods
- current land use and environmental threats to site hazards associated with undertaking site inspections
- protocols of accessing and visiting a site
- relevant legislative and regulatory requirements including environmental protection legislation
- local government regulations relating to the proximity of trees to buildings, services and roads
- local tree protection and preservation regulations
- relevant Code of Practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- verify details of the location, ownership, orientation

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>and boundaries of a site</li> <li>• perform hazard identification and risk control procedures</li> <li>• observe and record site information details and features</li> <li>• inspect vegetation and soil types, health, condition and location</li> <li>• carry out a site inspection</li> <li>• develop and document a site inspection report and/or a base plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Features may include:	<ul style="list-style-type: none"> <li>• soils</li> <li>• topography</li> <li>• vegetation</li> <li>• hydrology</li> <li>• services above and below ground</li> <li>• amenities, buildings and structures</li> <li>• access points</li> <li>• site modifications</li> <li>• fauna</li> <li>• location of boundaries</li> <li>• aspect</li> <li>• watercourses and paths and all vegetation forms</li> <li>• plants               <ul style="list-style-type: none"> <li>• their botanical and common names</li> <li>• age</li> <li>• health</li> <li>• types of defects</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• problems and conditions.</li> </ul>
Site inspections may include:	<ul style="list-style-type: none"> <li>• those conducted in all areas of urban and regional settings such as residential areas and public open spaces.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Work
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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# AHCWRK313A Implement and monitor environmentally sustainable work practices

## Modification History

Not Applicable

## Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the performance outcomes, skills and knowledge required to effectively analyse the workplace in relation to environmentally sustainable work practices and to implement improvements and monitor their effectiveness.</p> <p>This unit requires the ability to access industry information, applicable legislative and Occupational Health and Safety (OHS) guidelines.</p> <p>While no licensing, legislative, regulatory or certification requirements apply holistically to this unit at the time of publication, relevant national, state and territory legislation, regulations and codes of practice impact upon this unit.</p>
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## Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to those with responsibility for a specific area of work or who lead a work group or team. It addresses the knowledge, processes and techniques necessary to implement and monitor environmentally sustainable work practices, including the development of processes and tools, such as: identifying areas for improvement; developing plans to make improvements; implementing and monitoring improvements in environmental performance.</p> <p>A person who demonstrates competence in this unit must be able to provide evidence of the ability to implement and monitor integrated environmental and resource efficiency management policies and procedures within an organisation. Evidence must be strictly relevant to the particular workplace role.</p>
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## Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Investigate current practices in relation to resource usage	1.1. Identify environmental regulations applying to the enterprise. 1.2. Analyse procedures for assessing compliance with environmental/sustainability regulations. 1.3. Collect information on environmental and resource efficiency systems and procedures, and provide to the work group where appropriate. 1.4. Collect, analyse and organise information from a range of sources to provide information/advice and tools/resources for improvement opportunities. 1.5. Measure and document current resource usage of

ELEMENT	PERFORMANCE CRITERIA
	<p>members of the work group.</p> <p>1.6. Analyse and document current purchasing strategies.</p> <p>1.7. Analyse current work processes to access information and data to assist in identifying areas for improvement.</p>
<p>2. Set targets for improvements</p>	<p>2.1. Seek input from stakeholders, key personnel and specialists.</p> <p>2.2. Access external sources of information and data as required.</p> <p>2.3. Evaluate alternative solutions to workplace environmental issues.</p> <p>2.4. Set efficiency targets.</p>
<p>3. Implement performance improvement strategies</p>	<p>3.1. Source and use appropriate techniques and tools to assist in achieving efficiency targets.</p> <p>3.2. Apply continuous improvement strategies to own work area of responsibility, including ideas and possible solutions to communicate to the work group and management.</p> <p>3.3. Implement and integrate environmental and resource efficiency improvement plans for own work group with other operational activities.</p> <p>3.4. Supervise and support team members to identify possible areas for improved practices and resource efficiency in work area.</p> <p>3.5. Seek suggestions and ideas about environmental and resource efficiency management from stakeholders and act upon where appropriate.</p> <p>3.6. Implement costing strategies to fully value environmental assets.</p>
<p>4. Monitor performance</p>	<p>4.1. Use and/or develop evaluation and monitoring, tools and technology.</p> <p>4.2. Document and communicate outcomes to report on efficiency targets to key personnel and stakeholders.</p> <p>4.3. Evaluate strategies and improvement plans.</p> <p>4.4. Set new efficiency targets, and investigate and apply new tools and strategies.</p> <p>4.5. Promote successful strategies and reward participants where possible.</p>



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analytical skills to analyse problems, to devise solutions and to reflect on approaches taken
- change management skills
- communication skills to answer questions, clarify and acknowledge suggestions relating to work requirements and efficiency
- communication/consultation skills to support information flow from stakeholders to the work group
- innovation skills to identify improvements, to apply knowledge about resource use to organisational activities and to develop tools
- literacy skills to comprehend documentation, to interpret environmental and energy efficiency requirements, to create tools to measure and monitor improvements and to report outcomes
- numeracy skills to analyse data on organisational resource consumption and waste product volumes
- planning and organising skills to implement environmental and energy efficiency management policies and procedures relevant to own work area
- problem solving skills to devise approaches to improved environmental sustainability and to develop alternative approaches as required
- technology skills to operate and shut down equipment; where relevant, to use software systems for recording and filing documentation to measure current usage; and to use word processing and other basic software for interpreting charts, flowcharts, graphs and other visual data and information
- supervisory skills to work effectively with a team.

#### Required knowledge

- best practice approaches relevant to own area of responsibility and industry
- compliance requirements within work area for all relevant environmental/sustainability legislation, regulations and codes of practice including resource hazards/risks associated with work area, job specifications and procedures
- environmental and energy efficiency issues, systems and procedures specific to industry practice
- external benchmarks and support for particular benchmarks to be used within organisation, including approaches to improving resource use for work area and expected outcomes
- OHS issues and requirements
- organisational structure and reporting channels and procedures
- quality assurance systems relevant to own work area
- strategies to maximise opportunities and to minimise impact relevant to own work

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
<p>area</p> <ul style="list-style-type: none"> <li>• supply chain procedures</li> <li>• terms and conditions of employment including policies and procedures, such as daily tasks, work area responsibilities, employee, supervisor and employer rights, equal opportunity.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• knowledge of relevant compliance requirements within work area</li> <li>• developing plans to make improvements</li> <li>• planning and organising work group activities in relation to measuring current use and devising strategies to improve usage</li> <li>• monitoring resource use and improvements for environmental performance relative to work area and supervision</li> <li>• ensuring appropriate action is taken within work area in relation to environmental/sustainability compliance and potential hazards</li> <li>• implementing new approaches to work area in an effort to resolve and improve environmental and resource efficiency issues and reporting as required.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Compliance may include:	<ul style="list-style-type: none"> <li>• meeting relevant laws, by laws and regulations or best practice or codes of practice to support compliance in environmental performance and sustainability at each level as required (such as Environmental Protection or Biodiversity Conservation Act):                             <ul style="list-style-type: none"> <li>• international</li> <li>• commonwealth</li> <li>• state/territory</li> <li>• industry</li> <li>• organisation.</li> </ul> </li> </ul>
Sources may include:	<ul style="list-style-type: none"> <li>• organisation specifications</li> <li>• regulatory sources</li> <li>• relevant stakeholders</li> <li>• resource use.</li> </ul>
Purchasing strategies may include:	<ul style="list-style-type: none"> <li>• influencing suppliers to take up environmental sustainability approaches</li> <li>• researching and participating in programs such as a supply chain program to purchase sustainable products.</li> </ul>
Stakeholders, key personnel and specialists may include:	<ul style="list-style-type: none"> <li>• individuals and groups both inside and outside the organisation who have direct or indirect interest in the organisation's conduct, actions, products and services, including:                             <ul style="list-style-type: none"> <li>• customers</li> <li>• employees at all levels of the organisation</li> <li>• government</li> <li>• investors</li> <li>• local community</li> <li>• other organisations</li> <li>• suppliers</li> </ul> </li> <li>• key personnel within the organisation, and specialists outside the organisation who may have particular technical expertise.</li> </ul>

<b>RANGE STATEMENT</b>	
Techniques and tools may include:	<ul style="list-style-type: none"> <li>• examination of invoices from suppliers</li> <li>• examination of relevant information and data</li> <li>• measurements made under different conditions</li> <li>• others as appropriate to the specific industry context.</li> </ul>
Environmental and resource efficiency improvement plans may include:	<ul style="list-style-type: none"> <li>• addressing environmental and resource sustainability initiatives such as: environmental management systems, action plans, green office programs, surveys and audits</li> <li>• applying the waste management hierarchy in the workplace</li> <li>• determining organisation's most appropriate waste treatment including waste to landfill, recycling, re use, recoverable resources and wastewater treatment</li> <li>• initiating and/or maintaining appropriate organisational procedures for operational energy consumption, including stationary energy and non stationary (transport)</li> <li>• preventing and minimising risks, and maximising opportunities such as:                             <ul style="list-style-type: none"> <li>• improving resource/energy efficiency</li> <li>• reducing emissions of greenhouse gases</li> <li>• reducing use of non renewable resources</li> </ul> </li> <li>• referencing standards, guidelines and approaches such as:                             <ul style="list-style-type: none"> <li>• ecological foot printing</li> <li>• Energy Efficiency Opportunities Bill 2005</li> <li>• Global Reporting Initiative</li> <li>• green office program - a cultural change program</li> <li>• green purchasing</li> <li>• Greenhouse Challenge Plus (Australian government initiative)</li> <li>• ISO 14001:1996 Environmental management systems life cycle analyses</li> <li>• product stewardship</li> <li>• supply chain management</li> <li>• sustainability covenants/compacts</li> <li>• triple bottom line reporting.</li> </ul> </li> </ul>
Suggestions may include ideas	<ul style="list-style-type: none"> <li>• prevent and minimise risks and maximise</li> </ul>

<b>RANGE STATEMENT</b>	
that help to:	<p>opportunities such as:</p> <ul style="list-style-type: none"> <li>• usage of solar or renewable energies where appropriate</li> <li>• reducing emissions of greenhouse gases</li> <li>• reducing use of non renewable resources</li> <li>• making more efficient use of resources, energy and water</li> <li>• maximising opportunities to re use, recycle and reclaim materials</li> <li>• identifying strategies to offset or mitigate environmental impacts:</li> <li>• purchasing carbon credits</li> <li>• energy conservation</li> <li>• reducing chemical use</li> <li>• reducing material consumption</li> <li>• expressing purchasing power through the selection of suppliers with improved environmental performance e.g. purchasing renewable energy</li> <li>• eliminating the use of hazardous and toxic materials.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCWRK401A Implement and monitor quality assurance procedures

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the implementation and monitoring of quality assurance procedures and defines the standard required to: establish quality specifications for product; assist in planning of quality assurance procedures; implement, monitor and record quality assurance procedures; provide supervision and training of staff in quality processes.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to production managers and workplace supervisors in agricultural and production horticulture enterprises who implementing and monitoring quality assurance procedures.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish quality specifications for product	1.1. Market specifications are sourced. 1.2. Legislated requirements are identified.
2. Identify hazards and critical control points in the production of quality product	2.1. Critical control points impacting on quality are identified. 2.2. Degree of risk for each hazard is determined.
3. Assist in planning of quality assurance procedures	3.1. Procedures for each identified control point are developed to ensure optimum quality. 3.2. Hazards and risks are minimised through application of appropriate controls. 3.3. Processes to monitor the effectiveness of quality assurance procedures are developed.
4. Implement quality assurance procedure	4.1. Responsibilities for carrying out procedures are allocated to staff and contractors. 4.2. Instructions are prepared in accordance with the enterprise the quality assurance program. 4.3. Staff and contractors are given induction training on the quality assurance policy. 4.4. Staff and contractors are given in-service training relevant to their allocated procedures.



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify hazards and critical control points in the production of quality product
- assist in planning of quality assurance procedures
- provide induction and in-service staff training
- implement quality assurance procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- market requirements for product
- definition of quality
- quality specifications for product
- enterprise and industry quality assurance systems
- Hazard Analysis and Critical Control Points (HACCP) techniques
- strategies for control of hazards to quality
- work place training strategies
- delegation and empowerment
- contingency management.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• establish quality specifications for product</li> <li>• assist in planning of quality assurance procedures</li> <li>• implement, monitor and record quality assurance procedures</li> <li>• provide supervision and training of staff in quality processes.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
System may include:	<ul style="list-style-type: none"> <li>• those relevant across agricultural sectors and products.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK402A Provide information on issues and policies

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the provision of information on issues and policies and defines the standard required to: process a request for information; access information to respond to the request; collate information to deal specifically with the request; prepare a response using chosen media; maintain a record of the information provided and file for future reference.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workplace supervisors and managers in the agriculture, horticulture and land management sectors and describes the process of researching, extracting and providing information on issues and policies
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Process a request for information on issues and policies	<p>1.1. Request is documented using the appropriate recording system.</p> <p>1.2. Relevant notes are recorded from dialogue with the client and from correspondence.</p> <p>1.3. Approval to access information is sought and obtained and requests forwarded where appropriate.</p> <p>1.4. Client is actively listened to and questioned appropriately to clarify and elicit information provided.</p>
2. Identify sources and extract information	<p>2.1. Relevant sources and locations of information are identified, accessed and researched.</p> <p>2.2. Clear sequenced oral instructions are provided to colleagues required for assistance.</p> <p>2.3. Workplace policies and documentation relevant to the request are evaluated.</p> <p>2.4. Information relevant to the particular request is located and extracted and copied.</p> <p>2.5. Alternative methods to locate identified gaps in information.</p>
3. Evaluate information for meeting client request	<p>3.1. Information is evaluated for its validity and reliability and appropriateness to the client request.</p> <p>3.2. Client is engaged in effective dialogue to clarify indistinct or incorrect information.</p> <p>3.3. Additional information is obtained if available information is inadequate, unclear, conflicting or incorrect.</p>
4. Prepare and finalise	4.1. Report is developed, written, formatted and proofed

ELEMENT	PERFORMANCE CRITERIA
report	<p>according to enterprise policies and procedures.</p> <p>4.2. Report is checked for accuracy and intention.</p> <p>4.3. Review and sign off of report is arranged with designated person where required.</p> <p>4.4. Record of report/correspondence is made.</p> <p>4.5. Report/correspondence is forwarded to client.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- workplace policies and documentation on local, regional, state and national issues
- relevant workplace documentation on international treaties, agreements and charters
- types of information sources
- methods and means of accessing and extracting the required information
- methods of validating information
- types of reports and their uses.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• process a request for information</li> <li>• access information to respond to the request</li> <li>• collate information to deal specifically with the request</li> <li>• prepare a response using chosen media</li> <li>• maintain a record of the information provided and file for future reference.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Types of information and policies may include:	<ul style="list-style-type: none"> <li>• information taken from a range of sources including personal files and notes</li> <li>• articles (academic, on-line, newspaper, journal)</li> <li>• specialist texts</li> <li>• letters</li> <li>• internal correspondence</li> <li>• government reports</li> <li>• relevant legislation</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• Codes of Practice</li> <li>• national and international protocols and charters</li> <li>• statistics</li> <li>• local knowledge</li> <li>• original research</li> <li>• media (television, video, audio)</li> <li>• libraries.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWRK403A Supervise work routines and staff performance

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the supervision of work routines and staff performance and defines the standard required to: assess staff capability against position descriptions; designate and communicate staff roles and responsibilities, including line management; develop work plans to achieve organisational targets and business objectives; provide training and mentoring for staff; implement strategies to foster teamwork and trust; negotiate with staff as part of dealing with conflict; monitor team and individual work performance and provide feedback to staff.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to workers with supervisory responsibilities and covers the work functions associated with supervising work routines and staff performance.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Communicate work roles	<p>1.1.Roles and responsibilities of staff are clearly defined and documented.</p> <p>1.2.Skills of staff are accurately identified and matched with available tasks and duties.</p> <p>1.3.Requirements of jobs are clearly identified and communicated to personnel.</p> <p>1.4.Information on activities is developed and provided to personnel.</p> <p>1.5.Occupational Health and Safety (OHS) policy and procedural requirements for supervisors are effectively implemented.</p>
2. Coordinate activities	<p>2.1.Work activities are prioritised to ensure completion of tasks in accordance with available timelines.</p> <p>2.2.Work plans are developed to establish targets and objectives of activities, and to define tasks and timelines.</p> <p>2.3.Training and learning opportunities are identified and incorporated into work activities.</p> <p>2.4.Supervisory and reporting responsibilities are clarified and maintained in line with organisational requirements.</p> <p>2.5.Enterprise environmental policy and procedures for supervisors are effectively implemented.</p>
3. Maintain effective working relations	<p>3.1.Problems are recognised and addressed through discussion with work group.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Assistance is sought from work group members when difficulties arise in achieving allocated tasks</p> <p>3.3. Discussion and information sharing is routinely used to communicate requirements of work activities through a participative approach.</p> <p>3.4. Disagreements and conflicts are managed constructively using appropriate conflict management strategies.</p>
4. Provide feedback	<p>4.1. Feedback is clear, constructive and provided promptly to individuals to support achievement of outcomes.</p> <p>4.2. Difficult situations are identified and negotiated to achieve results in line with organisational requirements.</p> <p>4.3. Team and individual performances are monitored regularly to ensure personnel are able to achieve goals.</p> <p>4.4. Supervisory structures and lines of reporting are maintained in accordance with organisational requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- supervise and instruct staff to achieve work activities
- delegate and allocate tasks
- assess and evaluate staff capability
- identify and provide training requirements
- plan timesheets and timetables to meet deadlines
- demonstrate safe workplace and environmentally responsible practices
- solve problems (staffing, resources)
- evaluate performance, provide feedback and prepare reports and performance appraisals
- promote and maintain effective relationships between staff
- monitor productivity and maintain staff records as required

## REQUIRED SKILLS AND KNOWLEDGE

- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- enterprise personnel processes
- enterprise organisational structure and responsibilities
- techniques for building trust and relationships
- principles of team work and negotiation
- leadership for the work team
- performance appraisal systems and procedures
- principles of time management
- conflict management techniques
- enterprise training requirements and processes
- relevant State/Territory legislation, regulations and Codes of Practice with regard to workplace OHS, environmental protection and employment
- OHS hazard identification, risk assessment and development of risk controls.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include

<b>EVIDENCE GUIDE</b>	
	<p>achievement of the following:</p> <ul style="list-style-type: none"> <li>• assess staff capability against position descriptions</li> <li>• designate and communicate staff roles and responsibilities, including line management</li> <li>• develop work plans to achieve organisational targets and business objectives</li> <li>• provide training and mentoring for staff</li> <li>• implement strategies to foster teamwork and trust</li> <li>• negotiate with staff as part of dealing with conflict</li> <li>• monitor team and individual work performance and provide feedback to staff.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
The people may include:	<ul style="list-style-type: none"> <li>• coaches</li> <li>• mentors</li> <li>• supervisors or managers</li> <li>• work colleagues with supervisory responsibilities.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK404A Ensure compliance with pest legislation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the implementation of the compliance of legislation and defines required to: identify non-compliance with legislation; contact stakeholder and notify of breach and communicate requirements; follow right of entry policies; investigate and collect evidence of breaches; report findings of compliance and non-compliance; issue relevant notices; document activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to compliance officers who assisting the implementation of legislation and involves the provision of both support and advice to stakeholders to ensure their compliance.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify non-compliance with legislation	<p>1.1. Non-compliance is identified through complaint or other means, and recorded in accordance with legislative and enterprise requirements.</p> <p>1.2. Senior staff are notified in accordance with legislative and enterprise requirements.</p>
2. Investigate non-compliance	<p>2.1. Land ownership or identity of stakeholder is established and responsibilities of all parties are established in line with State legislation.</p> <p>2.2. Further information is obtained on possible non-compliance with legislation.</p> <p>2.3. Stakeholder/owner is contacted and notified of breach and communicate requirements in compliance with enterprise guidelines and supervisors instructions.</p> <p>2.4. Policies of right of entry are adhered to in communicating with stakeholders.</p> <p>2.5. Accurate records are maintained in line with agency policies.</p>
3. Act on non-compliance issues	<p>3.1. Relevant notices are issued in accordance with relevant legislation and regulations, enterprise guidelines and supervisors instructions.</p> <p>3.2. Evidence is collected and findings are reported in accordance with enterprise guidelines or following supervisor's instructions.</p> <p>3.3. Advice is provided to the stakeholder consistent with enterprise guidelines and legislative requirements.</p> <p>3.4. Support is provided to stakeholders in the</p>



ELEMENT	PERFORMANCE CRITERIA
	implementation of programs in accordance with enterprise policy.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- follow right of entry policies
- identify non-compliance with legislation
- investigate and collect evidence of breaches
- act on non-compliance issues
- report findings of compliance and non-compliance
- issue relevant notices
- document activities
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- federal and state legislation and local government and local authority regulations
- breaches occurring in the locality and appropriate control options
- communication techniques
- conflict avoidance and resolution
- individual and property rights
- negotiation techniques.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify non-compliance with legislation</li> <li>• contact stakeholder and notify of breach and communicate requirements</li> <li>• follow right of entry policies</li> <li>• investigate and collect evidence of breaches</li> <li>• report findings of compliance and non-compliance</li> <li>• issue relevant notices</li> <li>• document activities.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Legislation may include:	<ul style="list-style-type: none"> <li>• Federal, State and Territory legislation</li> <li>• local government</li> <li>• statutory authority regulations relevant to the area, worksite or job role.</li> </ul>

## Unit Sector(s)

Unit sector	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK501A Plan, implement and review a quality assurance program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of planning, implementing and reviewing a quality assurance program for an agricultural or horticultural enterprise and defines the standard required to: define product quality standards based on the needs of the customer; determine quality assurance objectives for the enterprise; develop and implement procedures for quality assurance; maintain required records to support quality assurance; review the quality assurance program.
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### Application of the Unit

<b>Application of the unit</b>	This unit covers the process of planning, implementing and reviewing a quality assurance program for an agricultural or horticultural enterprise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine quality assurance objectives for the enterprise	1.1.Future market requirements for quality assured products are assessed. 1.2.Premiums for quality assurance products are determined. 1.3.Strategic benefits of a quality assurance program are assessed.
2. Plan the quality assurance program and develop implementation strategies	2.1.Product quality standards are defined. 2.2.Current status of products and operations is audited. 2.3.Industry quality assurance programs are evaluated and costed. 2.4.Required processes and practices are documented in the quality assurance program manual and an implementation plan is prepared.
3. Implement the quality assurance program	3.1.Instructions are documented defining task and process requirements. 3.2.Contractor and staff training is established and implemented. 3.3.Communication takes account of social, cultural and ethnic backgrounds. 3.4.Changes to processes and practices are introduced. 3.5.Processes to monitor and verify product quality are established. 3.6.Recording systems are introduced. 3.7.Operating instructions are validated under conditions

ELEMENT	PERFORMANCE CRITERIA
	<p>to verify their suitability.</p> <p>3.8.Problems and issues are analysed and resolved appropriately, promptly and decisively.</p>
4. Review the quality assurance program	<p>4.1.Reporting formats are established.</p> <p>4.2.Mechanisms for gaining feedback information are implemented.</p> <p>4.3.Preparation is made for quality assurance audits.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- determine quality assurance objectives for the enterprise
- plan the quality assurance program and develop implementation strategies
- implement the quality assurance program
- review the quality assurance program
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- market projections and customer requirements
- cost/benefit of quality assurance implementation
- system analysis, HAACCP or related processes
- enterprise culture and values
- leadership and administrative skills
- human resources induction practices
- human resources performance monitoring practices.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• define product quality standards based on the needs of the customer</li> <li>• determine quality assurance objectives for the enterprise</li> <li>• develop and implement procedures for quality assurance</li> <li>• maintain required records to support quality assurance</li> <li>• review the quality assurance program.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Quality assurance may include:	<ul style="list-style-type: none"> <li>• regulation of the quality of raw materials</li> <li>• assemblies</li> <li>• products and components</li> <li>• services related to production</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>management, production and inspection processes.</li> </ul>
Quality assurance programs may include:	<ul style="list-style-type: none"> <li>programs with planned and systematic production processes that provide confidence in a product' or service's suitability for its intended purpose.</li> </ul>
Market requirements may include:	<ul style="list-style-type: none"> <li>trends and directions from regional, domestic and overseas markets.</li> </ul>
Industry quality assurance programs may include:	<ul style="list-style-type: none"> <li>programs developed by industry organisations and marketing authorities, processors, wholesalers/retailers and other stakeholders including Cattlecare, Flockcare, Freshcare, Graincare and Proven Perfect.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Work
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	
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## AHCWRK502A Collect and manage data

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of collecting, analysing and managing data and defines the standard required to: identify data requirements and establish sampling and data collection techniques; collect and collate data using standardised recording sheets and systems; review sampling and data collection techniques based on validity and reliability of the data; manage data to facilitate retrieval and analysis; analyse data using appropriate statistical and analytical techniques; draw conclusions based on reasoned argument and appropriate evidence; produce a report in required format with information and data presented to support decision making.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to managers and supervisors with a job function to determine the type and extent of data to be collected, access and collate data, evaluate data, manage, analyse and retrieve data.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine the type and extent of data to be collected	<p>1.1.Data requirements are clearly defined and communicated to all staff involved in data collection.</p> <p>1.2.Relevant data sources are identified.</p> <p>1.3.Type and extent of data required is clearly defined.</p> <p>1.4.Occupational Health and Safety (OHS) hazards associated with data collecting are identified.</p> <p>1.5.Data collection methods and techniques are clearly defined relative to data requirements.</p>
2. Access and collate data	<p>2.1.Data collection sheets are formatted to assist collection.</p> <p>2.2.Data is researched and/or collected from field sources according to enterprise guidelines and with standard research approaches.</p> <p>2.3.Data is collated by appropriate electronic means.</p> <p>2.4.Appropriateness of data is monitored and recorded during collection.</p> <p>2.5.Information is researched using appropriate methods and technologies.</p> <p>2.6.Sources of information are regularly reviewed for</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>usefulness, validity, reliability and cost.</p> <p>2.7.Channels and sources of information are used effectively.</p> <p>2.8.Opportunities are taken to establish and maintain contacts with those who may provide useful information.</p> <p>2.9.Appropriate OHS requirements and work practices are followed.</p>
3. Evaluate data	<p>3.1.Data collected is relevant, valid and sufficient.</p> <p>3.2.Where data is unclear or difficult to interpret, clarification and assistance is sought.</p> <p>3.3.Where data is inadequate, additional data is obtained.</p> <p>3.4.Information is analysed for its validity and reliability.</p>
4. Manage and retrieve data	<p>4.1.Data is stored by appropriate electronic means.</p> <p>4.2.Data is presented using appropriate graphical aids and techniques.</p> <p>4.3.Data is assembled and provided to the manager/client as required and in accordance with standard research approaches.</p> <p>4.4.Data is retrieved as required.</p> <p>4.5.New methods of recording and storing data are suggested/introduced as needed.</p>
5. Analyse and interpret data	<p>5.1.Data is analysed using appropriate statistical and analytical techniques.</p> <p>5.2.Data is interpreted to determine its significance, validity and reliability.</p> <p>5.3.Findings based on the analysis and interpretation of the data is reported.</p> <p>5.4.Data is organised into a suitable report format to aid decision-making.</p> <p>5.5.Conclusions drawn are based on reasoned argument and appropriate evidence.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

- determine the type and extent of data to be collected
- access and collate data
- evaluate data
- manage and retrieve data
- analyse the data
- interpret the data
- follow safe work practices
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- data collection techniques and procedures
- data recording and evaluation techniques
- data analysis and interpretive techniques
- data storage and retrieval methods
- data reporting methods.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and

The evidence required to demonstrate competency in this

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	<p>unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• identify data requirements and establish sampling and data collection techniques</li> <li>• collect and collate data using standardised recording sheets and systems</li> <li>• review sampling and data collection techniques based on validity and reliability of the data</li> <li>• manage data to facilitate retrieval and analysis</li> <li>• analyse data using appropriate statistical and analytical techniques</li> <li>• draw conclusions based on reasoned argument and appropriate evidence</li> <li>• produce a report in required format with information and data presented to support decision making.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Data may include:	<ul style="list-style-type: none"> <li>• primary and secondary sources including: <ul style="list-style-type: none"> <li>• field work and trials</li> <li>• research materials</li> <li>• published books</li> <li>• academic reports</li> <li>• industry reports</li> <li>• colleagues</li> <li>• computer software</li> <li>• internet</li> <li>• newspapers</li> <li>• photographic data</li> </ul> </li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"><li>• journals</li><li>• industry publications</li><li>• industry specialists and experts.</li></ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWRK503A Prepare reports

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of preparing comprehensive reports for a rural, horticultural or land management setting and defines the standard required to: identify the purpose of the report and verify it with the client; conduct research and compile information; draw conclusions from research supported by reasoned argument and supporting information; make recommendations if required and reference to information and conclusions; produce a correctly formatted report document that uses appropriate language and terminology, is arranged in a logical order, and provides details on information sources and consultation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to enterprise or project managers for a rural, horticultural or land management enterprise or project. The task is carried out independently with access to technical information and support where required.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Research material	1.1. Topic of the report is identified and described. 1.2. Sources of information are determined. 1.3. Information appropriate to the task is collected and organised according to enterprise standards.
2. Evaluate information	2.1. Information collected is relevant and sufficient to provide a full report. 2.2. Where information is unclear or difficult to understand, clarification and assistance is sought. 2.3. Where available information is inadequate, additional information is obtained. 2.4. Information is assessed for its validity and reliability, and is organised into a suitable form to aid decision-making. 2.5. Conclusions drawn from relevant information are based on reasoned argument and appropriate evidence.
3. Produce a document	3.1. Language is applicable to the task and audience. 3.2. The document is organised logically, is structured and balanced according to purpose, audience and



ELEMENT	PERFORMANCE CRITERIA
	<p>context.</p> <p>3.3.The document is formatted and presented according to business and enterprise standards.</p> <p>3.4.Conclusions reached reflect the stated objectives of the report.</p> <p>3.5.Preparation is completed within the specified timeframe.</p> <p>3.6.Enterprise and Occupational Health and Safety (OHS) requirements and procedures are followed.</p>
4. Deliver an oral presentation	<p>4.1.Language is applicable to the task and audience.</p> <p>4.2.Presentation is organised logically, is structured and balanced according to purpose, audience and context.</p> <p>4.3.Concise and well presented support materials are used in oral presentations to reflect industry standards.</p> <p>4.4.Efficient time use allows clear presentation of the desired topic.</p> <p>4.5.Oral presentation is delivered within a specified time.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research material
- evaluate information
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**REQUIRED SKILLS AND KNOWLEDGE****Required knowledge**

- information and research sources
- report structure and presentation
- public presentation techniques and approaches.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify the purpose of the report and verify it with the client
- conduct research and compile information
- draw conclusions from research supported by reasoned argument and supporting information
- make recommendations if required and reference to information and conclusions
- produce a correctly formatted report document that uses appropriate language and terminology, is arranged in a logical order, and provides details on information sources and consultation.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Reports may include:

- a range of sources of information that reports may be based on including:
  - field work
  - research materials
  - published books
  - academic reports
  - industry reports
  - colleagues
  - computer software
  - internet
  - newspapers
  - journals
  - industry publications
  - industry specialists and experts.

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	
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## AHCWRK504A Assess new industry developments

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the outcomes required to assess new developments of enterprises and of the industry sector as a whole and describes the standard required to: critically evaluate information and research findings of relevance to enterprises and industry sector; integrate research and development into enterprise planning; evaluate the potential of research proposals with other producers, associates or colleagues; document a report on new industry developments.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to all personnel engaged at senior levels in agricultural, horticultural and rural support enterprise activities.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Analyse the industry sector	<p>1.1. Knowledge of one's own and related industry sectors, products, equipment, supply chain, organisations, people, resource management processes and policies, work practices, legislation and regulations is developed and maintained.</p> <p>1.2. Opportunities for participation in relevant organisations are identified and undertaken.</p> <p>1.3. Likely sources of credible information are identified and accessed as required.</p> <p>1.4. Relevant historical events, sensitivities and positions of people involved are recalled and applied.</p> <p>1.5. State, territory, national and international issues are analysed for their relevance to the industry and impact on one's own enterprise.</p>
2. Assess new developments for impact on enterprises and industry sector	<p>2.1. Industry research and development information is sourced and evaluated for relevance to enterprises and to industry sector.</p> <p>2.2. Risks and opportunities of new developments in industry processes, technologies and quality/environmental requirements are evaluated.</p> <p>2.3. Emerging stakeholders and interest groups are identified and assessed for their potential benefit or impact on one's own enterprise and industry sector as a whole.</p> <p>2.4. Trends in production, marketing, resource management and research are analysed.</p> <p>2.5. Potential impacts of proposed government initiatives are identified and assessed for significance.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.6.Success and failure of relevant or related initiatives in other industries or enterprises are assessed for their relevance.</p> <p>2.7.Changing community and customer beliefs, attitudes and expectations are monitored.</p>
3. Report on new developments	<p>3.1.Evaluated research information is integrated in the enterprise/industry sector planning processes.</p> <p>3.2.Research information is shared with others and opportunities for cooperative approaches are explored and encouraged.</p> <p>3.3.Implications for use of research information are considered in a wider context with other producers, associates or colleagues.</p> <p>3.4.Document a report on new industry developments.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and analyse industry developments
- working with others to trial and implement R and D outcomes
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- appropriate avenues to disseminate industry sector information to a range of stakeholders
- correct names and terminology relevant to one's industry sector

**REQUIRED SKILLS AND KNOWLEDGE**

- credible sources of information
- key industry development and promotion programs relevant to one's industry sector
- roles and responsibilities of stakeholders and organisation's relevant to own industry sector
- supply chain for industry sector enterprises.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- critically evaluate information and research findings of relevance to enterprises and industry sector
- integrate research and development into enterprise planning
- evaluate the potential of research proposals with other producers, associates or colleagues
- document a report on new industry developments.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**



**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Developments may include:

- processes
- technologies and quality/environmental requirements
- issues in production
- marketing
- resource management
- research.

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWRK505A Manage trial and/or research material

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of managing a trial and/or research materials as part of a designated research project and defines the standard required to: define the purpose of the trial and the scope and extent of the work; oversee management of trial/research materials; collate data from trials or research; draw conclusions and apply findings of trials and/or research.
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### Application of the Unit

<b>Application of the unit</b>	This unit is likely to be undertaken alone or under broad guidance. It requires a high level of technical understanding about the aims and methodologies of research.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify scope and extent of work	<p>1.1.Trial/research hypothesis and parameters are identified according to researchers' requirements.</p> <p>1.2.Trial/research is planned to meet research objectives.</p> <p>1.3.Data relevant to managing trial/research materials is assessed according to research parameters.</p> <p>1.4.Data relevant to managing trial/research materials is assessed according to enterprise policy.</p> <p>1.5.Occupational Health and Safety (OHS) hazards associated with managing trial/research materials are identified, risks assessed, and controls developed according to enterprise guidelines, costed and documented in the survey design.</p> <p>1.6.Tools, equipment and machinery required for managing trial/research materials are identified, costed, and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>1.7.Research design is determined according to the trial/research plan.</p>
2. Oversee management of trial/research materials	<p>2.1.Trial/research is prepared, maintained and monitored according to project parameters.</p> <p>2.2.Field work is conducted to verify and collect data according to the trial/research design and research parameters.</p> <p>2.3.Work activities are monitored for accuracy, validity and compliance to the parameters of the trial/research design.</p> <p>2.4.Staged data collection is undertaken according to trial/research design, scheduling and access</p>

ELEMENT	PERFORMANCE CRITERIA
	requirements. 2.5. Monitoring and data is recorded faithfully, promptly and accurately according to the specifications of the trial/research design.
3. Prepare reports on work complete	3.1. Collected data is recorded according to trial/research requirements and guidelines. 3.2. Data is statistically analysed to determine significance of research results. 3.3. Hypothesis is accepted or rejected based on data collected. 3.4. Reports are produced which conform to the structure and content required by the researcher.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- define the purpose of the trial
- identify scope and extent of work
- collate data
- oversee management of trial/research materials
- comply with legislative and enterprise requirements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- scheduling and programming work within timelines
- ecological principles and terminology

**REQUIRED SKILLS AND KNOWLEDGE**

- data collection and reporting
- research procedures and best practice techniques
- enterprise work team management guidelines
- data analysis techniques
- research planning and design
- research methodologies.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- define the purpose of the trial and the scope and extent of the work
- oversee management of trial/research materials
- collate data from trials or research
- draw conclusions and apply findings of trials and/or research.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Trials may include:

- research projects
- field trials.

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	
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## AHCWRK507A Implement professional practice

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of implementing professional practice and defines the standard required to: reflect upon your own practice; ensure continuing self support-and supervision; operate within an agreed ethical code of practice/ethics; identify professional roles in the industry; develop a project brief and form of agreement; document a practice plan.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the legal, professional and ethical practices in the operation of a consultancy business, management role or professional practice and covers the process of applying ethical standards in dealing with clients, contractors and other stakeholders and conducting business contracts to the required standard.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Investigate and analyse business structures and working practices	1.1. Discuss the roles and responsibilities of the job role. 1.2. Define the roles of various personnel working in a business practice or organisation. 1.3. Formulate a range of management approaches and methodologies suitable for business development.
2. Develop legal, professional and ethical responsibilities working in industry	2.1. Develop methods of sourcing policies, regulations and standards relevant to a project. 2.2. Observe the legal and ethical responsibilities of the job role. 2.3. Identify and describe legislation governing protection of intellectual property in Australia and internationally. 2.4. Identify issues that need to be addressed when entering into a client / practitioner agreement. 2.5. Undertake a range of contracts / agreements used in the industry and demonstrate their application. 2.6. Implement the ethical and legal responsibilities in expert witness roles, provision of legal evidence and provision of expert advice.
3. Evaluate & reflect upon own practice	3.1. Demonstrate and promote sustainable practices in own work and the work of others. 3.2. Analyse own work to identify influences, style, market relevance and quality in conjunction with supervisors and/or peers. 3.3. Feedback is actively sought and accepted non defensively.



ELEMENT	PERFORMANCE CRITERIA
4. Develop a professional practice plan to meet professional goals	4.1. Develop personal and professional goals and objectives. 4.2. Identify strengths and weaknesses in relation to goals and objectives. 4.3. Evaluate own capacity to meet goals and objectives. 4.4. Develop a professional development plan to enhance professional capabilities. 4.5. Document a professional practice plan designed to support the achievement of goals.
5. Operate within an agreed ethical code of practice/ethics	5.1. Own practice is assessed against identified objectives or code of ethics using a range of valid evidence. 5.2. The effect of values, beliefs and behaviour in work with clients is recognised. 5.3. Build client relationships in accordance with identified objectives or code of ethics. 5.4. Realistic goals and targets for self development are established.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- assess the effectiveness of own skills development
- develop job and time based costing and pricing
- developing marketing strategies
- monitoring research trends related to roles and responsibilities
- organisation, planning and personal management skills
- professional practice skills
- self evaluation
- provide legal evidence and expert advice
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

## REQUIRED SKILLS AND KNOWLEDGE

- clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- typical business management structures
- issues of professional practice for the job role
- team roles, responsibilities and accountabilities
- legislation, ethical and financial considerations
- legislation covering protection of copyright and intellectual property
- local and international professional organisations relevant to the industry
- workplace occupational health and safety policies and procedures
- understanding of relevant theories, principles, practices and their application and other aspects of knowledge, desirable or necessary in order to practise effectively within the industry
- expert witness roles and processes
- personal goal setting
- measuring performance
- time management
- marketing principles
- professional practice considerations
- communication principles
- strategies for promoting awareness of a product.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include

<b>EVIDENCE GUIDE</b>	
	<p>achievement of the following:</p> <ul style="list-style-type: none"> <li>• reflect upon your own practice</li> <li>• ensure continuing self support-and supervision</li> <li>• operate within an agreed ethical code of practice/ethics</li> <li>• identify professional roles in the industry</li> <li>• develop a project brief and form of agreement</li> <li>• document a practice plan.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Practices may include:	<ul style="list-style-type: none"> <li>• roles and responsibilities</li> <li>• personnel</li> <li>• business development</li> <li>• legal and ethical responsibilities</li> <li>• provision of legal evidence and expert advice</li> <li>• protection of intellectual property</li> <li>• contracts and agreements</li> <li>• effective communication techniques</li> <li>• project management methodologies</li> <li>• industry based and technical developments.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK508A Interpret legislation

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of interpreting legislation and defines the standard required to: determine legislation&legal framework applicable to task; research, interpret and apply appropriate legislation; promote compliance with relevant legislation; assess situations which may potentially present legal problems/issues; maintain knowledge of legal framework and relevant legislation.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the process of interpretation&application of legislation and the preparation of relevant documentation. This standard requires the ability to determine the application of legal knowledge combined with horticultural expertise.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine applicable legal framework	<p>1.1. Identify and access current legislation, regulations, organisational procedures, standards and/or codes of practice affecting the workplace, industry, occupation or client.</p> <p>1.2. Determine legal accountability obligations in relation to workplace, industry, occupation or client.</p> <p>1.3. Identify consequences of non-compliance with legislation, regulations, organisational procedures, standards and/or codes of practice.</p>
2. Research, interpret and apply appropriate legislation	<p>2.1. Monitor sources of information for changes to the legal framework.</p> <p>2.2. Regularly update and communicate information and changes to legal framework components which impact on work activities.</p>
3. Promote compliance with relevant legislation	<p>3.1. Access current information about the range of legislation &amp; other legally binding policies &amp; protocols relating to own work.</p> <p>3.2. Clarify compliance requirements to confirm understanding and ensure consistency of interpretation and application.</p> <p>3.3. Obtain advice to assist in applying relevant legislation to own work and identifying compliance requirements.</p> <p>3.4. Identify areas of uncertainty in own work related to compliance requirements and take action to clarify</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>issues.</p> <p>3.5. Identify possible implications of non-compliance and use these to guide own work practices.</p>
<p>4. Assess situations which may potentially present legal problems/issues</p>	<p>4.1. Identify and document details of suspected or actual incidences of illegal conduct by self or others in the workplace.</p> <p>4.2. Contribute to ongoing monitoring and compliance with legal framework.</p> <p>4.3. Ensure that work is undertaken in a legally compliant manner.</p> <p>4.4. Recognise limits of own expertise, legal accountability obligations and access appropriate sources of expertise as required.</p> <p>4.5. Assess conduct of self and others in the workplace against specific components of the legal framework applicable to the workplace.</p> <p>4.6. Take appropriate actions to resolve/report illegal conduct, as required by applicable legislation, regulations, organisational procedures, standards and/or codes of practice.</p>
<p>5. Maintain knowledge of legal framework &amp; relevant legislation</p>	<p>5.1. Monitor sources of information for changes to the legal framework.</p> <p>5.2. Regularly update and communicate information and changes to legal framework components which impact on work activities.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify compliance requirements
- address compliance issues
- develop and implement strategies to manage compliance with appropriate legislation
- provide advice & documentation regarding applicable legislation, regulations, organisational procedures and/or codes of practice

## REQUIRED SKILLS AND KNOWLEDGE

- maintain knowledge of changes to compliance legislation and requirements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- understanding and overview of the provisions contained in key relevant legislation, & other legally binding legal policies & protocols from all levels of government that affect the relevant industry.
- relevant Australian Standards
- organisational policies and procedures relating to legislation in organisation's functional area
- penalties for non-compliance with legislative requirements
- auditing requirements
- Occupational Health and Safety (OHS) requirements applicable to own work and functional area.
- scope of legal practitioner/support role and own responsibilities and obligations to provide legal advice, complete or sign off on legal work and/or appear in court as described by relevant jurisdiction/s
- encourage and support own compliance and that of others in the workplace
- relevant conventions, treaties, agreements, guidelines, declarations, recommendations, laws and rules.
- identification and access legislation, regulations, organisational procedures, standards and/or codes of practice
- application of legal information to the workplace
- monitoring compliance and identification of illegal conduct
- referral to appropriate sources of information and specialist personnel when limits of own expertise are reached in determining applicable legislation
- maintenance of ongoing knowledge of legal framework by monitoring changes from appropriate information sources
- Accepted codes of practice relevant to the workplace including those relating to:
  - Privacy and confidentiality
  - Use of company property
  - Duty of care
  - Ethical behaviour



**REQUIRED SKILLS AND KNOWLEDGE**

- Non-discriminatory practice
- Conflict of interest
- Compliance with reasonable direction
- Relevant general legal terminology.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- determine legislation&legal framework applicable to task
- research, interpret and apply appropriate legislation; promote compliance with relevant legislation
- assess situations which may potentially present legal problems/issues
- maintain knowledge of legal framework&relevant legislation.

**Context of and specific resources for assessment**

Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Resources required are the relevant legislations regulations and policies covering Federal Acts, State Acts and local government regulations. State based legislation covers but is not limited to relevant Acts, regulations and policies in state and local jurisdictions, for example, such as in NSW:

- Heritage Act(NSW)

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• Environmental Planning and Assessment Act (NSW) 1979</li> <li>• Native Vegetation Act (NSW) 2003</li> <li>• Threatened Species Conservation Act (NSW) 1995</li> <li>• Nature Conservation Trust Act (NSW) 2001</li> <li>• Noxious Weeds Act (NSW) 1993</li> <li>• Dividing Fences Act</li> <li>• Civil Liability Act 2002 (NSW)</li> <li>• Rural Fires Act</li> <li>• Protection of the Environment Operations Act</li> <li>• Civil procedures Act 2005 (NSW)</li> <li>• Inclosed Lands Act 1901</li> <li>• Tree Preservation Orders</li> <li>• Development Control Plan(s)</li> <li>• Local Environment Plan(s)</li> <li>• Landscape Policy</li> <li>• State Environmental Planning Policies (SEPP)</li> <li>• Regional Environment Plans (REP)</li> <li>• Contract law.</li> </ul>

### Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Legislation may include:	<ul style="list-style-type: none"> <li>• Federal, State and Territory laws</li> <li>• local government and statutory authority regulations relevant to the area</li> <li>• worksite or job role.</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK509A Provide specialist advice to clients

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of providing specialist advice and defines the standard required to: maintain technical currency for specialist knowledge; maintain a current and documented interpretation of the legislative, environmental and financial implications for industry; cultivate and maintain industry wide sources of information and advice; determine client needs by professional consultation; provide information with comprehensive advice and recommendations detailing implications for the client; document financial and implementation issues for the individual client; evaluate the relevance, applicability and timeliness of advice by client survey and review of financial benefits.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the provision of specialist information to clients.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop and maintain specialist knowledge	<p>1.1.A comprehensive knowledge and understanding of specialist information is actively and regularly researched from industry and other sources.</p> <p>1.2.Characteristics of industry practices, products and services are identified and understood using available documentation.</p> <p>1.3.Information is accurately documented and maintained in a format consistent with enterprise requirements.</p> <p>1.4.Acquired knowledge is applied to improve quality within personal work areas.</p>
2. Consult with clients	<p>2.1.Consultation with clients is conducted in a professional and courteous manner according to enterprise requirements.</p> <p>2.2.Appropriate interpersonal skills are used to facilitate accurate and relevant exchange of information.</p> <p>2.3.Work practices reflect sensitivity to client's requirements, specific needs and cultural, family and individual differences.</p>
3. Provide a response to client enquiries and need	<p>3.1.Information relevant to client's needs is prepared in line with enterprise requirements.</p> <p>3.2.Information emphasises issues relevant to client needs.</p> <p>3.3.Information is based on sound research practices and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>preparation is achievable within enterprise resources.</p> <p>3.4.Evidence in support of information is researched, shown to be verifiable and documented in a suitable format.</p> <p>3.5.Information is structured to identify clear benefits to clients and the organisation.</p> <p>3.6.Information is documented and presented in a professional format and style to the client for consideration and discussion.</p> <p>3.7.Client feedback is evaluated by survey to improve future provision of technical information and professional services.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- develop and maintain industry wide specialist knowledge
- provide a professional service to client enquiries and needs
- demonstrate discretion and judgement in stakeholder interaction
- maintain a current and documented interpretation of the legislative, environmental and financial implications for industry
- implement professional practice in stakeholder consultation and report documentation
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- products, treatments and/or services

**REQUIRED SKILLS AND KNOWLEDGE**

- environmental sustainability and land use issues relevant to the industry
- enterprise policy and procedures for customer service including handling customer complaints
- service standards and best practice models
- strategies for planning and monitoring activities
- consultation methods, techniques and protocols
- current enterprise, government and local council policy, legislation and regulations
- mechanisms to obtain and analyse customer feedback.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- maintain technical currency for specialist knowledge
- maintain a current and documented interpretation of the legislative, environmental and financial implications for industry
- cultivate and maintain industry wide sources of information and advice
- determine client needs by professional consultation
- provide information with comprehensive advice and recommendations detailing implications for the client
- document financial and implementation issues for the individual client
- evaluate the relevance, applicability and timeliness of advice by client survey and review of financial benefits.

**Context of and specific resources for**

Competency requires the application of work practices under work conditions. Selection and use of resources

**EVIDENCE GUIDE****assessment**

for some worksites may differ due to the regional or enterprise circumstances.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole.

Specialist advice may include:

- expert testimony or documentation and professional reports based on extensive knowledge or ability based on research, experience, or occupation and in a particular area of work.

Advice areas may include:

- agricultural
- horticultural and/or land management practices
- products
- treatments
- policies
- issues.

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>		



## Competency field

Competency field	
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## AHCWRK510A Audit site operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of auditing site operations and defines the standard required to: develop the scope and methodology for an audit; identify parameters of audit requirements; manage audit implementation; identify compliance and non compliance items; evaluate audit findings; provide feedback to staff, organisation and client; document and present the final audit report.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to supervisors and managers engaged in the process of auditing site operations and covers determining the scope of the audit, specifying the audit requirements, defining the audit process, performing the audit, evaluating the audit findings and documenting an audit report.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine the scope of the audit	1.1.Objectives and scope of the audit is prepared. 1.2.Expectations of client or organisation are described. 1.3.Pattern of random or non random audit events is determined. 1.4.Individual and personal actions are identified for audit requirements. 1.5.Groups and processes are identified for audit for audit requirements. 1.6.List of audit items is prepared.
2. Specify the audit requirements	2.1.Precise parameters of acceptable conditions / results are identified and documented. 2.2.Relevant sections of Codes of Practice and specific clauses in Australian Standards are described. 2.3.Written guidelines are communicated to the audited group and individual staff members. 2.4.Detailed information is provided to audit groups in a durable format for working conditions.
3. Define the audit process	3.1.Responsibilities for audit implementation and evaluation are determined and assigned. 3.2.The timing and frequency of the audit events of audit events are determined. 3.3.Schedules and logistical arrangements are confirmed and contingency arrangements planned. 3.4.Expectations are confirmed with the audited group

ELEMENT	PERFORMANCE CRITERIA
	<p>and individual staff members.</p> <p>3.5. Audit process is documented and communicated.</p>
4. Manage the audit implementation	<p>4.1. Audit meeting is organised in advance at a mutually agreed time.</p> <p>4.2. Activities of audited group and individual staff members are examined.</p> <p>4.3. Items of compliance and non compliance are identified and recorded.</p> <p>4.4. Appropriate persons are interviewed for detailed information, clarification and feedback.</p> <p>4.5. Relevant information and sample documentation is gathered and recorded.</p> <p>4.6. Contingency actions are taken as required and recorded.</p>
5. Evaluate and document the audit findings into a report	<p>5.1. Results and findings are examined against audit objectives and presented to the audited group or individual.</p> <p>5.2. Agreement is sought and reached on corrective action reports.</p> <p>5.3. Context and consequences of audit are explained and discussed during follow-up meetings.</p> <p>5.4. Feedback on results is provided to client or organisation.</p> <p>5.5. Document the final audit report and present to client or organisation.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- identify client or organisation expectations
- determine the scope of items for audit
- specify parameters of audit requirements
- define the audit process
- identify compliance and non compliance items

## REQUIRED SKILLS AND KNOWLEDGE

- implement an audit
- manage the implementation of audits
- plan for and act on contingencies
- evaluate audit findings
- organise scheduling and meetings
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- audit methodology and techniques
- product and/or service knowledge
- quality principles and techniques
- interview techniques
- workplace documentation and policies
- logistics of operations of organisation
- legal issues and terminology relating to quality auditing
- award and enterprise agreements and relevant industrial instruments
- relevant legislation and regulations from all levels of government
- relevant codes of practice, regulations and standards, for example ISO 9000:2000: Quality Management Systems - Fundamentals and Vocabulary, ISO 19011:2003: Guidelines for Quality and/or Environmental Management Systems Auditing.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop the scope and methodology for an audit</li> <li>• identify parameters of audit requirements</li> <li>• manage audit implementation</li> <li>• identify compliance and non compliance items</li> <li>• evaluate audit findings</li> <li>• provide feedback to staff, organisation and client</li> <li>• document and present the final audit report.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Audits may include:	<p>the evaluation of :</p> <ul style="list-style-type: none"> <li>• a person</li> <li>• organisation</li> <li>• system</li> <li>• process</li> <li>• enterprise</li> <li>• project</li> <li>• product.</li> </ul>
Sites may include:	<ul style="list-style-type: none"> <li>• project works</li> <li>• management or administration systems.</li> </ul>

## Unit Sector(s)

Unit sector	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## AHCWRK511A Develop workplace policy and procedures for sustainability

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers developing workplace policy and procedures for sustainability and describes the performance outcomes, skills and knowledge required to: develop and implement a workplace sustainability policy, including the modification of the policy to suit changed circumstances.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to people with managerial responsibility who undertake work developing approaches to create strategies within workplaces.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop workplace sustainability policy	1.1. Define scope of sustainability policy. 1.2. Gather information from a range of sources to plan and develop policy. 1.3. Identify and consult stakeholders as a key component of the policy development process. 1.4. Include appropriate strategies in policy at all stages of work for minimising resource use, reducing toxic material and hazardous chemical use, and employing life cycle management approaches. 1.5. Make recommendations for policy options based on likely effectiveness, timeframes and cost. 1.6. Develop policy that reflects the organisation's commitment to sustainability as an integral part of business planning and as a business opportunity. 1.7. Agree to appropriate methods of implementation.
2. Communicate workplace sustainability policy	2.1. Promote workplace sustainability policy, including its expected outcome to key stakeholders. 2.2. Inform those involved in implementing the policy as to outcomes expected, activities to be undertaken and responsibilities assigned.
3. Implement workplace sustainability policy	3.1. Develop and communicate procedures to help implement workplace sustainability policy. 3.2. Implement strategies for continuous improvement in resource efficiency. 3.3. Establish and assign responsibility to use recording systems for tracking continuous improvements in sustainability approaches.

ELEMENT	PERFORMANCE CRITERIA
4. Review workplace sustainability policy implementation	4.1.Document outcomes and provide feedback to key personnel and stakeholders. 4.2.Investigate successes or otherwise of policy. 4.3.Monitor records to identify trends that may require remedial action and use to promote continuous improvement of performance. 4.4.Modify policy and or procedures as required to ensure improvements are made.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to adjust communication to suit different audiences; to respond effectively to diversity; to work as a member of a team to consult on and validate policy
- literacy skills to read and evaluate complex and formal documents such as policy and legislation
- problem skills to effectively manage different points of view and dissenting stakeholders
- research, analytical and writing skills to research, analyse and present information; to prepare written reports requiring precision of expression and language and structures suited to the intended audience
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- best practice approaches relevant to own work area
- environmental or sustainability legislation, regulations and codes of practice

**REQUIRED SKILLS AND KNOWLEDGE**

applicable to industry and organisation

- equal employment opportunity, equity and diversity principles and occupational health and safety implications of policy being developed
- policy development processes and practices
- principles, practices and available tools and techniques of sustainability management relevant to the particular industry context
- quality assurance systems relevant to own organisation
- relevant industry competency
- relevant organisational policies, procedures and protocols
- relevant systems and procedures to aid in the achievement of workplace sustainability.

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- candidate's involvement as a key person in planning, developing and implementing organisational policy and that the developed policy complies with legislative requirements
- implementation strategy, as part of the policy, that has been devised, implemented and reviewed showing a measurable improvement utilising the chosen benchmark indicators
- communicating with stakeholders to discuss possible approaches to policy development and implementation, and contributing to the resolution of disputes among stakeholders
- developing and monitoring policies for analysing

<b>EVIDENCE GUIDE</b>	
	<p>data on enterprise resource consumption</p> <ul style="list-style-type: none"> <li>• using software systems for recording and filing documentation for measurement of current usage and using word processing and other basic software for interpreting charts, flowcharts, graphs and other visual data and information</li> <li>• reviewing and improving policies by identifying improvements and benchmarking against industry best practice and attempting new approaches continuously over time.</li> </ul>
<b>Context of and specific resources for assessment</b>	The context of the unit applies to all sectors of the Agrifood industry. It may be applied to all sections of an organisation, including the office, the factory floor, or work area. With such a broad application, the unit will need to be contextualised as it is applied across an organisation and across different industry sectors.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Scope of workplace sustainability policy may include:	<ul style="list-style-type: none"> <li>• addressing sustainability initiatives through reference to standards, guidelines and approaches such as:</li> <li>• ecological footprinting</li> <li>• Energy Efficiency Opportunities Bill 20051</li> <li>• Global Reporting Initiative</li> <li>• green office program</li> <li>• green purchasing</li> <li>• Greenhouse Challenge Plus (Australian government initiative)</li> <li>• ISO 14001:1996 Environmental management systems life cycle analyses</li> <li>• life cycle analyses</li> <li>• product stewardship</li> <li>• supply chain management</li> <li>• sustainability covenants/compacts</li> <li>• triple bottom line reporting</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• integrated approach to sustainability which includes environmental, economic and social aspects, or a specific approach that focuses on each aspect individually</li> <li>• investigating particular business and market context of the industry/organisation</li> <li>• meeting relevant laws, by laws and regulations or best practice to support compliance in environmental performance and sustainability at each level as required (such as Environmental Protection or Biodiversity Conservation Act):                             <ul style="list-style-type: none"> <li>• international</li> <li>• commonwealth</li> <li>• state/territory</li> <li>• industry</li> <li>• organisation</li> </ul> </li> <li>• parts of the organisation to which it is to apply, including whether it is for the whole organisation, one site, one work area or a combination of these.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>		

## Competency field

Competency field	
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## AHCWRK601A Monitor projects in a program

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of monitoring and reporting requirements at a program level including interim, annual and final project reporting and defines the standard required to: develop project milestones and monitor progress against them; monitor resource usage against the project plan; work with project groups in redefining the tasks and timelines to avoid slippage and complete projects; oversee project reporting.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to monitoring projects in a program.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Review project milestones	<p>1.1. Project milestones for approved projects within the program are logged for monitoring.</p> <p>1.2. Negotiated and approved changes to milestones are used to adjust the monitoring records.</p>
2. Check progress against milestones	<p>2.1. Contact is maintained with groups and coordinators to monitor project progress against agreed timelines.</p> <p>2.2. Records are kept of progress for reporting purposes.</p> <p>2.3. Variations from agreed progress are identified for reporting and response purpose.</p> <p>2.4. Requests for change in project milestones and timelines are submitted for approval according to program and agency requirements.</p>
3. Summarise progress	<p>3.1. Regular progress reports are prepared according to program and agency requirements.</p> <p>3.2. Progress reports are discussed with groups, coordinators and others according to program and agency procedures.</p> <p>3.3. Project reports are consolidated into program reports as required according to program and agency requirements.</p>
4. Assist groups maintain project timeline	<p>4.1. Group activities and resources are reviewed where required achievement may not or has not been met.</p> <p>4.2. Strategies to place the project back onto required plan are developed with coordinator and community group leaders.</p> <p>4.3. Proposed changes in project are documented and submitted for approval by group initially, and then to</p>



ELEMENT	PERFORMANCE CRITERIA
	program and agency requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- review project milestones.
- check progress against milestones.
- summarise progress.
- assist groups maintain project timelines
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

#### Required knowledge

- group and regional cultures including diverse groups of people.
- program and agency reporting requirements.
- reporting formats.
- project management.
- financial reporting.
- project management computer applications.

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> <li>• develop project milestones and monitor progress against them</li> <li>• monitor resource usage against the project plan</li> <li>• work with project groups in redefining the tasks and timelines to avoid slippage and complete projects</li> <li>• oversee project reporting.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Projects may include:	<ul style="list-style-type: none"> <li>• separate project activity funded under the program for specific purposes, which may require separate accounts and accounting records and for which regular reporting may be required on project basis.</li> </ul>
Types of programs may include:	<ul style="list-style-type: none"> <li>• Commonwealth Government community programs under the Natural Heritage Trust</li> <li>• rural industry programs</li> <li>• business programs, and state government community programs related to the environment.</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	Work
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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## AHCWRK602A Lead and manage community or industry organisations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of providing leadership to community or industry organizations and defines the standard required to: guide the organisation in the achievement of its aims; design and implement communication; establish and maintain effective relationships and professional and business networks; build effective teams in the organisation; demonstrate active and effective participation and leadership in community or industry organisations.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the ability to guide the organisation in the achievement of its aims design and implement communication, establish and maintain effective relationships, establish and manage professional and business networks and build effective teams in the organisation.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Guide the organisation in the achievement of its aims	<p>1.1.The strategic direction of the organisation is examined and confirmed.</p> <p>1.2.A leadership role is undertaken in the strategic planning, goal setting and action planning of the organisation.</p> <p>1.3.A clear understanding of organisational purpose is promoted with stakeholders.</p> <p>1.4.Clear roles and responsibilities for those in the organisation are defined and documented.</p>
2. Design and implement communication	<p>2.1.The organisations policies and directions are communicated through documents and presentations.</p> <p>2.2.Reporting mechanisms are clearly defined and reports are produced in line with organisational policy and guidelines.</p> <p>2.3.Protocols for communication are defined.</p>
3. Establish and maintain effective relationships	<p>3.1.Code of behaviour covering disagreements and negotiation is established in consultation with others in organisation.</p> <p>3.2.Different strategies are employed to deal with a variety of personality types.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. Conflict is managed to seek mutually beneficial solutions. 3.4. Consensus is achieved in decision-making within the organisation where appropriate. 3.5. Stakeholder relationships are maintained and promoted. 3.6. Effective meeting procedures are promoted and applied within the organisation.
4. Establish and manage professional and business networks	4.1. Decision-making in other relevant forums is influenced to align with organisations best interests. 4.2. Views for consideration and representation are gathered and acknowledged. 4.3. Win-win outcomes are achieved through lobbying and negotiations. 4.4. Contemporary knowledge of issues and political factors is maintained.
5. Build effective teams in the organisation	5.1. Ethical behaviour and appropriate inter-personal skills are demonstrated and maintained in all dealings. 5.2. Leadership style is adapted to suit a range of differing contexts. 5.3. Opinion leaders are canvassed and institutional support is gained for the organisation. 5.4. New members for the organisation are recruited. 5.5. Relevant information is provided to new and potential members.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- guide the organisation in the achievement of its aims
- design and implement communication
- establish and maintain effective relationships
- establish and manage professional and business networks

## REQUIRED SKILLS AND KNOWLEDGE

- team building
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

### Required knowledge

- leadership styles, roles and responsibilities
- strategic planning
- development and implementation of organisational policy and procedures
- ethics and codes of behaviour
- conflict management
- meeting procedures and protocols
- negotiation and consensus in decision-making.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- guide the organisation in the achievement of its aims
- design and implement communication
- establish and maintain effective relationships and professional and business networks

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• build effective teams in the organisation</li> <li>• demonstrate active and effective participation and leadership in community or industry organisations.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
People may include:	<ul style="list-style-type: none"> <li>• those in external funding bodies</li> <li>• members of the organisation</li> <li>• employees of the organisation</li> <li>• patrons</li> <li>• clients or purchasers/recipients of services.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

<b>Co-requisite units</b>	



## Competency field

Competency field	
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## AHCWRK603A Design and conduct a field-based research trial

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the process of designing and conducting field-based research trials and defines the standard to: establish sound research parameters that enables achievable results; conduct research consistent with recognised scientific practice; analysis and reporting reflects the scope and consequences of the project.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to designing and conducting field-based research trials.
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Design the trial	<p>1.1. Problems and/or opportunities that support undertaking a trial are identified and the trial subject and projected outcomes are defined according to enterprise guidelines, market research, client requirements, cost analysis and cost benefits to the enterprise.</p> <p>1.2. Research into available evidence is undertaken to establish the performance criteria of the subject, product or treatment to be trialled and the trial design.</p> <p>1.3. Trial sites are located according to trial design requirements and enterprise capabilities, and site factors are identified and incorporated into the trial design.</p> <p>1.4. Approvals and/or permits required to conduct the trial are identified and obtained.</p> <p>1.5. Data collection and recording specifications are established according to the trial design, and proper conventions and controls are followed to satisfy statistical audit requirements and eliminate variables according to sound clinical practice.</p>
2. Prepare to conduct the trial	<p>2.1. Occupational Health and Safety (OHS) hazards associated with the implementation of the trial are identified, risks assessed and controls developed according to enterprise guidelines, costed and documented in the trial design.</p> <p>2.2. Environmental implications associated with implementation of the trial are identified and documented in the trial design.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3. Materials, tools, equipment and machinery required for the trial are identified, costed, and availability confirmed with suppliers, contractors and appropriate personnel.</p> <p>2.4. Trial sites are established and prepared for implementation of the trial according to the specifications of the trial design.</p> <p>2.5. Detailed trial site plans, trial specifications and trial procedures are documented clearly and comprehensively in the trial design.</p>
3. Conduct the trial	<p>3.1. Staged data collection is undertaken throughout the course of the trial according to the specifications of the trial design.</p> <p>3.2. Trial implementation is monitored for accuracy, compliance to the trial design and out-of-specification procedures or events.</p> <p>3.3. All monitoring and trial data is recorded faithfully, promptly and accurately according to the specifications of the trial design.</p>
4. Assess practical application of trial outcome	<p>4.1. Statistical auditing is undertaken for the trial outcomes, and proper conventions and controls are followed to eliminate variables according to sound clinical practice.</p> <p>4.2. Conclusions are drawn from relevant information and are based on appropriate evidence and reasoned arguments.</p> <p>4.3. Trial outcomes are assessed for practical application, based on conclusions drawn from the trial and according to enterprise guidelines and industry best practice.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and evaluate information
- calculate the cost and spatial and logistical requirements of components of the trial

**REQUIRED SKILLS AND KNOWLEDGE**

- enter, analyse and organise data in a mathematically sound and accurately graphed, charted or tabled representation, consistent with the trial design
- comply with legislative requirements
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

**Required knowledge**

- growth habits, physiological properties and taxonomic specification of animals/plants involved in the trial
- physical and biochemical properties of products involved in the trial
- properties and current, best practice application of treatments involved in the trial
- scientific and mathematical trialling, data collection, processing and analytical techniques and procedures
- auditing and reporting procedures
- the enterprise business and marketing plans
- enterprise work team management guidelines
- bio-ethics (where animals are involved in the trial).

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• establish sound research parameters that enables achievable results</li> <li>• conduct research consistent with recognised scientific practice</li> <li>• analysis and reporting reflects the scope and consequences of the project.</li> </ul>
<b>Context of and specific resources for assessment</b>	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole.	
Trial subjects may include:	<ul style="list-style-type: none"> <li>• individual animal or plant species or cultivars</li> <li>• specified products, and treatments or applications whose performance or responses are measured in relation to defined performance criteria.</li> </ul> <p>Note: The involvement of animals in a research trial may be covered by duty of care provisions in Animal Welfare Acts and codes of practices dealing with animal ethics.</p>

## Unit Sector(s)

<b>Unit sector</b>	Work
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	
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## BSBADM504B Plan or review administrative systems

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to plan or review the requirements of effective administration systems and procedures for implementing, monitoring and reviewing the system.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals employed in a range of work environments who are required to plan or review administrative systems. They may work as senior administrative staff or may have been delegated responsibility for planning or reviewing administrative systems.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan or review administration systems	<p>1.1. Identify <i>requirements</i> of, or modifications to, <i>administration system</i> through consultation with <i>system users</i> and other stakeholders in accordance with organisational and budgetary requirements</p> <p>1.2. Obtain quotations from <i>suppliers/developers</i> of system in accordance with organisational policy and procedures</p> <p>1.3. Make selection of supplier or developer in accordance with organisational policy and procedures</p>
2. Implement new or modified administration system	<p>2.1. Identify and develop <i>implementation strategies</i> in consultation with staff</p> <p>2.2. Encourage staff to participate in all stages of the implementation process</p> <p>2.3. Implement system in accordance with organisational requirements</p> <p>2.4. Define and <i>communicate</i> procedures for using the system to staff</p> <p>2.5. Provide <i>training and support for staff</i> on the use of the new or modified system</p> <p>2.6. Deal with <i>contingencies</i> to ensure minimal impact on users</p>
3. Monitor	3.1. <i>Monitor</i> system for usage, <i>security</i> and output in

ELEMENT	PERFORMANCE CRITERIA
administration system	<p>accordance with organisational requirements</p> <p>3.2. Modify system to meet <i>changing needs</i> in accordance with organisational requirements</p> <p>3.3. Clearly identify <i>further modifications</i> and notify users</p> <p>3.4. <i>Monitor staff training needs</i> and train new staff on administration system</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to recommend alternative ways of completing tasks, to discuss changes in routines and procedures, and to monitor and define objectives
- literacy skills to write detailed procedural text, including alternative courses of action
- planning and organising skills to implement system smoothly with a minimum of disruption, to anticipate modifications, to plan system overhauls and to allow sufficient time for training
- problem-solving skills to choose appropriate solutions from a range of possible solutions, to use processes flexibly and interchangeably, and to anticipate problems and modify systems accordingly
- research skills to assemble evidence and to evaluate information for accuracy and relevance.

#### Required knowledge

- key provisions of relevant legislation from all forms of government, standards and codes that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - copyright
  - occupational health and safety
- organisational policies and procedures relating to the tasks required.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>documenting requirements or modifications to administration system</li> <li>developing appropriate activities to support system implementation</li> <li>working with staff to identify system improvements.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>access to organisational policy and procedure manuals, reference materials and appropriate equipment.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>review of authenticated documents from the workplace or training environment</li> <li>demonstration of techniques.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>other general administration units.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work

<b>RANGE STATEMENT</b>	
situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
System <i>requirements</i> may include:	<ul style="list-style-type: none"> <li>• components of the system</li> <li>• number and type of users</li> <li>• organisation/staff requirements</li> <li>• purpose and nature of system</li> <li>• purpose and nature of organisation</li> <li>• size of system</li> <li>• skills of existing staff</li> <li>• staff training needs</li> <li>• type of system</li> <li>• work practices</li> </ul>
<i>Administration system</i> may include:	<ul style="list-style-type: none"> <li>• electronic system</li> <li>• paper-based system</li> </ul>
<i>System users</i> may include:	<ul style="list-style-type: none"> <li>• casual personnel</li> <li>• external clients</li> <li>• organisation's personnel</li> </ul>
<i>Suppliers/developers</i> may include:	<ul style="list-style-type: none"> <li>• administration system consultants</li> <li>• computer/software suppliers</li> <li>• efficiency consultants</li> <li>• equipment suppliers</li> <li>• information technology technicians</li> <li>• information technology trainers</li> <li>• internal staff/clients</li> <li>• office equipment suppliers</li> </ul>
<i>Implementation strategies</i> may include:	<ul style="list-style-type: none"> <li>• boosting staff confidence</li> <li>• change management strategies</li> <li>• changing team/organisational culture</li> <li>• ensuring system functions correctly</li> <li>• external consultants</li> <li>• informing relevant persons</li> <li>• modifying system</li> <li>• providing staff training/information sessions</li> <li>• re-defining staff roles</li> <li>• re-distributing office tasks</li> <li>• team goal setting</li> <li>• temporary reduction of workload</li> <li>• testing</li> <li>• trialling</li> </ul>

<b>RANGE STATEMENT</b>	
<i>Communicating</i> procedures may include:	<ul style="list-style-type: none"> <li>• email messages</li> <li>• facsimile messages</li> <li>• internal newsletter</li> <li>• meetings</li> <li>• office memorandum</li> <li>• photocopied instructions</li> <li>• professional development time</li> <li>• training days</li> </ul>
<i>Training and support for staff</i> may include:	<ul style="list-style-type: none"> <li>• coach, mentor and/or buddy systems</li> <li>• online tutorials</li> <li>• on-the-job trainers</li> <li>• professional development</li> <li>• skills assessment</li> <li>• training handbooks</li> <li>• videos</li> </ul>
<i>Contingencies</i> may include:	<ul style="list-style-type: none"> <li>• loss of staff confidence</li> <li>• need for additional training</li> <li>• need to modify system</li> <li>• temporary reduction of work output</li> </ul>
<i>Monitoring</i> of system may include:	<ul style="list-style-type: none"> <li>• extra administrative support and back-up</li> <li>• feedback from internal/external client/s</li> <li>• observation by trained technician/s</li> <li>• utilising monitoring tools and processes</li> </ul>
<i>Security</i> may include:	<ul style="list-style-type: none"> <li>• confidentiality agreements</li> <li>• passwords</li> <li>• safeguards against computer viruses</li> </ul>
<i>Changing needs</i> may include:	<ul style="list-style-type: none"> <li>• change in the nature and purpose of the system/organisation</li> <li>• change in user requirements</li> <li>• growth or decline in system size</li> <li>• technological advances in administration systems</li> </ul>
<i>Further modifications</i> may relate to:	<ul style="list-style-type: none"> <li>• additional equipment, training</li> <li>• negotiation of timeframes for system implementation</li> <li>• redefinition of administrative roles and duties</li> <li>• specialised software</li> </ul>
<i>Monitoring staff training needs</i> may include:	<ul style="list-style-type: none"> <li>• ongoing assessment of staff skills</li> <li>• ongoing feedback opportunities</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>providing professional development opportunities</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	
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**Competency field**

<b>Competency field</b>	Administration - General Administration
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**Co-requisite units**

<b>Co-requisite units</b>		

## BSBCMM401A Make a presentation

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit covers the performance outcomes, skills and knowledge required to prepare, deliver and review a presentation to a target audience.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who may be expected to make presentations for a range of purposes, such as marketing, training, promotions, etc. They contribute well developed communication skills in presenting a range of concepts and ideas.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare a presentation	<p>1.1. Plan and document presentation approach and intended outcomes</p> <p>1.2. Choose <i>presentation strategies, format and delivery methods</i> that match the <i>characteristics</i> of the target audience, location, resources and personnel needed</p> <p>1.3. Select <i>presentation aids, materials and techniques</i> that suit the format and purpose of the presentation, and will enhance audience understanding of key concepts and central ideas</p> <p>1.4. Brief others involved in the presentation on their roles/responsibilities within the presentation</p> <p>1.5. Select <i>techniques to evaluate presentation effectiveness</i></p>
2. Deliver a presentation	<p>2.1. Explain and discuss desired outcomes of the presentation with the target audience</p> <p>2.2. Use presentation aids, materials and examples to support target audience understanding of key concepts and central ideas</p> <p>2.3. Monitor non-verbal and verbal communication of participants to promote attainment of presentation outcomes</p> <p>2.4. Use persuasive communication techniques to secure audience interest</p> <p>2.5. Provide opportunities for participants to seek</p>



ELEMENT	PERFORMANCE CRITERIA
	<p>clarification on central ideas and concepts, and adjust the presentation to meet participant needs and preferences</p> <p>2.6. Summarise key concepts and ideas at strategic points to facilitate participant understanding</p>
3. Review the presentation	<p>3.1. Implement <i>techniques to review the effectiveness</i> of the presentation</p> <p>3.2. Seek and discuss reactions to the presentation from participants or from key personnel involved in the presentation</p> <p>3.3. Utilise feedback from the audience or from key personnel involved in the presentation to make changes to central ideas presented</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- facilitation and presentation skills to communicate central ideas of a message in an informative and engaging manner, and to utilise verbal and non-verbal techniques to sustain participant engagement
- literacy skills to prepare presentation information and to write in a range of styles for different target audiences.

#### Required knowledge

- data collection methods that will support review of presentations
- industry, product/service
- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - environmental issues
  - occupational health and safety

**REQUIRED SKILLS AND KNOWLEDGE**

- principles of effective communication
- range of presentation aids and materials available to support presentations.

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- preparation, delivery and evaluation of the effectiveness of at least two presentations related to the candidate's occupation or area of interest
- knowledge of the principles of effective communication.

**Context of and specific resources for assessment**

Assessment must ensure:

- access to an actual workplace or simulated environment
- access to office equipment, documentation and resources.

**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- demonstration of preparation, delivery and evaluation of a presentation
- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- observation of presentations
- review of selected presentation aids, materials and techniques
- review of briefing provided for others involved in the presentation
- evaluation of techniques implemented to review the effectiveness of the presentation.

**Guidance information for**

Holistic assessment with other units relevant to the

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	industry sector, workplace and job role is recommended, for example: <ul style="list-style-type: none"> <li>• other general administration units.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Presentation strategies</i></b> may involve:</p>	<ul style="list-style-type: none"> <li>• case studies</li> <li>• demonstration</li> <li>• discussion</li> <li>• group and/or pair work</li> <li>• oral presentations</li> <li>• questioning</li> <li>• simulations and role-play</li> </ul>
<p><b><i>Presentation format and delivery methods</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• advertising copy</li> <li>• audio</li> <li>• direct marketing copy</li> <li>• individual presentation</li> <li>• public relations copy</li> <li>• scripts</li> <li>• storyboards</li> <li>• team presentation</li> <li>• verbal presentation</li> <li>• video</li> <li>• visuals</li> </ul>
<p><b><i>Characteristics</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• age</li> <li>• cultural and language background</li> <li>• educational background or general knowledge</li> <li>• gender</li> <li>• language, literacy and numeracy needs</li> <li>• physical ability</li> <li>• previous experience with the topic</li> </ul>

<b>RANGE STATEMENT</b>	
<i>Presentation aids and materials</i> may include:	<ul style="list-style-type: none"> <li>• computer simulations and presentations</li> <li>• diagrams, charts and posters</li> <li>• models</li> <li>• overhead projector</li> <li>• paper-based materials</li> <li>• video and audio recordings</li> <li>• whiteboard</li> </ul>
<i>Presentation techniques</i> may include:	<ul style="list-style-type: none"> <li>• animation</li> <li>• comparative advertising</li> <li>• live action</li> <li>• music</li> <li>• signature elements such as:               <ul style="list-style-type: none"> <li>• slogans</li> <li>• logotypes</li> <li>• packaging</li> </ul> </li> <li>• sound effects</li> <li>• use of a guest speaker</li> <li>• use of black and white</li> <li>• use of colour</li> <li>• use of humour</li> </ul>
<i>Techniques to evaluate presentation effectiveness</i> may include:	<ul style="list-style-type: none"> <li>• action research</li> <li>• critical friends</li> <li>• focus group interviews</li> <li>• one-on-one interviews with participants and other personnel involved in the presentation</li> <li>• written feedback provided by participants</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

<b>Competency field</b>	Communication - Interpersonal Communication
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## Co-requisite units

Co-requisite units		

## BSBCUS301B Deliver and monitor a service to customers

### Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i></p> <p>Revised unit. Performance criteria amended so that the learner is not required to 'incorporate evidence of customer satisfaction in decision to modify products or services'. Required skills updated to focus on learning and development practices and compliance with policy and procedures.</p> <p>Replaces BSBCUS301A Deliver and monitor a service to customers</p>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to identify customer needs and monitor service provided to customers. Operators may exercise discretion and judgement using appropriate theoretical knowledge of customer service to provide technical advice and support to customers over either a short or long term interaction.

### Application of the Unit

This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Identify customer needs	<p>1.1 Use <b><i>appropriate interpersonal skills</i></b> to accurately identify and clarify <b><i>customer needs and expectations</i></b></p> <p>1.2 Assess customer needs for urgency to determine priorities for service delivery according to <b><i>organisational requirements</i></b></p> <p>1.3 Use <b><i>effective communication</i></b> to inform customers about available choices for meeting their needs and assist in the selection of preferred options</p> <p>1.4 Identify limitations in addressing customer needs and seek appropriate assistance from <b><i>designated individuals</i></b></p>
2. Deliver a service to customers	<p>2.1 Provide prompt service to customers to meet identified needs in accordance with organisational requirements</p> <p>2.2 Establish and maintain appropriate rapport with customers to ensure completion of quality service delivery</p> <p>2.3 Sensitively and courteously handle <b><i>customer complaints</i></b> in accordance with organisational requirements</p> <p>2.4 Provide assistance or respond to customers with <b><i>specific needs</i></b> according to organisational requirements</p> <p>2.5 Identify and use available <b><i>opportunities</i></b> to promote and enhance services and products to customers</p>
3. Monitor and report on service delivery	<p>3.1 Regularly review customer satisfaction with service delivery using <b><i>verifiable evidence</i></b> according to organisational requirements</p> <p>3.2 Identify opportunities to enhance the quality of service and products, and pursue within organisational requirements</p> <p>3.3 Monitor procedural aspects of service delivery for effectiveness and suitability to customer requirements</p>

	<p>3.4 Regularly seek customer feedback and use to improve the provision of products and services</p> <p>3.5 Ensure reports are clear, detailed and contain recommendations focused on critical aspects of service delivery</p>
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## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- analytical skills to identify trends and positions of products and services
- communication skills to monitor and advise on customer service strategies
- literacy skills to:
  - edit and proofread texts to ensure clarity of meaning and accuracy of grammar and punctuation
  - prepare general information and papers according to target audience
  - read and understand a variety of texts
- problem-solving skills to deal with customer enquiries or complaints
- technology skills to select and use technology appropriate to a task
- self-management skills to:
  - comply with policies and procedures
  - consistently evaluate and monitor own performance
  - seek learning opportunities.

### Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - financial legislation
  - occupational health and safety (OHS)
- organisational policy and procedures for customer service including handling customer complaints
- service standards and best practice models
- public relations and product promotion
- techniques for dealing with customers, including customers with specific needs.



## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• identifying needs and priorities of customers</li> <li>• distinguishing between different levels of customer satisfaction</li> <li>• treating customers with courtesy and respect</li> <li>• responding to and reporting on, customer feedback</li> <li>• knowledge of organisational policy and procedures for customer service.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to an actual workplace or simulated environment</li> <li>• access to office equipment and resources</li> <li>• examples of customer complaints</li> <li>• examples of documents relating to customer service standards and policies.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• review of reports on customer service delivery</li> <li>• analysis of responses to case studies and scenarios</li> <li>• demonstration of techniques</li> <li>• oral or written questioning to assess knowledge of customer service strategies.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><b><i>Appropriate interpersonal skills</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• listening actively to what the customer is communicating</li> <li>• providing an opportunity for the customer to confirm their request</li> <li>• questioning to clarify and confirm customer needs</li> <li>• seeking feedback from the customer to confirm understanding of needs</li> <li>• summarising and paraphrasing to check understanding of customer message</li> <li>• using appropriate body language.</li> </ul>
<p><b><i>Customers</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• corporate customers</li> <li>• individual members of the organisation</li> <li>• individual members of the public</li> <li>• internal or external</li> <li>• other agencies.</li> </ul>
<p><b><i>Customer needs and expectations</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• accuracy of information</li> <li>• advice or general information</li> <li>• complaints</li> <li>• fairness/politeness</li> <li>• further information</li> <li>• making an appointment</li> <li>• prices/value</li> <li>• purchasing organisation's products and services</li> <li>• returning organisation's products and services</li> <li>• specific information.</li> </ul>
<p><b><i>Organisational requirements</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• access and equity principles and practice</li> <li>• anti-discrimination and related policy</li> <li>• defined resource parameters</li> <li>• goals, objectives, plans, systems and processes</li> <li>• legal and organisational policies, guidelines and requirements</li> <li>• OHS policies, procedures and programs</li> <li>• payment and delivery options</li> <li>• pricing and discount policies</li> <li>• quality and continuous improvement processes and</li> </ul>

	<p>standards</p> <ul style="list-style-type: none"> <li>• quality assurance and/or procedures manuals</li> <li>• replacement and refund policy and procedures</li> <li>• who is responsible for products or services.</li> </ul>
<b>Effective communication</b> may include:	<ul style="list-style-type: none"> <li>• giving customers full attention</li> <li>• maintaining eye contact, except where eye contact may be culturally inappropriate</li> <li>• speaking clearly and concisely</li> <li>• using active listening techniques</li> <li>• using appropriate language and tone of voice</li> <li>• using clear written information/communication</li> <li>• using non-verbal communication e.g. body language, personal presentation (for face-to-face interactions)</li> <li>• using open and/or closed questions.</li> </ul>
<b>Designated individuals</b> may include:	<ul style="list-style-type: none"> <li>• colleagues</li> <li>• customers</li> <li>• line management</li> <li>• supervisor.</li> </ul>
<b>Customer complaints</b> may include:	<ul style="list-style-type: none"> <li>• administrative errors such as incorrect invoices or prices</li> <li>• customer satisfaction with service quality</li> <li>• damaged goods or goods not delivered</li> <li>• delivery errors</li> <li>• product not delivered on time</li> <li>• service errors</li> <li>• warehouse or store room errors such as incorrect product delivered.</li> </ul>
<b>Specific needs</b> of customers may relate to:	<ul style="list-style-type: none"> <li>• age</li> <li>• beliefs/values</li> <li>• culture</li> <li>• disability</li> <li>• gender</li> <li>• language</li> <li>• religious/spiritual observances.</li> </ul>
<b>Opportunities</b> to promote and enhance services and products may include:	<ul style="list-style-type: none"> <li>• extending time lines</li> <li>• packaging procedures</li> <li>• procedures for delivery of goods</li> <li>• returns policy</li> <li>• system for recording complaints</li> <li>• updating customer service charter.</li> </ul>
<b>Verifiable evidence</b> may include:	<ul style="list-style-type: none"> <li>• customer satisfaction questionnaires</li> <li>• audit documentation and reports</li> </ul>

	<ul style="list-style-type: none"><li>• quality assurance data</li><li>• returned goods</li><li>• lapsed customers</li><li>• service calls</li><li>• complaints.</li></ul>
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## Unit Sector(s)

Stakeholder Relations – Customer Service

## Custom Content Section

Not applicable.

## BSBCUS501C Manage quality customer service

### Modification History

Release	Comments
Release 1	<p>New release of this Qualification released with <i>version 6 of BSB07 Business Services Training Package</i>.</p> <p>Revised unit. Required skills updated to focus on learning and development practices and compliance with policy and procedures.</p>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop strategies to manage organisational systems that ensure products and services are delivered and maintained to standards agreed by the organisation.

Operators may have staff involved in delivering customer service and are responsible for the quality of their work. In many instances the work will occur within the organisation's policies and procedures framework. At this level, the exercise of considerable discretion and judgement, using a range of problem solving and decision making strategies, will be required.

### Application of the Unit

Many managers are involved in ensuring that products and services are delivered and maintained to standards agreed by the organisation.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Plan to meet internal and external customer requirements	<p>1.1 Investigate, identify, assess, and include the needs of <b>customers</b> in planning processes</p> <p>1.2 Ensure plans achieve the <b>quality</b>, time and cost specifications agreed with customers</p>
2. Ensure delivery of quality products and services	<p>2.1 Deliver <b>products and services</b> to customer specifications within organisation's business plan</p> <p>2.2 Monitor team performance to consistently meet the organisation's quality and delivery standards</p> <p>2.3 Assist colleagues to overcome difficulty in meeting customer service standards</p>
3. Monitor, adjust and review customer service	<p>3.1 Develop and use <b>strategies</b> to monitor progress in achieving product and/or service targets and standards</p> <p>3.2 Develop and use strategies to obtain customer feedback to improve the provision of products and services</p> <p>3.3. Develop, procure and use <b>resources</b> effectively to provide quality products and services to customers</p> <p>3.4 Make decisions to overcome problems and to adapt customer services, products and service delivery in consultation with appropriate individuals and groups</p> <p>3.5 Manage records, reports and recommendations within the organisation's systems and processes</p>

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

## Required skills

- analytical skills to identify trends and positions of products and services
- communication skills to:
  - coach and mentor staff and colleagues
  - monitor and advise on customer service strategies
- literacy skills to:
  - edit and proofread texts to ensure clarity of meaning and accuracy of grammar and punctuation
  - prepare general information and papers according to target audience
  - read and understand a variety of texts
- problem-solving skills to:
  - deal with customer enquiries or complaints
  - deal with complex and non-routine difficulties
- technology skills to select and use technology appropriate to a task
- self-management skills to:
  - comply with policies and procedures
  - consistently evaluate and monitor own performance
  - seek learning opportunities.

## Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - Australian consumer law
  - ethical principles
  - codes of practice
  - privacy laws
  - financial legislation
  - occupational health and safety (OHS)
- organisational policy and procedures for customer service including handling customer complaints
- service standards and best practice models
- public relations and product promotion
- techniques for dealing with customers, including customers with specific needs
- techniques for solving complaints including the principles and techniques involved in the management and organisation of:
  - customer behaviour
  - customer needs research
  - customer relations
  - ongoing product and/or service quality

- problem identification and resolution
- quality customer service delivery
- record keeping and management methods
- strategies for monitoring, managing and introducing ways to improve customer service relationships
- strategies to obtain customer feedback.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• plans, policies or procedures for delivering quality customer service</li> <li>• demonstrated techniques in solving complex customer complaints and system problems that lead to poor customer service</li> <li>• knowledge of techniques for solving complaints.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to appropriate documentation and resources normally used in the workplace.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• assessment of written reports</li> <li>• demonstration of techniques</li> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• observation of performance in role plays</li> <li>• evaluation of leadership, supervision, coaching and mentoring used to assist colleagues to overcome difficulty in meeting customer service standards</li> <li>• review of strategies developed and used to monitor progress in achieving product and/or service targets and standards</li> <li>• review of records, reports and recommendations about managing customer service.</li> </ul>



<b>Guidance information for assessment</b>	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.
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## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<b><i>Customers</i></b> may be:	<ul style="list-style-type: none"> <li>• Board members</li> <li>• clients, purchasers of services</li> <li>• co-workers, peers and fellow frontline managers</li> <li>• members of the general public who make contact with the organisation, such as prospective purchasers of services</li> <li>• potential funding bodies</li> <li>• supervisors</li> <li>• suppliers of goods and services and contractors providing goods and services.</li> </ul>
<b><i>Quality</i></b> may refer to:	<ul style="list-style-type: none"> <li>• characteristics of a product, system, service or process that meet the requirements of customers and interested parties.</li> </ul>
<b><i>Products and services</i></b> may include:	<ul style="list-style-type: none"> <li>• either products or services</li> <li>• goods</li> <li>• ideas</li> <li>• infrastructure</li> <li>• private or public sets of benefits.</li> </ul>
<b><i>Strategies</i></b> may refer to:	<ul style="list-style-type: none"> <li>• databases and other controls to record and compare data over time</li> <li>• electronic feedback mechanisms using intranet, internet and email</li> <li>• feedback forms and other devices to enable communication from customers</li> <li>• long-term or short-term plans for monitoring achievement and evaluating effectiveness</li> <li>• policies and procedures</li> <li>• questionnaires, survey and interviews</li> <li>• training and development activities.</li> </ul>

<i>Resources</i> may include:	<ul style="list-style-type: none"><li>• buildings/facilities</li><li>• equipment</li><li>• finance</li><li>• information</li><li>• people</li><li>• power/energy</li><li>• technology</li><li>• time.</li></ul>
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## Unit Sector(s)

Stakeholder Relations – Customer Service

## Custom Content Section

Not applicable.

## BSBDES403A Develop and extend design skills and practice

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to develop and extend skills as a practising designer.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to any individual who works as a designer in any industry context. Designers may work independently or be employed by an organisation.</p> <p>Designers must continually refine, develop and evaluate their own conceptual and technical skills. Research, experimentation and collaboration are key factors in this process.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Acquire and develop technical skills	1.1. Plan <i>strategies</i> to ensure the development of appropriate <i>technical skills</i> in design practice 1.2. Plan and use opportunities to develop and assess technical skills 1.3. Identify and use practice, feedback, discussion and evaluation opportunities to continuously improve technical skills 1.4. Develop and extend technical skills through <i>testing capabilities</i> of materials, tools and equipment 1.5. Identify and use <i>relevant media</i> to stimulate technical and professional development
2. Develop conceptual skills and ideas	2.1. Engage in ongoing experimentation and exploration of different ideas and techniques 2.2. Discuss ideas with others and apply knowledge gained to inform own work 2.3. Use work practice to gain experience in a range of genres and interpretations 2.4. Study the work of others to stimulate conceptual and technical skills development 2.5. Research and share ideas across a range of design disciplines 2.6. Identify and use a range of <i>opportunities to develop own skills</i> and keep informed about current design

ELEMENT	PERFORMANCE CRITERIA
	practice
3. Develop own voice	3.1. Explore and experiment with new ideas in making and/or interpreting design work 3.2. Explore and use technology, where appropriate, to develop <i>own voice</i> and expand practice 3.3. Demonstrate own voice through design project realisation
4. Evaluate own work	4.1. Seek and apply constructive criticism from others to improve own work 4.2. Evaluate own work against planned strategy for own practice 4.3. Evaluate own work in the context of work by others in order to extend own practice 4.4. Adjust work processes and practice as necessary to improve technical, conceptual and commercial outcomes
5. Research work opportunities	5.1. Correctly identify <i>sources of information</i> relating to work opportunities for designers 5.2. Identify <i>networks</i> and <i>promotional opportunities</i> for designers which may be helpful in developing career opportunities 5.3. Incorporate research results and information into own work and career planning

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to discuss potentially complex ideas and concepts with others and to engage in critical discourse about own work
- creative thinking skills to explore and generate new ideas for design work
- comprehension skills to interpret and communicate a wide range of potentially complex information about design concepts and technologies
- problem-solving skills to explore and develop strategies and solutions to new design challenges and opportunities
- self-management skills to take pro-active responsibility for own professional

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
development.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• current and emerging copyright, moral rights and intellectual property issues and legislation, and their impact on designers</li> <li>• current and emerging designers in the relevant design discipline</li> <li>• current and emerging trends and technologies in the relevant design discipline, and the opportunities and challenges they represent</li> <li>• professional development information and resources available to designers</li> <li>• sources of information relating to work opportunities and career planning.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• development of own voice through exploring and experimenting with new ideas in making and/or interpreting work</li> <li>• application of planned strategies to develop appropriate skills in design practice</li> <li>• use of discussion and evaluation opportunities to inform and develop technical and conceptual skills.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to the materials, resources and equipment used in the development of technical and conceptual skills in the relevant design context.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• evaluation of candidate diary or log detailing the</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>ways in which different experiences and opportunities have been used to develop and extend skills</p> <ul style="list-style-type: none"> <li>• evaluation of bodies of work that demonstrate the progressive development of skills</li> <li>• evaluation of a presentation by the candidate addressing the ways in which a pro-active approach to skills development has been taken.</li> </ul>
<b>Guidance information for assessment</b>	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Strategies</i></b> for developing self as a designer may include:</p>	<ul style="list-style-type: none"> <li>• being involved in a range of relevant design activities</li> <li>• communicating with peers</li> <li>• experimenting</li> <li>• participating in professional development and other learning opportunities</li> <li>• participating in relevant groups or associations</li> <li>• practising</li> <li>• undertaking training courses</li> <li>• working effectively with supervisor</li> <li>• working with a mentor or coach</li> </ul>
<p><b><i>Technical skills</i></b> may include skills in:</p>	<ul style="list-style-type: none"> <li>• animation</li> <li>• digital/electronic design</li> <li>• entertainment design</li> <li>• fashion/clothing/accessories design</li> <li>• furnishings</li> <li>• furniture design</li> <li>• graphic design</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• illustration/technical drawing</li> <li>• interior design</li> <li>• jewellery design</li> <li>• object design</li> <li>• photoimaging</li> <li>• tableware design</li> <li>• other design disciplines</li> </ul>
<i>Testing capabilities</i> refers to:	<ul style="list-style-type: none"> <li>• experimenting with innovative applications</li> <li>• extending the possibilities of materials, tools and equipment towards their full potential</li> </ul>
<i>Relevant media</i> may include:	<ul style="list-style-type: none"> <li>• catalogues</li> <li>• journals</li> <li>• magazines</li> </ul>
<i>Opportunities to develop own skills</i> may include participation in and/or attendance at, some of the following:	<ul style="list-style-type: none"> <li>• competitions</li> <li>• exhibitions</li> <li>• floor talks at galleries</li> <li>• laboratories</li> <li>• lectures, seminars, conferences, symposiums</li> <li>• manufacturing sites</li> <li>• master classes</li> <li>• professional organisations</li> <li>• trade fairs, expositions</li> </ul>
Developing <i>own voice</i> includes:	<ul style="list-style-type: none"> <li>• analysing and researching the work of others relevant to selected area of specialisation</li> <li>• analysing conventions, practices and customs in design practice</li> <li>• developing repertoire and knowledge</li> <li>• exploring elements and principles of design</li> </ul>
<i>Sources of information</i> may include:	<ul style="list-style-type: none"> <li>• design journals</li> <li>• employer listings</li> <li>• exhibition catalogues and programs</li> <li>• job advertisements</li> <li>• websites</li> <li>• word of mouth</li> </ul>
<i>Networks</i> may include:	<ul style="list-style-type: none"> <li>• alumni organisations</li> <li>• colleagues and teachers</li> <li>• consumer organisations</li> <li>• professional associations</li> </ul>
<i>Promotional opportunities</i> may	<ul style="list-style-type: none"> <li>• applications to funding bodies</li> </ul>



**RANGE STATEMENT**

include:

- competitions
- demonstrations
- exhibitions
- performances
- trade fairs

**Unit Sector(s)**

Unit sector

**Competency field**

Competency field

Design - Design Process

**Co-requisite units**

Co-requisite units

## BSBDES501A Implement design solutions

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to take a design concept or solution to the implementation stage.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who implement concepts and solutions in response to a design challenge in any industry context. It takes BSBDES401A Generate design solutions, to the next stage focusing on the resourcing and testing of a design concept.</p> <p>The outcome of work could be a completed product, object, system or service, but is more likely to be a complete or partial prototype or model for the design.</p> <p>The focus of the unit is on a general knowledge of design techniques and processes, and practical application to a specific design context.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Organise resources for realising the design solution	1.1. Confirm the nature and scope of the proposed design solution 1.2. Research <i>resources</i> required for developing the design concept to <i>implementation stage</i> 1.3. Investigate different <i>factors that impact on the selection and use of resources</i> 1.4. Select and prepare resources based on research and other <i>legislative or organisational requirements</i>
2. Test the design solution	2.1. Experiment with a range of different <i>techniques and processes to test the design solution</i> 2.2. Evaluate, challenge and refine testing processes 2.3. Gain input and feedback from <i>key stakeholders</i> during the testing process 2.4. Accurately document outcomes of testing 2.5. Select final design solution based on outcomes of

ELEMENT	PERFORMANCE CRITERIA
	testing and input from others
3. Develop the prototype or model	3.1. Create prototype or model based on agreed approaches 3.2. Where appropriate, select and organise materials, tools and equipment according to chosen design solution 3.3. Expose model or prototype to quality checks and ongoing analysis, enhancement and refinement 3.4. Compare completed prototype or model against <i>identified needs and other considerations</i> and make adjustments as required
4. Present the prototype or model	4.1. Identify key stakeholders to whom design should be presented 4.2. Select <i>appropriate format</i> for presentation based on nature of the audience and design 4.3. Present prototype or model in a way that optimises clarity, conciseness and appeal

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to consult with others on testing and refinement of the design solution
- creative thinking skills to develop and adapt responses to experimentation and testing processes
- literacy skills to interpret and develop a wide range of visual and written information sources
- planning and organisational skills to organise resources and to coordinate a testing process, including liaison and consultation with others during the design process
- problem-solving skills to respond to unpredictable issues and challenges that arise during the testing process.

#### Required knowledge

- copyright, moral rights and intellectual property issues and legislation that impact on design in the relevant context
- elements and principles of design and their application in the relevant design

**REQUIRED SKILLS AND KNOWLEDGE**

context

- features of the wider industry, economic, social and historical context for the design solution
- other designs and the work of other design practitioners in the relevant context
- sources of information that support the development of technical and other knowledge
- technical knowledge of the area for which design solutions are being implemented - in terms of relevant resources, materials, tools, equipment, techniques and industry processes and procedures.

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- critical analysis, testing and development of a model, prototype or aspect of a design solution to meet an identified need
- knowledge of design trends and technologies in the relevant industry context.

**Context of and specific resources for assessment**

Assessment must ensure:

- interaction with others to reflect the collaborative nature of the design process
- access to resources required to test a design solution in a given industry context (e.g. finance, materials, tools, equipment, expertise).

**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- evaluation of a design solution implemented by the candidate against an original brief, set of criteria or

<b>EVIDENCE GUIDE</b>	
	<p>guiding objectives</p> <ul style="list-style-type: none"> <li>• evaluation of the processes used to test and refine the solution</li> <li>• oral or written questioning to assess knowledge of technical and context issues that impact on design in a given industry context.</li> </ul>
<b>Guidance information for assessment</b>	<p>The design process does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p> <p>Combined assessment with the following unit is appropriate:</p> <ul style="list-style-type: none"> <li>• BSBDES401A Generate design solutions.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Resources</i></b> will depend on the nature of the design, but may be:</p>	<ul style="list-style-type: none"> <li>• financial: <ul style="list-style-type: none"> <li>• budget allocation</li> <li>• grants</li> <li>• in kind contributions</li> <li>• sponsorship</li> </ul> </li> <li>• human expertise: <ul style="list-style-type: none"> <li>• creative</li> <li>• financial</li> <li>• management</li> <li>• technical</li> </ul> </li> <li>• physical: <ul style="list-style-type: none"> <li>• hardware or software</li> <li>• materials</li> <li>• tools</li> <li>• workspaces</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
<b><i>Implementation stage</i></b> could be the point at which:	<ul style="list-style-type: none"> <li>• marketing can commence</li> <li>• production can commence</li> <li>• production is confirmed</li> <li>• staff can be employed</li> </ul>
<b><i>Factors that impact on the selection and use of resources</i></b> may relate to:	<ul style="list-style-type: none"> <li>• environmental considerations</li> <li>• industry context</li> <li>• social or ethical issues</li> <li>• sustainability</li> <li>• technologies</li> </ul>
<b><i>Legislative or organisational requirements</i></b> may relate to:	<ul style="list-style-type: none"> <li>• commonwealth or state/territory legislation</li> <li>• licensing requirements</li> <li>• local regulations and standards</li> <li>• policies or procedures</li> </ul>
<b><i>Techniques and processes to test the design solution</i></b> will depend on the nature of the design, and may include:	<ul style="list-style-type: none"> <li>• colour tests</li> <li>• mock ups</li> <li>• models</li> <li>• practice pieces</li> <li>• samples</li> <li>• scenario testing</li> <li>• stress tests</li> </ul>
<b><i>Key stakeholders</i></b> may include:	<ul style="list-style-type: none"> <li>• client</li> <li>• employer</li> <li>• end user</li> <li>• peers</li> <li>• supervisor</li> <li>• technical experts</li> <li>• work colleagues</li> </ul>
<b><i>Identified needs and other considerations</i></b> may relate to:	<ul style="list-style-type: none"> <li>• access to and availability of resources</li> <li>• aesthetic considerations</li> <li>• budgetary constraints</li> <li>• ease of manufacture</li> <li>• opportunities for innovation</li> <li>• specifications of a brief</li> <li>• wider industry trends</li> </ul>
<b><i>Appropriate format</i></b> may include:	<ul style="list-style-type: none"> <li>• drawings or sketches - manual or computer aided design and drafting (CADD)</li> <li>• electronic presentation</li> <li>• verbal presentation</li> <li>• written notes with rationale or description</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Design - Design Process
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### Co-requisite units

<b>Co-requisite units</b>		



## BSBDES502A Establish, negotiate and refine a design brief

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to work pro actively with a client or commissioning organisation to develop and negotiate a design brief.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals working in any industry or design context where the designer plays a key role in determining the scope and nature of work required. This unit builds on BSBDES402A Interpret and respond to a design brief, which focuses on working with an established brief.</p> <p>Establishment, negotiation and refinement of a design brief requires the integration of highly developed creative thinking, communication and planning skills in a process that may not be linear. Adaptability and effective response to change and new ideas is crucial.</p> <p>In practice, this unit supports and is supported by other units describing the specialist skills and knowledge required by specific design disciplines.</p>
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### Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Establish design requirements	<p>1.1. Identify and make appropriate contact with <b><i>relevant stakeholders</i></b> for the design project, in addition to the client</p> <p>1.2. Identify and source <b><i>information and references relevant to the design project</i></b></p> <p>1.3. Undertake <b><i>critical analysis</i></b> of sources and extract key information to inform the design project</p> <p>1.4. Liaise with client and other key stakeholders to determine <b><i>overall objectives and parameters</i></b> for the design project</p> <p>1.5. Pro-actively seek, review and act upon information needed to inform constructive communication with client</p> <p>1.6. Build trust and respect between self and client</p>

ELEMENT	PERFORMANCE CRITERIA
	through effective use of communication skills and demonstration of professional integrity
2. Develop and refine design brief	2.1. Develop concepts and ideas for inclusion in design brief that take account of overall objectives and parameters 2.2. Undertake own analysis of concept and challenge ideas and approaches taken to ensure responsiveness to project needs 2.3. Present ideas in an <i>appropriate format/medium</i> and seek feedback from key stakeholders 2.4. Use effective communication techniques to generate discussion, debate and critical analysis 2.5. Re-evaluate and refine options based on own analysis and discourse with others 2.6. Establish and agree on final nature and scope of design brief with client and accurately document details
3. Negotiate terms and conditions	3.1. Negotiate and agree <i>terms and conditions</i> of the brief in accordance with relevant <i>organisational and professional standards</i> 3.2. Clarify, agree and document roles and responsibilities of those involved in the project 3.3. Confirm agreements in writing in accordance with <i>organisational requirements</i> 3.4. Identify the need for and seek specialist advice in developing, formal agreements or contracts where appropriate

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication, presentation and negotiation skills to work with clients to establish and refine design briefs
- creative thinking skills to generate and develop concepts and ideas for the design brief, including responses to situations where parameters may be quite broad and open or very restrictive

**REQUIRED SKILLS AND KNOWLEDGE**

- literacy skills to research and evaluate a wide range of source materials for the development of ideas and concepts
- numeracy skills to develop realistic costings for realisation of design concept
- planning and organisational skills to guide and coordinate the process of negotiating and finalising a design brief
- problem-solving skills to pro-actively identify and develop effective solutions to complex challenges of a varied and unpredictable nature
- self-management skills to take responsibility for driving and guiding the brief negotiation process.

**Required knowledge**

- copyright, moral rights and intellectual property issues and legislation that impact on design in the relevant work context
- legal issues that affect negotiations and contracts in the relevant work context
- scope, nature and potential variations within design briefs relevant to a specific context
- sources of information that inform the development of design concepts within a specific industry context.

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- practical demonstration of skills through the development and finalisation of at least two design briefs for a specific industry purpose
- effective collaboration and communication skills to work with others to develop and refine a design brief
- knowledge of the design process within the specific industry context/design discipline.

**Context of and specific resources for assessment**

Assessment must ensure:

- access to appropriate equipment and media to communicate and present ideas and concepts
- access to sources of information relevant to the

<b>EVIDENCE GUIDE</b>	
	<p>industry context</p> <ul style="list-style-type: none"> <li>interaction with and involvement of others to reflect the collaborative nature of the work, and the communication and negotiation skills required.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>evaluation of a design brief in which the candidate has played a significant development role</li> <li>evaluation of reports prepared by the candidate detailing the processes undertaken for establishing and refining the design brief, including challenges faced and lessons learned for the future</li> <li>observation of discussions and negotiations with client and other stakeholders</li> <li>oral or written questioning to assess knowledge of the process and issues surrounding legislation, industry context, sources of information</li> <li>evaluation of candidate response to different scenarios to assess ability to adapt approach to different client requirements and contexts.</li> </ul>
<b>Guidance information for assessment</b>	<p>The design process does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>any specialised design unit.</li> </ul>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>RANGE STATEMENT</b>	
<b><i>Relevant stakeholders</i></b> in addition to the client may include:	<ul style="list-style-type: none"> <li>• authorities such as local council for outdoor event design</li> <li>• creative specialists</li> <li>• other designers</li> <li>• others involved in the project</li> <li>• production teams</li> <li>• technical specialists</li> <li>• venue managers</li> </ul>
<b><i>Information and references relevant to the design project</i></b> may include:	<ul style="list-style-type: none"> <li>• environment</li> <li>• financial information</li> <li>• legislative and regulatory requirements</li> <li>• music and/or film/video</li> <li>• oral history</li> <li>• organisational information</li> <li>• photographs and other artworks</li> <li>• project team members</li> <li>• promotional material</li> <li>• technical reports/data</li> <li>• texts and other written references</li> <li>• work of other designers/artists</li> </ul>
<b><i>Critical analysis</i></b> may involve:	<ul style="list-style-type: none"> <li>• considering how ideas may be adapted</li> <li>• considering how ideas may be challenged</li> <li>• drawing links between references and potential designs</li> <li>• evaluating work of other designers</li> <li>• making judgements about potential ideas in relation to the budget and available resources</li> <li>• making judgements about relevance of information and ideas</li> </ul>
<b><i>Overall objectives and parameters</i></b> may relate to:	<ul style="list-style-type: none"> <li>• audience</li> <li>• availability of materials, tools, equipment and human resources</li> <li>• budget constraints</li> <li>• conflicting competing demands</li> <li>• environmental sustainability</li> <li>• organisational vision</li> <li>• presentation venue/context</li> <li>• sponsorship</li> <li>• timeframe</li> <li>• triple bottom line (people, planet, profit)</li> </ul>

<b>RANGE STATEMENT</b>	
<i>Appropriate format/medium</i> for presentation of ideas may include:	<ul style="list-style-type: none"> <li>• checklists</li> <li>• digital presentation</li> <li>• drawings</li> <li>• electronic presentations</li> <li>• graphic formats</li> <li>• models</li> <li>• paintings</li> <li>• photographs</li> <li>• plans</li> <li>• prototypes</li> <li>• verbal description/oral presentation</li> <li>• video</li> <li>• visual diagrams</li> </ul>
<i>Terms and conditions</i> may relate to:	<ul style="list-style-type: none"> <li>• conceptual parameters</li> <li>• contracts</li> <li>• deliverables</li> <li>• legal and financial issues such as processes to be used</li> <li>• ownership and copyright</li> <li>• reporting</li> <li>• technical requirements</li> <li>• time lines</li> </ul>
<i>Organisational and professional standards</i> may include:	<ul style="list-style-type: none"> <li>• industry-accepted fee schedules</li> <li>• industry standards for written agreements</li> <li>• requirements for written agreements</li> </ul>
<i>Organisational requirements</i> for confirming agreements may include:	<ul style="list-style-type: none"> <li>• approval and ongoing communication processes</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

Competency field	Design - Design Process
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## Co-requisite units

Co-requisite units		



## BSBFIA301A Maintain financial records

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to maintain financial records for a business. It includes maintaining daily financial records such as reconciling debtors' and creditors' systems, preparing and maintaining a general ledger, and preparing a trial balance. It also includes activities associated with monitoring cash control for accounting purposes.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts. They may exercise discretion and judgement using appropriate theoretical knowledge of financial records to provide technical advice and support to a team.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

Employability skills	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain daily financial records	<p>1.1. Correctly maintain daily financial records and in accordance with <b><i>organisational requirements</i></b> for accounting purposes</p> <p>1.2. Identify and rectify or refer <b><i>discrepancies</i></b> or errors in <b><i>documentation</i></b> or transactions to <b><i>designated persons</i></b> in accordance with organisational requirements</p> <p>1.3. Accurately credit and debit transactions and promptly enter into <b><i>journals</i></b> in accordance with organisational requirements</p>
2. Maintain general ledger	<p>2.1. Maintain general ledger in accordance with organisational requirements</p> <p>2.2. Post <b><i>transactions</i></b> into general ledger in accordance with organisational reporting requirements</p> <p>2.3. <b><i>Reconcile systems for accounts payable and receivable</i></b> with general ledger</p> <p>2.4. Accurately prepare trial balance from general ledger in accordance with organisational requirements</p>
3. Monitor cash control	<p>3.1. Ensure cash flow is accurately accounted for in accordance with organisational requirements</p> <p>3.2. Make and receive <b><i>payments</i></b> in accordance with</p>

ELEMENT	PERFORMANCE CRITERIA
	organisational requirements 3.3. Collect or follow-up outstanding accounts within designated time lines 3.4. Check payment documentation for accuracy of information and despatch to creditors within <i>designated time line</i>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy skills to identify financial information; to read and understand the organisation's accounting procedures; and to edit and proofread documents to ensure conformity and consistency of information
- communication skills to clarify information and to refer errors or discrepancies to appropriate people
- numeracy skills to read and interpret financial data and to prepare cash analysis sheets
- problem-solving skills to reconcile figures.

#### Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - financial legislation
  - occupational health and safety (OHS)
- organisational policies and procedures relating to maintaining financial records
- definition of credits/creditors and debits/debtors
- principles of double entry bookkeeping and accrual accounting
- methods of presenting financial data.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• identifying and responding to discrepancies and errors</li> <li>• transferring and recording financial data accurately</li> <li>• reconciling expenditures and revenue</li> <li>• knowledge of organisational policies and procedures relating to maintaining financial records.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to an actual workplace or simulated environment</li> <li>• access to office equipment and resources</li> <li>• examples of source documents relating to financial record keeping.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• review of identification and rectification or referral of discrepancies or errors in documentation or transactions</li> <li>• analysis of responses to case studies and scenarios</li> <li>• demonstration of techniques</li> <li>• oral or written questioning to assess knowledge of financial record keeping</li> <li>• examples of financial documentation.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• general administration units</li> <li>• other financial administration units.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Organisational requirements</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• designated time lines</li> <li>• guidelines for reconciling journals</li> <li>• legal and organisational policies, guidelines and requirements</li> <li>• OHS policies, procedures and programs</li> <li>• procedures for totalling adjusted journals</li> <li>• quality assurance and/or procedures manuals</li> <li>• resolution procedures</li> <li>• security procedures</li> </ul>
<p><b><i>Discrepancies</i></b> may relate to:</p>	<ul style="list-style-type: none"> <li>• bank charges</li> <li>• dishonoured cheques</li> <li>• errors in transposing between source documents and journals</li> <li>• interest</li> </ul>
<p><b><i>Documentation</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• purchase credit notes</li> <li>• purchase invoices</li> <li>• sales credit notes</li> <li>• sales invoices</li> </ul>
<p><b><i>Designated persons</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• bank</li> <li>• line management</li> <li>• organisation's authorisations department</li> <li>• statutory body</li> <li>• supervisor</li> </ul>
<p><b><i>Journals</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• cash payments</li> <li>• cash receipts</li> <li>• purchases and purchase returns</li> <li>• sales and sales returns</li> </ul>
<p><b><i>Transactions</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• commencing business entries</li> <li>• correction of posting errors</li> <li>• interest expense</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• interest receivable</li> <li>• non-cash transactions (e.g. writing-off depreciation, stock losses)</li> <li>• purchase of a fixed asset on credit</li> <li>• sale of a fixed asset on credit</li> <li>• withdrawal of stock/assets by owner</li> <li>• write-off a bad debt</li> </ul>
<i>Reconciling systems for accounts payable and receivable</i> may include:	<ul style="list-style-type: none"> <li>• checking accuracy of creditor account balances (e.g. cash payments journal, purchases journal, purchases returns journal, general journal)</li> <li>• checking accuracy of debtor account balances (e.g. cash receipts journal, sales return journal, general journal)</li> <li>• checking cash payments and receipt journals against bank statement</li> <li>• checking the total of the creditor's schedule equals the balance of the creditor's control account</li> <li>• checking the total of the debtor's schedule equals the balance of the debtor's control account</li> </ul>
<i>Payments</i> may include:	<ul style="list-style-type: none"> <li>• cash</li> <li>• cheque</li> <li>• credit card</li> <li>• direct debit</li> </ul>
<i>Designated time lines</i> may include:	<ul style="list-style-type: none"> <li>• by month end</li> <li>• monthly</li> <li>• within agreed period</li> <li>• within organisational deadline</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

<b>Competency field</b>	Finance - Financial Administration
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## Co-requisite units

<b>Co-requisite units</b>		

## BSBFIA402A Report on financial activity

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to report financial activity for business both in response to client requests and to meet statutory requirements such as the completion of statutory requirement reports.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals with a broad knowledge of financial activities who contribute financial skills and knowledge to address reporting requirements of clients and legal authorities. They may have responsibility to provide guidance or to delegate aspects of these tasks to others.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Compile financial information and data	<p>1.1. Collect, evaluate and code current <i>financial data</i> to ensure consistency, quality and accuracy in accordance with <i>organisational requirements</i></p> <p>1.2. Use <i>conversion and consolidation procedures</i> to compile analysis in accordance with organisational requirements</p> <p>1.3. Make, record and disclose asset and liability valuations in accordance with organisational requirements</p> <p>1.4. Ensure that <i>discrepancies</i>, unusual features or queries are identified, resolved or referred to the appropriate authority</p>
2. Prepare statutory requirement reports	<p>2.1. Correctly record income and expenditure to ensure compliance with <i>statutory requirements</i></p> <p>2.2. Calculate liabilities for tax in accordance with current legislation and <i>revenue gathering practices</i></p> <p>2.3. Correctly identify relevant receipts, <i>revenue documentation</i> and payments</p> <p>2.4. Ensure that statements and claims take full advantage of <i>available benefits and allowances</i> in accordance with statutory requirements</p> <p>2.5. Submit statutory requirement reports to appropriate authorities within <i>stated deadlines</i></p>

ELEMENT	PERFORMANCE CRITERIA
3. Provide financial business recommendations	3.1.Ensure that <i>recommendations</i> are logically derived and supported by <i>evidence</i> in report 3.2.Provide recommendations to propose constructive actions to enhance the effectiveness and efficacy of functions and services 3.3.Ensure recommendations are concise and facilitate direction and control of organisation's operations 3.4.Identify and prioritise <i>significant issues</i> in statements including comparative financial performances for review and decision making 3.5.Ensure structure and <i>format of reports</i> are clear and conform to organisational and statutory requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy skills to identify financial information and the organisation's accounting procedures, and to create financial reports
- problem-solving skills to deal with a defined range of predictable problems
- decision making skills to make routine decisions
- numeracy skills to calculate data and to reconcile figures.

#### Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - financial legislation
  - occupational health and safety (OHS)
- principles of double entry bookkeeping and accrual accounting
- techniques for forecasting and analysis
- Federal government taxes and charges

**REQUIRED SKILLS AND KNOWLEDGE**

- options, methods and practices for deductions, benefits and depreciations.

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- organising financial data to highlight relevant features
- presenting financial data in comprehensive format
- completing Business Activity Statements
- knowledge of relevant legislation.

**Context of and specific resources for assessment**

Assessment must ensure:

- access to an actual workplace or simulated environment
- access to office equipment and resources
- examples of financial data, reports and documents.

**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- review of income and expenditure records
- analysis of responses to case studies and scenarios
- demonstration of techniques
- review of tax liabilities calculations
- oral or written questioning to assess knowledge of principles of double entry bookkeeping and accrual accounting
- assessment of recommendations provided proposing constructive actions to enhance the effectiveness and efficacy of functions and services.

**EVIDENCE GUIDE****Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- general administration units
- other financial administration units.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Financial data*** may include:

- Australian Bureau of Statistics (ABS) economic data
- budget variances
- budgets and forecasts
- cash flow/profit reports
- financial markets monitoring services (e.g. Reuters)
- financial/operational statements and reports (e.g. expenditures and receipts, profit and loss statements)
- market valuations

***Organisational requirements*** may include:

- financial analysis assessments
- financial management manuals
- legal and organisational policies, guidelines and requirements
- OHS policies, procedures and programs
- price and exchange parameters
- quality assurance and/or procedures manuals
- recording and filing systems
- reporting requirements
- standard financial analysis techniques

***Conversion and consolidation procedures*** may include:

- moving averages
- spreadsheets

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• standardised variables</li> <li>• trend analysis</li> <li>• unit costs</li> </ul>
<i>Discrepancies</i> may include:	<ul style="list-style-type: none"> <li>• absence of auditable trail</li> <li>• expenditure report mismatches</li> <li>• inappropriate authorisations</li> <li>• incorrect payments</li> <li>• incorrect report formats</li> <li>• unreconciled cash flows and operating statements</li> <li>• variances from budget and phasings</li> </ul>
<i>Statutory requirements</i> may include:	<ul style="list-style-type: none"> <li>• delegated authorities</li> <li>• internal control procedures</li> <li>• reporting periods</li> <li>• taxation payment timings</li> </ul>
<i>Revenue gathering practices</i> may include:	<ul style="list-style-type: none"> <li>• billing schedules</li> <li>• fees and charges</li> <li>• investments</li> <li>• leasing</li> <li>• lending and financing</li> <li>• sales</li> </ul>
<i>Revenue documentation</i> may include:	<ul style="list-style-type: none"> <li>• bills</li> <li>• cash received</li> <li>• debit notes</li> <li>• declarations</li> <li>• invoices</li> <li>• sales proceeds</li> </ul>
<i>Available benefits and allowances</i> may include:	<ul style="list-style-type: none"> <li>• depreciation</li> <li>• donations</li> <li>• interest payments</li> <li>• sales tax deductions</li> </ul>
<i>Stated deadlines</i> may include:	<ul style="list-style-type: none"> <li>• annual reports</li> <li>• lodgement dates</li> <li>• monthly returns</li> <li>• payment schedules</li> </ul>
<i>Recommendations</i> may include:	<ul style="list-style-type: none"> <li>• cash flow</li> <li>• consolidation</li> <li>• expenses</li> <li>• loss</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• profit</li> <li>• write-offs</li> </ul>
<i>Evidence</i> may include:	<ul style="list-style-type: none"> <li>• budgetary analysis</li> <li>• forecasts and estimates</li> <li>• order and supplier documentation</li> <li>• returns on investments</li> <li>• taxation and statutory returns</li> </ul>
<i>Significant issues</i> may include:	<ul style="list-style-type: none"> <li>• cost structures</li> <li>• internal controls</li> <li>• losses and returns</li> <li>• profitability</li> <li>• statutory obligations</li> <li>• suppliers</li> </ul>
<i>Format of reports</i> may include:	<ul style="list-style-type: none"> <li>• balance sheets</li> <li>• cash flow statements</li> <li>• electronic forms</li> <li>• financial year reports</li> <li>• operating statements</li> <li>• spreadsheets</li> <li>• statutory forms</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Finance - Financial Administration
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### Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## BSBFIM501A Manage budgets and financial plans

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to undertake financial management within a work team in an organisation. This includes planning and implementing financial management approaches, supporting team members whose role involves aspects of financial operations, monitoring and controlling finances, and reviewing and evaluating effectiveness of financial management processes in line with the financial objectives of the work team and the organisation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit addresses the requirement for managers to ensure that financial resources are used effectively. This is done by ensuring access to budget/s and ongoing monitoring expenditure against the budget/s.</p> <p>The unit applies to managers working in small and large business environments and not for profit organisations.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	



<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan financial management approaches	1.1. Access <b><i>budget/financial plans</i></b> for the work team 1.2. Clarify budget/financial plans with <b><i>relevant personnel</i></b> within the organisation to ensure that documented outcomes are achievable, accurate and comprehensible 1.3. Negotiate any changes required to be made to budget/financial plans with relevant personnel within the organisation 1.4. Prepare <b><i>contingency plans</i></b> in the event that initial plans need to be varied
2. Implement financial management approaches	2.1. Disseminate relevant details of the agreed budget/financial plans to team members 2.2. Provide <b><i>support</i></b> to ensure that team members can competently perform <b><i>required roles</i></b> associated with the management of finances 2.3. Determine and access <b><i>resources and systems</i></b> to manage financial management processes within the

ELEMENT	PERFORMANCE CRITERIA
	work team
3. Monitor and control finances	<p>3.1. Implement <i>processes</i> to monitor actual expenditure and to control costs across the work team</p> <p>3.2. Monitor expenditure and costs on an agreed cyclical basis to identify cost variations and expenditure overruns</p> <p>3.3. Implement, monitor and modify contingency plans as required to maintain financial objectives</p> <p>3.4. <b>Report</b> on budget and expenditure in accordance with organisational protocols</p>
4. Review and evaluate financial management processes	<p>4.1. Collect and collate for analysis, <i>data and information on the effectiveness of financial management processes</i> within the work team</p> <p>4.2. Analyse data and information on the effectiveness of financial management processes within the work team and identify, document and recommend any improvements to existing processes</p> <p>4.3. Implement and monitor agreed improvements in line with financial objectives of the work team and the organisation</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- numeracy skills to read and understand a budget and to update a budget
- technology skills to use software associated with financial record keeping.

#### Required knowledge

- basic accounting principles
- organisational requirements related to financial management
- relevant legislation and current requirements of the Australian Taxation Office, including GST
- requirements for organisational record keeping and auditing
- principles and techniques involved in:
  - budgeting

**REQUIRED SKILLS AND KNOWLEDGE**

- cash flows
- electronic spreadsheets
- GST
- ledgers and financial statements
- profit and loss statements.

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- financial skills required to work with and interpret budgets, ageing summaries, cash flow, petty cash, GST, and profit and loss statements
- knowledge of the record keeping requirements for the ATO and for auditing purposes.

**Context of and specific resources for assessment**

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- assessment of written reports indicating broad knowledge of managing budgets and managing financial resources in the organisation
- demonstration of techniques using financial record keeping software
- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- oral or written questioning to assess knowledge of requirements for organisational record keeping and auditing

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• review of contingency plans</li> <li>• review of identification of cost variations and expenditure overruns</li> <li>• evaluation of documentation reporting on budget and expenditure</li> <li>• review of documentation identifying and recommending improvements to financial management processes.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• other units from the Diploma of Management.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Budget/financial plans</i></b> may include:	<ul style="list-style-type: none"> <li>• cash flow projections</li> <li>• long-term budgets/plans</li> <li>• operational plans</li> <li>• short-term budgets/plans</li> <li>• spreadsheet-based financial projections</li> <li>• targets or key performance indicators for production, productivity, wastage, sales, income and expenditure</li> </ul>
<b><i>Relevant personnel</i></b> may include:	<ul style="list-style-type: none"> <li>• financial managers, accountants or financial controllers</li> <li>• supervisors, other frontline managers</li> </ul>
<b><i>Contingency plans</i></b> may include:	<ul style="list-style-type: none"> <li>• contracting out or outsourcing human resources and other functions or tasks</li> <li>• diversification of outcomes</li> <li>• finding cheaper or lower quality raw materials and consumables</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• increasing sales or production</li> <li>• recycling and re-using</li> <li>• rental, hire purchase or alternative means of procurement of required materials, equipment and stock</li> <li>• restructuring of organisation to reduce labour costs</li> <li>• risk identification, assessment and management processes</li> <li>• seeking further funding</li> <li>• strategies for reducing costs, wastage, stock or consumables</li> <li>• succession planning</li> </ul>
<i>Support</i> may include:	<ul style="list-style-type: none"> <li>• access to specialist advice</li> <li>• documentation of procedures</li> <li>• help desk or identified experts within the organisation</li> <li>• information briefings or sessions</li> <li>• intranet-based information</li> <li>• training including mentoring, coaching and shadowing</li> </ul>
<i>Required roles</i> may include:	<ul style="list-style-type: none"> <li>• arranging for use of corporate credit cards</li> <li>• banking</li> <li>• debt collection</li> <li>• ensuring security, accuracy and currency of financial operations</li> <li>• invoicing clients, customers and consumers</li> <li>• maintaining journals, ledgers and other record keeping systems</li> <li>• maintaining petty cash system</li> <li>• purchasing and procurement</li> <li>• wages and salaries payments and record keeping</li> </ul>
<i>Resources and systems</i> may include:	<ul style="list-style-type: none"> <li>• hardware and software</li> <li>• human, physical or financial resources</li> <li>• record keeping systems (electronic and paper-based)</li> <li>• specialist advice or support</li> </ul>
<i>Processes</i> to monitor actual expenditure and to control costs across the work team include:	<ul style="list-style-type: none"> <li>• reporting of: <ul style="list-style-type: none"> <li>• assets</li> <li>• consumables</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• equipment</li> <li>• expenditure</li> <li>• income</li> <li>• stock</li> <li>• wastage</li> </ul>
<i>Reporting</i> may include data from:	<ul style="list-style-type: none"> <li>• bank statements</li> <li>• credit card statements</li> <li>• financial reports</li> <li>• invoices and receipts</li> <li>• ledgers and journals</li> <li>• logs</li> <li>• petty cash records</li> <li>• spreadsheet-based records</li> </ul>
<i>Data and information on the effectiveness of financial management processes</i> may include records (paper-based and electronic) related to:	<ul style="list-style-type: none"> <li>• bank account records</li> <li>• cash flow data</li> <li>• contracts</li> <li>• credit card receipts</li> <li>• employee timesheets</li> <li>• files of paid purchase and service invoices</li> <li>• income and expenditure</li> <li>• insurance reports</li> <li>• invoices</li> <li>• job costings</li> <li>• petty cash receipts</li> <li>• quotations</li> <li>• taxation records</li> <li>• wages/salaries books</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

<b>Competency field</b>	Management and Leadership - Management
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## Co-requisite units

Co-requisite units		

## BSBHRM402A Recruit, select and induct staff

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to execute tasks associated with the recruitment cycle.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals with a role in recruitment, selection and induction functions who work under the direction of a human resources manager.</p> <p>It is not assumed that the individuals addressed by this unit have staff who report to them, although this may be the case.</p> <p>Performance of the work described in this unit will be underpinned by in depth knowledge of the work of the organisation, and how recruitment and selection practices fit with other human resource functions.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		



<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Determine job descriptions	1.1. Clarify time lines and requirement for appointment 1.2. Assist with preparation of <i>job descriptions</i> which accurately reflect the role requirements in accordance with organisational procedures and <i>legislation, codes and national standards</i> and <i>occupational health and safety (OHS) considerations</i> 1.3. Consult with relevant personnel about job descriptions 1.4. Ensure that job descriptions do not contravene legislative requirements 1.5. Obtain approvals to advertise position
2. Plan for selection	2.1. <i>Advertise</i> vacancies for <i>staffing requirements</i> in accordance with organisational policies and procedures 2.2. Consult with relevant personnel to convene selection panel and to develop interview questions

ELEMENT	PERFORMANCE CRITERIA
	2.3.Short list applicants 2.4.Ensure that interview questions do not breach legislative requirements 2.5.Schedule interviews and advise relevant personnel of times, dates and venues
3. Assess and select applicants	3.1.Participate in interview process and assess candidates against agreed selection criteria 3.2.Discuss assessment with other selection panel members 3.3.Correct any biases or deviations from agreed procedures and negotiate for preferred candidate 3.4.Contact referees for referee reports 3.5.Prepare selection report and make recommendations to senior personnel for appointment 3.6.Advise unsuccessful candidates of outcomes and respond to any queries 3.7.Complete all necessary documentation in accordance with organisational procedures 3.8.Secure agreement of preferred candidate
4. Appoint and induct successful candidate	4.1.Provide successful candidate with employment contract and other documentation 4.2.Advise managers and staff of starting date and make necessary administrative arrangements for pay and employee record keeping 4.3.Advise manager and work team of new appointment 4.4.Arrange induction in accordance with organisational policy

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to use networks to source suitable applicants, to listen to and understand what is being said in interviews, and to advise on the outcomes of the selection process
- literacy skills to work with job descriptions to devise suitable questions for

<b>REQUIRED SKILLS AND KNOWLEDGE</b>
interviews, to prepare letters for unsuccessful applicants and to make job offers
<ul style="list-style-type: none"> <li>organising and scheduling skills to arrange interviews and venues.</li> </ul>
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>documentation required for recruitment and selection</li> <li>human resource functions, human resource life cycle and the place of recruitment and selection in that life cycle</li> <li>principles of equity, diversity and relevant legislation.</li> <li>range of interviewing techniques and other selection processes and their application.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>demonstrated ability to work with job descriptions to source and select suitable staff</li> <li>interviewing and other selection techniques that demonstrate awareness of equal opportunity and anti-discrimination requirements</li> <li>knowledge of the human resource life cycle.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>access to an appropriate range of documentation and resources normally used in the workplace.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>analysis of responses to case studies and scenarios</li> <li>assessment of written reports on recruitment and selection</li> <li>demonstration of selection techniques</li> <li>direct questioning combined with review of portfolios of evidence and third party workplace</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>reports of on-the-job performance by the candidate</p> <ul style="list-style-type: none"> <li>• observation of interviewing techniques</li> <li>• review of advertisements for staffing vacancies</li> <li>• review of documentation provided to successful candidate</li> <li>• oral or written questioning to assess knowledge of selection processes.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• other units from the Certificate IV in Human Resources.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Job descriptions</i></b> may include:	<ul style="list-style-type: none"> <li>• attributes</li> <li>• competencies required by staff</li> <li>• job or person specifications</li> <li>• job title and purpose of position</li> <li>• necessary skills and knowledge</li> <li>• qualifications</li> <li>• selection criteria</li> <li>• tasks or duties associated with the position</li> </ul>
<b><i>Legislation, codes and national standards</i></b> may include:	<ul style="list-style-type: none"> <li>• award and enterprise agreements, and relevant industrial instruments</li> <li>• relevant industry codes of practice</li> <li>• relevant legislation from all levels of government that affects business operation, especially in regard to OHS and environmental issues, equal opportunity, industrial relations and anti-discrimination</li> </ul>

<b>RANGE STATEMENT</b>	
<i>Occupational health and safety (OHS) considerations</i> may include:	<ul style="list-style-type: none"> <li>• establishment and maintenance of OHS training, records, induction processes</li> <li>• performance against OHS legislation and organisation's OHS system, especially policies, procedures and work instructions</li> </ul>
<i>Advertising</i> may include:	<ul style="list-style-type: none"> <li>• electronic or print</li> <li>• internal or external</li> <li>• outsourcing</li> </ul>
<i>Staffing requirements</i> may include:	<ul style="list-style-type: none"> <li>• permanent, temporary, full-time, part-time or casual</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Workforce Development - Human Resource Management
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### Co-requisite units

<b>Co-requisite units</b>	

## BSBHRM506A Manage recruitment selection and induction processes

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to manage all aspects of the recruitment selection and induction processes in accordance with organisational policies and procedures.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to human resources managers or human resources personnel who take responsibility for managing all aspects of selecting new staff and orientating those staff to their new positions. It is not assumed that the manager will be directly involved in the selection processes themselves, although this may well be the case.</p> <p>In small organisations this role may belong to someone who is not a dedicated human resources professional; the unit however will still be applicable.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Develop recruitment, selection and induction policies and procedures	1.1. Analyse strategic and operational plans and policies to identify relevant policies and objectives 1.2. Develop <b><i>recruitment, selection and induction policies and procedures</i></b> and supporting documents 1.3. Review options for technology to improve the efficiency and effectiveness of the recruitment and selection process 1.4. Obtain support for policies and procedures from senior managers 1.5. Trial forms and documents that support policies and procedures and make necessary adjustments 1.6. Communicate policies and procedures to relevant staff and provide training if required
2. Recruit and select staff	2.1. Determine future human resources needs in collaboration with <b><i>relevant managers and sections</i></b> 2.2. Ensure current position descriptors and person specifications for vacancies are used by managers

ELEMENT	PERFORMANCE CRITERIA
	<p>and others involved in the recruitment, selection and induction processes</p> <p>2.3. Provide access to training and other forms of support to all persons involved in the recruitment and selection process</p> <p>2.4. Ensure that <i>advertising</i> of vacant positions complies with organisational policy and legal requirements</p> <p>2.5. Utilise <i>specialists</i> where necessary</p> <p>2.6. Ensure that <i>selection procedures</i> are in accordance with organisational policy and legal requirements</p> <p>2.7. Ensure that processes for advising applicants of selection outcome are followed</p> <p>2.8. Ensure that job offers and contracts of employment are executed promptly and that new appointments are provided with advice about salary, terms and conditions</p>
3. Manage staff induction	<p>3.1. Provide access to training and ongoing support for all persons engaged in staff induction</p> <p>3.2. Check that induction processes are followed across the organisation</p> <p>3.3. Oversee the management of probationary employees and provide them with feedback until their employment is confirmed or terminated</p> <p>3.4. Obtain feedback from participants and relevant managers on the extent to which the induction process is meeting its objectives</p> <p>3.5. Make refinements to induction policies and procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to liaise across the organisation and to ensure that policies and procedures are well supported
- leadership skills to engage others and to ensure that good processes are followed and supported



## REQUIRED SKILLS AND KNOWLEDGE

- literacy skills to document clear policies and procedures and to develop proformas to support recruitment, selection and induction.

### Required knowledge

- concept of outsourcing
- diversity, equal employment opportunity and anti-discrimination principles and associated legislation
- employee contracts
- industrial relations
- recruitment and selection methods, including assessment centres
- relevant legislation on equal opportunity, industrial relations and anti-discrimination
- relevant terms and conditions of employment
- understanding of psychometric and skills testing programs
- workplace relations regulations, workplace relations legislation and other relevant legislation.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- development of a policy and procedures framework for recruitment, selection and induction OR critical analysis of an existing policy and procedures framework for recruitment, selection and induction
- knowledge of relevant legislation.

#### Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- assessment of written reports on recruitment,

<b>EVIDENCE GUIDE</b>	
	<p>selection and induction processes</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• review of training and other forms of support provided to all persons involved in the recruitment and selection process</li> <li>• evaluation of trialling of forms and documents that support policies and procedures</li> <li>• review of documentation outlining feedback obtained from participants and relevant managers on the extent to which the induction process is meeting its objectives</li> <li>• oral or written questioning to assess knowledge of relevant legislation and selection processes.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• other units form the Diploma of Human Resource Management.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Recruitment, selection and induction policies and procedures</i></b> may address:</p>	<ul style="list-style-type: none"> <li>• application processing</li> <li>• competency profiling</li> <li>• documentation and use of standard forms</li> <li>• equal opportunity, anti-discrimination and diversity principles</li> <li>• interviewing methodologies</li> <li>• job analysis</li> <li>• job classifications, assessment centres</li> <li>• job description</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• job evaluation</li> <li>• privacy and confidentiality</li> <li>• probationary periods</li> <li>• psychometric assessment</li> <li>• recruitment advertising</li> <li>• reference checks</li> <li>• selection panels and their composition</li> <li>• the application of commercial software packages to improve efficiency in recruitment and selection processes</li> <li>• training for new staff</li> <li>• use of external agencies</li> </ul>
<i>Relevant managers and sections</i> includes:	<ul style="list-style-type: none"> <li>• those who have a role in the recruitment selection or induction processes</li> </ul>
<i>Advertising</i> may occur through:	<ul style="list-style-type: none"> <li>• internal channels</li> <li>• internet</li> <li>• newspapers</li> <li>• radio</li> <li>• recruitment agencies or specialists</li> <li>• television</li> </ul>
<i>Specialists</i> may include:	<ul style="list-style-type: none"> <li>• recruitment agencies</li> <li>• remuneration specialists</li> <li>• staff who run security checks</li> <li>• vocational psychologists</li> </ul>
<i>Selection procedures</i> may include:	<ul style="list-style-type: none"> <li>• aptitude test or IQ tests</li> <li>• behaviour in leaderless groups</li> <li>• demonstration of techniques or technical skills</li> <li>• interviews, including structured interviews, behavioural interviews or other interviewing methodologies</li> <li>• peer assessments</li> <li>• personality testing</li> <li>• psychometric testing</li> <li>• referee reports</li> <li>• use of an assessment centre</li> <li>• work samples</li> </ul>

**Unit Sector(s)**

<b>Unit sector</b>	
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**Competency field**

<b>Competency field</b>	Workforce Development - Human Resource Management
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**Co-requisite units**

<b>Co-requisite units</b>		

## BSBHRM604A Manage employee relations

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the performance outcomes, skills and knowledge to develop and maintain a positive and productive workplace environment. It covers all aspects of employee relations impacting on managers at the strategic level.
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### Application of the Unit

Application of the unit	The unit is designed for non-specialist HR managers and covers the application of the broad range of employee relations activities.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement employee relations strategy and policies for own work area	<p>1.1.Ensure <b><i>employee relations</i></b> strategy is consistent with organisational strategic objectives</p> <p>1.2.Develop <b><i>strategies and policies</i></b> through the application of a risk management approach and extensive consultation and participation by relevant groups and individuals</p> <p>1.3.Ensure strategy and policies take account of equal opportunity, family/work relationships and promote the absence of discrimination and/or harassment</p> <p>1.4.Develop <b><i>risk management</i></b> strategies which take account of the withdrawal of labour and other potential outcomes of disputes</p> <p>1.5.Identify potential areas of conflict (if any) and ensure strategies and policies take account of the objectives of relevant groups and individuals</p>
2. Build and maintain a productive culture	<p>2.1.Negotiate awards, agreements, and contracts which balance organisational objectives and <b><i>employee rights and obligations</i></b></p> <p>2.2.Identify and meet all legal and organisational requirements within the <b><i>conditions of employment</i></b></p> <p>2.3.Undertake regular and timely consultation and communication with individuals and relevant groups</p> <p>2.4.Develop policies and practices to facilitate employee recruitment, retention and satisfaction</p> <p>2.5.Provide induction programs and training to develop competence and confidence, and to ensure work is performed safely and effectively</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.6. Provide opportunities for employees to understand their role and how it contributes to the achievement of organisational objectives</p> <p>2.7. Develop, regularly review and update individual and team development plans</p> <p>2.8. Evaluate and revise employee relations policies regularly</p>
3. Resolve employee relations problems	<p>3.1. Establish processes for early intervention to identify and minimise problems or grievances</p> <p>3.2. Communicate <i>problem solving processes</i> to, and obtain support from, all relevant groups and individuals</p> <p>3.3. Provide training to develop competence in conflict management, negotiation and dispute resolution</p> <p>3.4. Obtain <i>specialist</i> advice where appropriate or where formal hearings are required</p> <p>3.5. Ensure processes are fair, equitable and consistent with all relevant awards agreements and legislation</p> <p>3.6. Ensure problem solving processes provide for external mediation and conciliation, and arbitration where appropriate</p>
4. Manage diversity	<p>4.1. Develop plans for the promotion of <i>diversity</i> within the organisation</p> <p>4.2. Openly promote diversity and its benefits within the organisation</p> <p>4.3. Develop <i>education and communication plans</i> to promote and encourage diversity</p> <p>4.4. Develop and implement processes to deal with events which inhibit the organisation from meeting its diversity objectives</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities

## REQUIRED SKILLS AND KNOWLEDGE

- communication/consultation skills to ensure all relevant groups and individuals are advised of what is occurring and are provided with an opportunity for input
- conflict management skills to mediate, negotiate and/or attempt to obtain consensus between individuals/groups in conflict situations which are dysfunctional in relation to the organisation's performance
- networking skills to ensure support from key groups and individuals for concepts/ideas/products/services
- risk management skills to analyse, identify and develop mitigation strategies for identified risks.

## Required knowledge

- human resource planning
- human resource specialist assistance available
- industrial agreements
- key result areas of the organisation
- organisational plans and objectives (strategic, tactical and operational)
- organisational policies relating to balancing family/work relationships
- organisational support services for employees (external and internal)
- performance measurement systems utilised within the organisation
- relevant legislation from all levels of government that affects business operation such as:
  - award and enterprise agreements and relevant industrial instruments
  - Occupational Health and Safety
  - environmental issues
  - equal opportunity
  - industrial relations
  - anti-discrimination
  - relevant industry codes of practice
- staff development strategies
- unfair dismissal rules and due process.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment



<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• While the unit is designed for non-specialist HR managers, there is an expectation that competence will be demonstrated in the implementation of the full range of employee relations activities</li> <li>• Negotiation of employment agreements/contracts and the maintenance of high standards of performance in respect to equal opportunity and the management of diversity are key areas of assessment</li> <li>• Conflict management and early intervention in respect to employee grievances/problems are also key elements of the evidence to be presented during assessment.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to appropriate documentation and resources normally used in the workplace.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• assessment of written reports on employee relations</li> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• observation of presentations on employee relations management</li> <li>• oral or written questioning to assess knowledge of human resources function/s being reviewed and policy frameworks</li> <li>• evaluation of research undertaken</li> <li>• review of documentation analysing the strengths and weaknesses of employee relations' policies and strategies</li> <li>• review of documentation of behaviours associated with managing diversity and, resolving employee problems and grievances.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Employee relations includes:	<ul style="list-style-type: none"> <li>all of the activities in an organisation which impact on the employees' terms and conditions of employment and their personal well-being and satisfaction with their work environment</li> </ul>
<i>Strategies and policies</i> may include:	<ul style="list-style-type: none"> <li>discipline</li> <li>equal opportunity</li> <li>human resource strategy</li> <li>induction and training</li> <li>industrial/labour relations</li> <li>organisational values statement</li> <li>performance management</li> <li>racial discrimination/vilification</li> <li>remuneration and benefits</li> <li>selection/recruitment</li> <li>sexual harassment</li> </ul>
<i>Risk management</i> means:	<ul style="list-style-type: none"> <li>the process of identification of potential negative events and the development of plans to mitigate or minimise the likelihood of the negative event occurring and/or the consequences in the event it does occur</li> </ul>
<i>Employee rights and obligations</i> refers to:	<ul style="list-style-type: none"> <li>those contained within any award agreement or contract of employment, or implied terms of those agreements, together with all rights and obligations under the laws of the Commonwealth and the relevant state/territory</li> </ul>
<i>Conditions of employment</i> may include:	<ul style="list-style-type: none"> <li>grievance procedures</li> <li>holidays and leave entitlements</li> <li>hours of work</li> <li>penalty rates</li> <li>salary/wages</li> <li>superannuation</li> </ul>
<i>Problem solving processes</i> may include:	<ul style="list-style-type: none"> <li>arbitration</li> <li>conciliation</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>dispute resolution procedures</li> <li>grievance procedures</li> <li>mediation</li> </ul>
<i>Specialist</i> means:	<ul style="list-style-type: none"> <li>person expert in the conduct of formal hearings in the relevant jurisdiction</li> </ul>
<i>Diversity</i> refers to:	<ul style="list-style-type: none"> <li>any difference between individuals and groups, and includes age, gender, race, nationality, political and philosophical beliefs, or any other different individual or group characteristic</li> </ul>
<i>Education and communication plans</i> refers to:	<ul style="list-style-type: none"> <li>a structured program for the dissemination of information, and the receipt of feedback information from individuals, relevant to the process or activity</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Workforce Development - Human Resource Management
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### Co-requisite units

<b>Co-requisite units</b>	

## BSBINM201A Process and maintain workplace information

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to collect, process, store and maintain workplace information and systems. It also includes the maintenance of filing and records systems.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who perform a range of routine tasks in the workplace, using a limited range of practical skills and fundamental knowledge of information and information systems in a defined context, under direct supervision or with limited individual responsibility.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect information	1.1. Collect <i>information</i> in a timely manner and ensure that it is relevant to organisational needs 1.2. Use <i>business equipment/technology</i> available in the work area to effectively obtain information 1.3. Apply <i>organisational requirements</i> relating to security and confidentiality in handling information
2. Process workplace information	2.1. Use business equipment/technology to process information in accordance with organisational requirements 2.2. Process information in accordance with defined timeframes, guidelines and procedures 2.3. Update, modify and file information in accordance with organisational requirements 2.4. Collate and despatch information in accordance with specified timeframes and organisational requirements
3. Maintain information systems	3.1. Maintain information and filing systems in accordance with organisational requirements 3.2. Identify, <i>remove</i> and/or <i>relocate inactive or dead files</i> in accordance with organisational requirements 3.3. Establish and assemble new files in accordance with organisational requirements 3.4. Update reference and index systems in accordance with organisational requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy skills to read and understand organisation's recordkeeping and information systems(including classification systems), to follow sequenced written instructions and to comprehend/interpret nature of record content
- numeracy skills to sequence and index files
- planning skills to organise work priorities and arrangements
- problem-solving skills to solve routine problems
- technology skills to select and use technology appropriate to maintaining workplace information.

#### Required knowledge

- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - occupational health and safety
- organisational policies and procedures relating to collecting and processing workplace information
- organisational recordkeeping/filing systems and security procedures
- organisation's business and structure
- range of filing systems including paper-based and software-based.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• applying organisational policies and procedures for collecting and processing workplace information</li> <li>• accuracy in recording and documenting information</li> <li>• correctly storing, classifying and maintaining documents and records.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to an actual workplace or simulated environment</li> <li>• access to office equipment and resources</li> <li>• examples of workplace information systems.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• review of maintenance of information and filing systems</li> <li>• analysis of responses to case studies and scenarios</li> <li>• demonstration of techniques</li> <li>• oral or written questioning to assess knowledge of the management of information in the workplace.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• general administration units</li> <li>• other information management units.</li> </ul>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and

<b>RANGE STATEMENT</b>	
regional contexts) may also be included.	
<b>Information</b> may include:	<ul style="list-style-type: none"> <li>• computer databases (library catalogue, customer records)</li> <li>• computer files (letters, memos and other documents)</li> <li>• correspondence (faxes, memos, letters, email)</li> <li>• forms (insurance forms, membership forms)</li> <li>• invoices (from suppliers, to debtors)</li> <li>• minutes of meetings</li> <li>• personnel records (personal details, salary rates)</li> <li>• sales records (monthly forecasts, targets achieved)</li> </ul>
<b>Business equipment/technology</b> may include:	<ul style="list-style-type: none"> <li>• answering machine</li> <li>• binder</li> <li>• computer</li> <li>• fax machine</li> <li>• filing systems (manual/computerised/electronic)</li> <li>• photocopier</li> <li>• printer</li> <li>• telephone</li> </ul>
<b>Organisational requirements</b> may include:	<ul style="list-style-type: none"> <li>• despatching and collecting procedures</li> <li>• legal and organisational policies, guidelines and requirements</li> <li>• OHS policies, procedures and programs</li> <li>• procedures for deciding which records should be captured and filed</li> <li>• procedures for updating records</li> <li>• security procedures</li> </ul>
<b>Removing inactive or dead files</b> may include:	<ul style="list-style-type: none"> <li>• compressing computer files prior to archiving</li> <li>• periodically archiving or deleting files</li> <li>• transferring files at regular intervals or routinely checking for dead or inactive files</li> <li>• transferring records from the active filing system to secondary storage</li> </ul>
<b>Relocating inactive or dead files</b> may include:	<ul style="list-style-type: none"> <li>• electronic (email, internet access, diskette, tape, CD-ROM)</li> <li>• microfilm</li> <li>• photographic material</li> </ul>



**RANGE STATEMENT**

	• printed material
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**Unit Sector(s)**

<b>Unit sector</b>	
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**Competency field**

<b>Competency field</b>	Knowledge Management - Information Management
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**Co-requisite units**

<b>Co-requisite units</b>		

# BSBINM401A IMPLEMENT WORKPLACE INFORMATION SYSTEM

## Modification History

Not applicable.

## Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to implement the workplace information system. It involves the identification, acquisition, initial analysis and use of appropriate information, which plays a significant part in the organisation's effectiveness.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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## Application of the Unit

<b>Application of the unit</b>	<p>Frontline managers play a significant role in contributing to the organisation's effectiveness in identifying, acquiring, analysing and using appropriate information.</p> <p>At this level, work will normally be carried out within routine and non routine methods and procedures, which require planning and evaluation, leadership and guidance of others, and some discretion and judgement.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify and source information needs	1.1. Determine and locate <b><i>information</i></b> required by teams 1.2. Acquire and review information held by the organisation to determine suitability, accessibility, currency and reliability according to <b><i>organisational policies</i></b>
2. Collect, analyse and report information	2.1. Collect information, which is adequate and relevant to the needs of teams, in a timely manner 2.2. Ensure information is in a format suitable for analysis, interpretation and dissemination 2.3. Analyse information to identify and report relevant trends and developments in terms of the needs for which it was acquired
3. Implement information systems	3.1. Implement management information systems effectively to store, retrieve and regularly review data for decision making purposes 3.2. Use <b><i>technology</i></b> available in the work area to manage information effectively

ELEMENT	PERFORMANCE CRITERIA
	3.3. Submit recommendations for improving the information system to <i>designated persons and/or groups</i>
4. Prepare for information system changes	4.1. Collect information about information system future needs in consultation with <i>colleagues</i> , including those who have a specialist role in resource management 4.2. Ensure estimates of information system future needs reflect the organisation's <i>business plans</i> , and customer and supplier requirements 4.3. Support proposals to secure resources by clearly presenting submissions that describe realistic options, benefits, costs and outcomes 4.4. Prepare team members to work with new technology and information system changes

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy skills to work with information, and to research and present information in ways that are appropriate to the work team
- technology skills to work with a range of information systems.

#### Required knowledge

- information management systems and technology that would be associated with the workplace such as:
  - budgets and financial management systems
  - customer information software or records
  - databases
  - personal digital assistant (PDA)
  - product and service information
  - project management software
  - record management systems
  - spreadsheets.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>analysis of the information that is required for the effective functioning of the team's work together</li> <li>knowledge of the range of information systems that are, or should be, available in the workplace</li> <li>ability to recognise what information system changes and improvements will be required in the future.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>access to appropriate documentation and resources normally used in the workplace.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>demonstration of techniques in working with information management systems</li> <li>direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>oral or written questioning to assess knowledge of relevant technology</li> <li>review of documentation analysing information trends and developments</li> <li>written reports on future information system needs</li> <li>review of preparation undertaken for team members to work with new technology and information system changes.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>other units from the Certificate IV in Frontline Management.</li> </ul>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><b><i>Information</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• archived, filed and historical background data</li> <li>• continuous improvement and quality assurance data</li> <li>• data available internally or externally</li> <li>• data shared and retrieved in various forms such as in writing or verbally, electronically or manually</li> <li>• financial and contractual data</li> <li>• marketing and customer-related data</li> <li>• organisational performance data</li> <li>• planning and organisational documents</li> <li>• policies and procedures</li> </ul>
<p><b><i>Organisational policies</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• guidelines for decision making throughout the organisation that link the formulation of strategy with its implementation</li> <li>• sets of accepted actions approved by the organisation</li> <li>• Standard Operating Procedures</li> </ul>
<p><b><i>Technology</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• computerised systems and software such as databases, project management and word processing</li> <li>• telecommunications devices</li> <li>• any other technology used to carry out work roles and responsibilities</li> </ul>
<p><b><i>Designated persons and/or groups</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• groups designated in workplace policies and procedures</li> <li>• managers or supervisors with management roles and responsibilities concerning information systems</li> <li>• other stakeholders accessing the information system such as customers and service providers</li> <li>• other work groups or teams whose work will be affected by the system</li> </ul>

<b>RANGE STATEMENT</b>	
<i>Colleagues</i> may include:	<ul style="list-style-type: none"> <li>• employees at the same level or more senior managers</li> <li>• occupational health and safety committee members and other specialists</li> <li>• people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities</li> <li>• team members</li> </ul>
<i>Business plans</i> may include:	<ul style="list-style-type: none"> <li>• cash flow projections</li> <li>• long-term budgets/plans</li> <li>• operational plans</li> <li>• short-term budgets/plans</li> <li>• spreadsheet-based financial projections</li> <li>• targets or key performance indicators for production, productivity, wastage, sales, income and expenditure</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Management and Leadership - Management
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### Co-requisite units

<b>Co-requisite units</b>	

## BSBITU203A Communicate electronically

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to send, receive and manage electronic mail (email), as well as to collaborate online using chat rooms, intranets and instant messaging.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who use business technology to perform a range of routine tasks to communicate with co workers, customers or others. The individual will use a limited range of practical skills and fundamental knowledge in a defined context under direct supervision or with limited individual responsibility.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement procedures to send and receive electronic mail	<p>1.1. Log in to <i>software</i> for sending and receiving email in accordance with <i>organisational requirements</i></p> <p>1.2. <i>Check outgoing email for accuracy</i> and ensure any required <i>attachments</i> are prepared, in accordance with organisational and service provider requirements</p> <p>1.3. Identify urgent, confidential, personal, <i>suspicious or potentially dangerous email</i> and take appropriate actions</p> <p>1.4. <i>Deal with returned email</i> in accordance with organisational policies and procedures</p>
2. Manage electronic mail	<p>2.1. Set security levels and/or filters for incoming email in accordance with organisational requirements</p> <p>2.2. Create and maintain individual mailboxes in accordance with organisational requirements</p> <p>2.3. <i>Store email</i> and/or attachments in accordance with organisational requirements</p> <p>2.4. Empty inboxes and archive or permanently delete in accordance with organisational requirements</p> <p>2.5. Prepare and maintain electronic <i>mailing lists</i> in accordance with organisational requirements</p>
3. Collaborate online	<p>3.1. Identify software to be used in collaboration</p> <p>3.2. Ensure <i>online collaboration</i> is undertaken in</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with organisational policy, procedures and <i>net etiquette</i> (netiquette)</p> <p>3.3. Respond to posts or communications in accordance with agreed parameters, organisational requirements and netiquette</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to request advice, to receive feedback and to work with a team
- literacy skills to identify work requirements; to understand and process basic, relevant workplace information; and to draft simple correspondence
- problem-solving skills to solve routine technology problems.

#### Required knowledge

- different methods of electronic communication
- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - occupational health and safety.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• sending and receiving email for a range of purposes</li> <li>• attaching and removing documents to email</li> <li>• using software applications to collaborate online</li> <li>• knowledge of relevant legislation.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to an actual workplace or simulated environment</li> <li>• access to office equipment and resources</li> <li>• access to software applications likely to be used in the workplace.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• analysis of responses to case studies and scenarios</li> <li>• demonstration of techniques</li> <li>• oral or written questioning to assess knowledge of electronic communication methods and tools</li> <li>• review of attachments prepared for email</li> <li>• review of electronic mailing lists</li> <li>• evaluation of postings and responses to online discussions.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• general administration units</li> <li>• other IT use units.</li> </ul>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating

<b>RANGE STATEMENT</b>	
conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Software</i> may include:	<ul style="list-style-type: none"> <li>• mobile or wireless software applications: <ul style="list-style-type: none"> <li>• personal digital assistants (PDA)</li> <li>• mobile phones</li> <li>• text messaging (SMS/TXT)</li> <li>• multimedia messaging (MMS)</li> <li>• internet relay chat (IRC)</li> </ul> </li> <li>• personal computer-based software applications: <ul style="list-style-type: none"> <li>• email applications</li> <li>• web-based email services</li> <li>• chat applications</li> <li>• internet discussion groups/boards/chat rooms</li> <li>• intranet discussion groups/boards/chat rooms</li> </ul> </li> </ul>
<i>Organisational requirements</i> may include:	<ul style="list-style-type: none"> <li>• carbon copies or blind carbon copies</li> <li>• concise, relevant subject line</li> <li>• electronic signature</li> <li>• form of address</li> <li>• formality/informality of language, tone and structure</li> <li>• including original message in the reply</li> <li>• length of emails (i.e. short and to the point)</li> <li>• net ethics</li> <li>• net etiquette(netiquette)</li> <li>• requesting read receipt</li> <li>• sender's name and address</li> </ul>
<i>Checking outgoing email for accuracy</i> may include checking:	<ul style="list-style-type: none"> <li>• clarity of intended meaning</li> <li>• completeness</li> <li>• content</li> <li>• grammar</li> <li>• punctuation</li> <li>• recipient's address</li> <li>• spelling</li> <li>• structure</li> </ul>
<i>Attachments</i> may include:	<ul style="list-style-type: none"> <li>• PDFs</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• pictures</li> <li>• spreadsheets</li> <li>• word processed documents</li> <li>• any electronic file</li> </ul>
<i>Suspicious or potentially dangerous email</i> may include:	<ul style="list-style-type: none"> <li>• attachments</li> <li>• email where sender is unknown, and subject line is enticing and/or personal (e.g. urging the receiver to open immediately)</li> <li>• particular file extensions</li> <li>• spam (unsolicited commercial email or junk email)</li> <li>• unsolicited email containing viruses</li> </ul>
<i>Dealing with returned email</i> may include:	<ul style="list-style-type: none"> <li>• checking email address</li> <li>• checking size of attachment/s</li> <li>• re-sending</li> <li>• sending message by other means e.g. facsimile, post</li> <li>• telephoning addressee</li> </ul>
<i>Storing email</i> may include:	<ul style="list-style-type: none"> <li>• email application software</li> <li>• paper-based filing system</li> <li>• specialised recordkeeping, spreadsheet or database software</li> </ul>
<i>Mailing lists</i> may include:	<ul style="list-style-type: none"> <li>• database or spreadsheet records</li> <li>• electronic address books</li> <li>• word processing tables or data files</li> </ul>
<i>Online collaboration</i> may include:	<ul style="list-style-type: none"> <li>• chat rooms</li> <li>• email communications</li> <li>• instant messaging</li> <li>• intranet</li> </ul>
<i>Net etiquette</i> may include:	<ul style="list-style-type: none"> <li>• accepted (not mandated) rules for being a good net citizen (netizen)</li> <li>• adjust to the style and tone of discussion groups</li> <li>• be forgiving of other's mistakes</li> <li>• do not abuse your power</li> <li>• if you would not do it in real life do not do it in cyberspace</li> <li>• keep flames under control (flaming is making personal attacks on others)</li> <li>• look good online (spelling, grammar, and have</li> </ul>

**RANGE STATEMENT**

	<p>something worth saying)</p> <ul style="list-style-type: none"> <li>• protocols for discussion groups</li> <li>• remember you are dealing with real people not computers</li> <li>• respect copyright</li> <li>• respect other people's privacy</li> <li>• respect other's time and bandwidth</li> <li>• share expert knowledge</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	
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**Competency field**

<b>Competency field</b>	Information and Communications Technology - IT Use
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**Co-requisite units**

<b>Co-requisite units</b>		

## BSBITU306A Design and produce business documents

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to design and produce various business documents and publications. It includes selecting and using a range of functions on a variety of computer applications.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who possess fundamental skills in computer operations and keyboarding. They may exercise discretion and judgement using appropriate theoretical knowledge of document design and production to provide technical advice and support to a team.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and prepare resources	1.1. Select and use appropriate <i>technology</i> and <i>software</i> applications to produce required <i>business documents</i> 1.2. Select layout and style of publication according to information and <i>organisational requirements</i> 1.3. Ensure document design is consistent with company and/or client requirements, using basic design principles 1.4. Discuss and clarify format and style with person requesting document/publication
2. Design document	2.1. Identify, open and generate files and records according to task and organisational requirements 2.2. Design document to ensure efficient entry of information and to maximise the presentation and appearance of information 2.3. Use a range of <i>functions</i> to ensure consistency of design and layout 2.4. Operate <i>input devices</i> within designated requirements
3. Produce document	3.1. Complete document production within designated time lines according to organisational requirements 3.2. Check document produced to ensure it meets task requirements for style and layout 3.3. Store document appropriately and save document to



ELEMENT	PERFORMANCE CRITERIA
	avoid loss of data 3.4. Use manuals, training booklets and/or help-desks to overcome basic difficulties with document design and production
4. Finalise document	4.1. Proofread document for readability, accuracy and consistency in language, style and layout prior to final output 4.2. Make any modifications to document to meet requirements 4.3. <i>Name</i> and <i>store</i> document in accordance with organisational requirements and exit the application without data/loss damage 4.4. Print and present document according to requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- keyboarding and computer skills to complete a range of formatting and layout tasks
- literacy skills to read and understand a variety of texts; to prepare general information and papers according to target audience; and to edit and proofread documents to ensure clarity of meaning and conformity to organisational requirements
- numeracy skills to access and retrieve data
- problem-solving skills to determine document design and production processes.

#### Required knowledge

- appropriate technology for production requirements
- functions and features of contemporary computer applications
- organisational policies, plans and procedures
- organisational requirements for document design e.g. style guide.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>designing and producing a minimum of 3 completed business documents, using at least 2 software applications in the production of each document</li> <li>using appropriate data storage options</li> <li>knowledge of the functions and features of contemporary computer applications.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>access to an actual workplace or simulated environment</li> <li>access to office equipment and resources</li> <li>access to examples of style guides and organisational procedures.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>review of final printed documents</li> <li>demonstration of techniques</li> <li>observation of presentations</li> <li>oral or written questioning to assess knowledge of software applications.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>general administration units</li> <li>other IT use units.</li> </ul>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Technology</i></b> may include:	<ul style="list-style-type: none"> <li>• computers</li> <li>• photocopiers</li> <li>• printers</li> <li>• scanners</li> </ul>
<b><i>Software</i></b> may include:	<ul style="list-style-type: none"> <li>• accounting packages</li> <li>• database packages</li> <li>• presentation packages</li> <li>• spreadsheet packages</li> <li>• word processing packages</li> </ul>
<b><i>Business documents</i></b> may include:	<ul style="list-style-type: none"> <li>• accounts statements</li> <li>• client databases</li> <li>• newsletters</li> <li>• project reviews</li> <li>• proposals</li> <li>• reports</li> <li>• web pages</li> </ul>
<b><i>Organisational requirements</i></b> may include:	<ul style="list-style-type: none"> <li>• budgets</li> <li>• correctly identifying and opening files</li> <li>• legal and organisational policies, guidelines and requirements</li> <li>• locating data</li> <li>• log-on procedures</li> <li>• manufacturers' guidelines</li> <li>• occupational health and safety policies, procedures and programs</li> <li>• quality assurance and/or procedures manuals</li> <li>• saving and closing files</li> <li>• security</li> <li>• storing data</li> </ul>
<b><i>Functions</i></b> may include:	<ul style="list-style-type: none"> <li>• alternating headers and footers</li> <li>• editing</li> <li>• merging documents</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• spell checking</li> <li>• table formatting</li> <li>• using columns</li> <li>• using styles</li> </ul>
<i>Input devices</i> may include:	<ul style="list-style-type: none"> <li>• keyboard</li> <li>• mouse</li> <li>• numerical key pad</li> <li>• scanner</li> </ul>
<i>Naming</i> documents may include:	<ul style="list-style-type: none"> <li>• appropriate file type</li> <li>• authorised access</li> <li>• file names according to organisational procedure e.g. numbers rather than names</li> <li>• file names which are easily identifiable in relation to the content</li> <li>• file/directory names which identify the operator, author, section, date etc.</li> <li>• filing locations</li> <li>• organisational policy for backing up files</li> <li>• organisational policy for filing hard copies of documents</li> <li>• security</li> </ul>
<i>Storing</i> documents may include:	<ul style="list-style-type: none"> <li>• storage in directories and sub-directories</li> <li>• storage on CD-ROMs, disk drives or back-up systems</li> <li>• storing/filing hard copies of computer generated documents</li> <li>• storing/filing hard copies of incoming and outgoing facsimiles</li> <li>• storing/filing incoming and outgoing correspondence</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

<b>Competency field</b>	Information and Communications Technology - IT Use
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## Co-requisite units

<b>Co-requisite units</b>		

## BSBITU404A Produce complex desktop published documents

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to design and produce complex desktop published documents.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals employed in a range of work environments who require well developed skills in desktop publishing. They may be individuals providing administrative support within an enterprise, or others responsible for the production of their own documents.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to produce desktop published documents	1.1. Use safe work practices including addressing <i>ergonomic requirements</i> and using <i>work organisation strategies</i> 1.2. Use <i>energy and resource conservation techniques</i> 1.3. Identify <i>document purpose</i> , audience, presentation and <i>final output</i> requirements, and clarify with relevant personnel as required 1.4. Identify <i>organisational and task requirements</i> for desktop published documents to ensure consistency of style and image
2. Design desktop published documents	2.1. <i>Design</i> document to enhance readability and appearance, according to organisational and task requirements 2.2. Determine document type and assess production and design requirements 2.3. Set up and use master pages, templates and styles to ensure <i>consistency of design and layout</i> 2.4. Set up colour palettes according to organisational and task requirements
3. Create desktop published documents	3.1. Prepare, format and enter required text 3.2. Import text from other applications and resolve any formatting issues 3.3. Scan or import graphics from other applications and

ELEMENT	PERFORMANCE CRITERIA
	resolve any formatting issues 3.4. Use <i>complex software functions</i> to arrange text and graphics on page, according to organisational and task requirements
4. Finalise desktop published documents	4.1. Ensure pages, and combined graphics and text are composed correctly, to suit organisational and task requirements 4.2. Check that numerical sequencing and laydown of document is correct, to meet binding and finishing requirements 4.3. Incorporate bleed allowance in margins and borders
5. Produce desktop published documents	5.1. Review text for possible errors and omissions, and resolve any issues 5.2. Produce completed document in line with required final output 5.3. <i>Name and store text documents</i> , in accordance with organisational requirements and exit the application without information loss/damage 5.4. Prepare text documents within <i>designated time lines</i> and organisational requirements for speed and accuracy 5.5. Use manuals, user documentation and online help to overcome problems with document design and production

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to clarify requirements of documents
- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- editing and proofreading skills to check own work for accuracy against original
- keyboarding skills to enter text and numerical data
- literacy skills to read and understand organisation's procedures and to use models or exemplars to produce a range of documents
- problem-solving skills to edit documents and to resolve issues of consistency of



<b>REQUIRED SKILLS AND KNOWLEDGE</b>
design.
<b>Required knowledge</b>
<ul style="list-style-type: none"> <li>• formatting styles and their effect on formatting, readability and appearance of documents</li> <li>• organisational requirements for ergonomics, work periods and breaks, and energy and resource conservation techniques</li> <li>• purposes, uses and functions of desktop publishing software</li> <li>• organisational style guide.</li> </ul>

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• applying document design and layout principles</li> <li>• producing complex desktop published documents.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to office equipment and resources</li> <li>• access to samples of desktop published documents.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• review of authenticated documents from the workplace or training environment</li> <li>• demonstration of techniques in a workplace or simulated environment</li> <li>• oral or written questioning to assess knowledge of desktop publishing software functions.</li> </ul>
<b>Guidance information for</b>	Holistic assessment with other units relevant to the

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	<p>industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• other information and communications technology units.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Ergonomic requirements</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• avoiding radiation from computer screens</li> <li>• chair height, seat and back adjustment</li> <li>• document holder</li> <li>• footrest</li> <li>• keyboard and mouse position</li> <li>• lighting</li> <li>• noise minimisation</li> <li>• posture</li> <li>• screen position</li> <li>• workstation height and layout</li> </ul>
<p><b><i>Work organisation strategies</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• exercise breaks</li> <li>• mix of repetitive and other activities</li> <li>• rest periods</li> </ul>
<p><b><i>Energy and resource conservation techniques</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• double-sided paper use</li> <li>• recycling used and shredded paper</li> <li>• re-using paper for rough drafts (observing confidentiality requirements)</li> <li>• utilising power-save options for equipment</li> </ul>
<p><b><i>Document purpose</i></b> may include using:</p>	<ul style="list-style-type: none"> <li>• call outs</li> <li>• captions</li> <li>• concordance files</li> <li>• different odd and even pages</li> <li>• document protection</li> <li>• drawing</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• forms with fields</li> <li>• hyperlinks</li> <li>• long documents</li> <li>• linked or embedded objects</li> <li>• mail merge data documents</li> <li>• master documents</li> <li>• MS WordArt</li> <li>• multiple headers and footers</li> <li>• multiple sections</li> <li>• multiple users</li> <li>• primary mail merge documents</li> <li>• subdocuments</li> <li>• templates</li> </ul>
<i>Final output</i> may include:	<ul style="list-style-type: none"> <li>• electronic publishing</li> <li>• printed document</li> <li>• professionally printed document</li> <li>• web services</li> </ul>
<i>Organisational and task requirements</i> may include:	<ul style="list-style-type: none"> <li>• company colour scheme</li> <li>• company logo</li> <li>• consistent corporate image</li> <li>• content restrictions</li> <li>• established guidelines and procedures for document production</li> <li>• house styles</li> <li>• master pages</li> <li>• observing copyright legislation</li> <li>• organisation name, time, date, document title, filename or other fields in headers or footers</li> <li>• sheet size</li> <li>• style sheets</li> <li>• templates</li> </ul>
<i>Design</i> may include:	<ul style="list-style-type: none"> <li>• balance</li> <li>• boxes</li> <li>• colour</li> <li>• columns</li> <li>• diversity</li> <li>• drawing</li> <li>• graphics</li> <li>• headings</li> <li>• letter and memo conventions</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• page layout</li> <li>• photographs</li> <li>• relative positioning of graphics and headings</li> <li>• simplicity</li> <li>• text flow</li> <li>• typeface</li> <li>• typography</li> <li>• white space</li> </ul>
<i>Consistency of design</i> may include:	<ul style="list-style-type: none"> <li>• annotated references</li> <li>• borders</li> <li>• bullet/ number lists</li> <li>• captions</li> <li>• consistency with other business documents</li> <li>• footnotes and endnotes</li> <li>• indentations</li> <li>• kerning and leading</li> <li>• page numbers</li> <li>• spacings</li> <li>• typeface styles and point size</li> </ul>
<i>Complex software functions</i> may include:	<ul style="list-style-type: none"> <li>• data transfer</li> <li>• display features</li> <li>• embedding</li> <li>• exporting</li> <li>• fields</li> <li>• form fields</li> <li>• formulae</li> <li>• importing</li> <li>• index</li> <li>• linking</li> <li>• macros</li> <li>• merge criteria</li> <li>• sort criteria</li> <li>• table of contents</li> <li>• templates</li> </ul>
<i>Naming and storing text documents</i> may include:	<ul style="list-style-type: none"> <li>• authorised access</li> <li>• file or folder names which identify the operator, author, section, date</li> <li>• filing locations</li> <li>• file names according to organisational procedure</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• file names which are easily identifiable in relation to the content</li> <li>• organisational policy for backing up files storage in folders and sub-folders</li> <li>• organisational policy for filing hard copies of documents</li> <li>• security and password protection</li> <li>• storage on disk drives, CD-ROM, USBs, tape or server back-up</li> </ul>
<i>Designated time lines</i> may include:	<ul style="list-style-type: none"> <li>• time line agreed with interna or external client</li> <li>• time line agreed with supervisor or person requiring document</li> <li>• organisational time line e.g. deadline requirements</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Information and Communications Technology - IT Use
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### Co-requisite units

<b>Co-requisite units</b>	

## BSBMGT402A Implement operational plan

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to implement the operational plan by monitoring and adjusting operational performance, producing short term plans for the department/section, planning and acquiring resources and providing reports on performance as required.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>Frontline managers are actively engaged in planning activities to achieve the measurable, stated objectives of the team and the organisation. This key role is carried out to provide safe, efficient and effective products and services to customer satisfaction within the organisation's productivity and profitability plans.</p> <p>At this level, work will normally be carried out within routine and non routine methods and procedures, which require planning, evaluation, leadership and guidance of others.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement operational plan	<p>1.1. Collate, analyse and organise details of <b><i>resource requirements</i></b> in consultation with <b><i>relevant personnel, colleagues and specialist resource managers</i></b></p> <p>1.2. Implement <b><i>operational plans</i></b> to contribute to the achievement of organisation's performance/business plan</p> <p>1.3. Identify and use <b><i>key performance indicators</i></b> (KPIs) to monitor operational performance</p> <p>1.4. Undertake <b><i>contingency planning</i></b> and <b><i>consultation processes</i></b></p> <p>1.5. Provide assistance in the development and presentation of proposals for resource requirements in line with operational planning processes</p>
2. Implement resource acquisition	<p>2.1. Recruit and induct employees within <b><i>organisation's policies, practices and procedures</i></b></p> <p>2.2. Implement plans for acquisition of physical</p>

ELEMENT	PERFORMANCE CRITERIA
	resources and services within organisation's policies, practices and procedures and in consultation with relevant personnel
3. Monitor operational performance	<p>3.1. Monitor <i>performance systems and processes</i> to assess progress in achieving profit/productivity plans and targets</p> <p>3.2. Analyse and use budget and actual financial information to monitor profit/productivity performance</p> <p>3.3. Identify unsatisfactory performance and take prompt action to rectify the situation according to organisational policies</p> <p>3.4. Provide mentoring, coaching and supervision to support individuals and teams to use resources effectively, economically and safely</p> <p>3.5. Present recommendations for variation to operational plans to the <i>designated persons/groups</i> and gain approval</p> <p>3.6. Implement <i>systems, procedures and records</i> associated with performance in accordance with organisation's requirements</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- coaching and mentoring skills to provide support to colleagues
- literacy skills to access and use workplace information, and to prepare reports
- planning and organising skills to monitor performance and to sequence work of self and others to achieve planned outcomes.

#### Required knowledge

- principles and techniques associated with:
  - contingency planning
  - methods for monitoring and reporting on performance
  - monitoring and implementing operations and procedures
  - problem identification and methods of resolution



## REQUIRED SKILLS AND KNOWLEDGE

- relevant budgeting and financial analysis, interpretation and reporting requirements
- resource management systems at the tactical implementation level
- resource planning and acquisition
- tactical risk analysis including identification and reporting requirements.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- ability to monitor and adjust operational performance, produce short-term plans for the department or section, plan and acquire resources, and provide reports on performance as required
- knowledge of principles and techniques associated with monitoring and implementing operations and procedures.

#### Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- review of documentation outlining contingency planning and consultation processes undertaken
- demonstration of techniques in managing performance
- evaluation of mentoring, coaching and supervision provided to support individuals and teams to use resources effectively, economically and safely.

**EVIDENCE GUIDE****Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- other units from the Certificate IV in Frontline Management.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Resource requirements*** may refer to:

- goods and services to be purchased and ordered
- human, physical and financial resources - both current and projected
- stock requirements and requisitions

***Relevant personnel, colleagues and specialist resource managers*** may include:

- colleagues and specialist resource managers
- managers
- occupational health and safety committees and other people with specialist responsibilities
- other employees
- people from a wide range of social, cultural and ethnic backgrounds, and people with a range of physical and mental abilities
- supervisors

***Operational plans*** may refer to:

- organisational plans
- tactical plans developed by the department or section to detail product and service performance

***Key performance indicators*** may refer to:

- measures for monitoring or evaluating the efficiency or effectiveness of a system, and which may be used to demonstrate accountability and to identify areas for improvements

<b>RANGE STATEMENT</b>	
<b><i>Contingency planning</i></b> may refer to:	<ul style="list-style-type: none"> <li>• contracting out or outsourcing human resources and other functions or tasks</li> <li>• diversification of outcomes</li> <li>• finding cheaper or lower quality raw materials and consumables</li> <li>• increasing sales or production</li> <li>• recycling and re-use</li> <li>• rental, hire purchase or alternative means of procurement of required materials, equipment and stock</li> <li>• restructuring of organisation to reduce labour costs</li> <li>• risk identification, assessment and management processes</li> <li>• seeking further funding</li> <li>• strategies for reducing costs, wastage, stock or consumables</li> <li>• succession planning</li> </ul>
<b><i>Consultation processes</i></b> may refer to:	<ul style="list-style-type: none"> <li>• mechanisms used to provide feedback to the work team in relation to outcomes of consultation</li> <li>• meetings, interviews, brainstorming sessions, email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual operational plans</li> </ul>
<b><i>Organisation's policies, practices and procedures</i></b> may include:	<ul style="list-style-type: none"> <li>• organisational culture</li> <li>• Standard Operating Procedures</li> <li>• organisational guidelines which govern and prescribe operational functions, such as the acquisition and management of human and physical resources</li> <li>• undocumented practices in line with organisational operations</li> </ul>
<b><i>Performance systems and processes</i></b> may refer to:	<ul style="list-style-type: none"> <li>• informal systems used by frontline managers for the work team in the place of existing organisation-wide systems</li> <li>• formal processes within the organisation to measure performance, such as: <ul style="list-style-type: none"> <li>• feedback arrangements</li> <li>• individual and teamwork plans</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• KPIs</li> <li>• specified work outcomes</li> </ul>
<i>Designated persons/groups</i> may include:	<ul style="list-style-type: none"> <li>• other affected work groups or teams and groups designated in workplace policies and procedures</li> <li>• those who have the authority to make decisions and/or recommendations about operations such as workplace supervisors, other managers</li> </ul>
<i>Systems, procedures and records</i> may include:	<ul style="list-style-type: none"> <li>• databases and other recording mechanisms for ensuring records are kept in accordance with organisational requirements</li> <li>• individual and team performance plans</li> <li>• organisational policies and procedures relative to performance</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Management and Leadership - Management
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### Co-requisite units

<b>Co-requisite units</b>		

## BSBMGT617A Develop and implement a business plan

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to run a business operation and covers the steps required to develop and implement a business plan.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who are running an organisation or who take a senior role in determining the effective functioning and success of the organisation. As such, they may oversee the work of a number of teams and other managers.</p> <p>Business plans are critical tools for business growth and development. They will vary depending on the needs of the organisation. This unit covers the typical elements of a business plan and the standard approaches to be used in implementing a business plan.</p> <p>The business plan should be supported by a strategic plan, and may also be supported by a marketing plan and cash flow forecasts.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop business plan	1.1. Review and evaluate pre-existing <i>strategic, business and operational plan</i> , if available 1.2. Analyse and interpret business vision, mission, values and objectives 1.3. Consult with <i>key stakeholders</i> 1.4. Review market requirements for the product or service, profile customer needs and research pricing options 1.5. Develop <i>performance objectives and measures</i> through consultation with key stakeholders 1.6. Identify financial, human and physical resource requirements for the business 1.7. Consider any permits or licences that may be required for new activity 1.8. Write <i>business plan</i>

ELEMENT	PERFORMANCE CRITERIA
2. Monitor performance	2.1. Communicate business plan to all relevant parties and ensure understanding of performance requirements and timeframes 2.2. Ensure skilled labour is available to implement plan 2.3. Test performance measurement systems and refine, if necessary 2.4. Ensure timely reports on all key aspects of the business are available, user-friendly and balanced in terms of financial and non-financial performance 2.5. Report system failures, product failures and variances to the business plan as they occur
3. Respond to performance data	3.1. Analyse performance reports against planned objectives 3.2. Review performance indicators and refine if necessary 3.3. Ensure groups and individuals contributing to under-performance are <i>coached</i> , and provide training where appropriate 3.4. Review system processes and work methods regularly as part of continuous improvement

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analytical and research skills to review the market, to research competitors and to review pricing structures
- coaching and communication skills to remediate any under-performance in the work group or individuals
- planning and organising skills to sequence activities and to develop a logical structure.

#### Required knowledge

- performance measurement approaches and benchmarking
- options for developing business plans.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>analysis of the strengths and weaknesses of a range of business plans</li> <li>implementation of a business plan including evaluation of performance against documented indicators in key results areas</li> <li>knowledge of performance measurement approaches and benchmarking.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>access to appropriate documentation and resources normally used in the workplace.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>assessment of written reports/examples of business plans and their outcomes</li> <li>direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>oral or written questioning to assess knowledge of options for developing business plans</li> <li>review of development of performance objectives and measures</li> <li>review of how business plan was communicated to all relevant parties.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>other units from the Advanced Diploma of Management.</li> </ul>



## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><b><i>Strategic, business and operational plan</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• previously formulated:             <ul style="list-style-type: none"> <li>• action plan</li> <li>• business goals</li> <li>• competitor analysis</li> <li>• financing arrangements or financial targets</li> <li>• management arrangements and/or personnel requirements</li> <li>• marketing approaches</li> <li>• product or service research or analysis</li> </ul> </li> </ul>
<p><b><i>Key stakeholders</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• business partners or financiers</li> <li>• customers</li> <li>• shareholders</li> <li>• staff</li> <li>• technical experts or advisers</li> </ul>
<p><b><i>Performance objectives and measures</i></b> may relate to:</p>	<ul style="list-style-type: none"> <li>• efficiency measures</li> <li>• input measures such as staff time or dollars allocated</li> <li>• outcomes measures</li> <li>• qualitative indicators such as feedback from customers, effect on the wider market or competitors, staff reports</li> <li>• quantitative indicators, such as numbers produced and sold, turnover, customer satisfaction ranking, lower staff turnover</li> </ul>
<p><b><i>Business plan</i></b> includes:</p>	<ul style="list-style-type: none"> <li>• description of the business</li> <li>• business products and services</li> <li>• marketing activity</li> <li>• financial indicators</li> <li>• productivity and performance targets for key result areas such as:             <ul style="list-style-type: none"> <li>• community awareness or branding</li> <li>• environmental impact</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• governance or management</li> <li>• quality</li> <li>• sales</li> <li>• triple bottom line</li> <li>• workforce</li> </ul>
<i>Coaching</i> refers to:	<ul style="list-style-type: none"> <li>• informal on-the-job and off-the-job advice and training to improve performance</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Management and Leadership - Management
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### Co-requisite units

<b>Co-requisite units</b>		

## BSBPRO301A Recommend products and services

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to provide advice and information within an organisation about the development and distribution of its products and services.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts. They may exercise discretion and judgement using appropriate knowledge of products and services to provide technical advice and support to a team.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop and maintain knowledge of products and services	<p>1.1. Actively and regularly research knowledge and understanding of <i>industry products and services</i> using <i>authoritative sources</i></p> <p>1.2. Use available <i>product and service documentation</i> to identify and understand characteristics of products and services, and to make comparisons with other products and services</p> <p>1.3. Accurately document and maintain <i>information</i> on products and services in a format consistent with <i>organisational requirements</i></p> <p>1.4. Apply acquired knowledge to improve quality within personal work areas</p>
2. Recommend products and services	<p>2.1. Ensure that recommendations on products and services are in line with organisational requirements</p> <p>2.2. Provide recommendations that emphasise <i>product and service issues</i> relevant to client needs</p> <p>2.3. Ensure that evidence in support of recommendations is verifiable and presented in a suitable format</p> <p>2.4. Structure recommendations to identify clear benefits to clients and the organisation</p>
3. Advise on promotional activities	<p>3.1. Provide advice that is clear, is supported by verifiable evidence and is compatible with organisational requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2.Ensure that promotional documentation and materials are appropriate to presentation of the organisation's products and services</p> <p>3.3.Ensure that costs of promotional activities conform to budget resources</p> <p>3.4.Estimate impact of <i>promotional activities</i> from <i>verifiable customer feedback sources</i></p> <p>3.5.Evaluate the benefits of promotional activities and incorporate in plans for future promotional activities</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy skills to read and understand a variety of texts; to prepare general information and papers according to target audience; and to edit and proofread texts to ensure clarity of meaning, and accuracy of grammar and punctuation
- technology skills to select and use technology appropriate to a task
- communication skills to monitor and advise on customer service strategies
- problem-solving skills to deal with customer enquiries or complaints
- analytical skills to identify trends and positions of products and services.

#### Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - occupational health and safety (OHS)
- organisation's products and services
- organisational policies and procedures for customer service including handling customer complaints
- product and service standards and best practice models
- principles and techniques of public relations and product promotion
- mechanisms to obtain and analyse customer feedback.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• assessing and reporting on customer satisfaction</li> <li>• identifying commercial characteristics of products and services</li> <li>• knowledge of product and service standards and best practice models.</li> <li>• preparing and structuring advice on products and services</li> <li>• researching market availability of products and services.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to an actual workplace or simulated environment</li> <li>• access to office equipment and resources</li> <li>• examples of promotional strategies</li> <li>• examples of documents relating to customer service standards and policies.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• analysis of responses to case studies and scenarios</li> <li>• assessment of written reports</li> <li>• demonstration of techniques</li> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• evaluation of promotional activities plans</li> <li>• observation of performance in role plays</li> <li>• observation of presentations</li> <li>• oral or written questioning to assess knowledge of promotional strategies and sources of product</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>information</p> <ul style="list-style-type: none"> <li>• review of documentation outlining information on products and services</li> <li>• review of products and services recommendations.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• sales and/or customer service units.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Industry products and services</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• competitor products and services</li> <li>• complementary products and services</li> <li>• emerging products and services</li> <li>• historical products and services</li> <li>• organisation's products</li> <li>• specified range of products and services within an organisation's offerings</li> </ul>
<p><b><i>Authoritative sources</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• authorised suppliers</li> <li>• industry associations</li> <li>• industry conferences</li> <li>• recognised industry media sources</li> </ul>
<p><b><i>Product and service documentation</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• colleagues' knowledge</li> <li>• consumer reports</li> <li>• industry reports</li> <li>• marketing data</li> <li>• operational guidelines</li> <li>• sales figures</li> </ul>
<p><b><i>Information</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• competitive features of products or services</li> <li>• cost and production data</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• distribution processes</li> <li>• innovations</li> <li>• problems with products or services</li> <li>• product trends</li> <li>• sales records (monthly forecasts, targets achieved)</li> <li>• sales trends</li> </ul>
<i>Organisational requirements</i> may include:	<ul style="list-style-type: none"> <li>• access and equity principles and practice</li> <li>• confidentiality and security requirements</li> <li>• defined resource parameters</li> <li>• ethical standards</li> <li>• filing and documentation storage processes</li> <li>• goals, objectives, plans, systems and processes</li> <li>• legal and organisational policies, guidelines and requirements</li> <li>• OHS policies, procedures and programs</li> <li>• payment and delivery options</li> <li>• pricing and discount policies</li> <li>• quality and continuous improvement processes and standards</li> <li>• quality assurance and/or procedures manuals</li> <li>• replacement and refund policy and procedures</li> <li>• who is responsible for products or services</li> </ul>
<i>Product and service issues</i> may include:	<ul style="list-style-type: none"> <li>• customer delivery</li> <li>• faults</li> <li>• market share data</li> <li>• organisational product knowledge</li> <li>• production down-time</li> <li>• sales figures</li> </ul>
<i>Promotional activities</i> may include:	<ul style="list-style-type: none"> <li>• advertisements</li> <li>• client functions</li> <li>• employee functions</li> <li>• media announcements</li> <li>• product launches</li> <li>• web pages</li> </ul>
<i>Verifiable customer feedback sources</i> may include:	<ul style="list-style-type: none"> <li>• audit documentation and reports</li> <li>• complaints</li> <li>• customer satisfaction questionnaires</li> <li>• lapsed clients</li> <li>• quality assurance data</li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• returned goods</li> <li>• service calls</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	
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**Competency field**

<b>Competency field</b>	Industry Capability - Product Skills and Advice
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**Co-requisite units**

<b>Co-requisite units</b>		

## BSBREL402A Build client relationships and business networks

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to establish, maintain and improve client relationships, and to actively participate in networks to support attainment of key business outcomes.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals in a variety of roles who are required to establish, maintain and improve client relationships to facilitate organisational objectives.</p> <p>This unit primarily applies to marketing and sales professionals who depend on excellent interpersonal relationships and communication skills to achieve outcomes, but may also apply to other individuals working in any industry.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Initiate interpersonal communication with clients	1.1. Identify and use <i>preferred client communication styles and methods</i> 1.2. Establish rapport with clients using <i>verbal</i> and <i>non-verbal communication</i> processes 1.3. Investigate and act upon opportunities to offer positive feedback to clients 1.4. Use open questions to promote two-way communication 1.5. Identify and act upon potential <i>barriers to effective communication</i> with clients 1.6. Initiate communication processes which relate to client needs, preferences and expectations
2. Establish client relationship management strategies	2.1. Develop client loyalty objectives focussing on the development of long term business partnerships 2.2. Assess client profile information to determine approach 2.3. Develop <i>client loyalty strategies</i> to attract and retain

ELEMENT	PERFORMANCE CRITERIA
	clients in accordance with the business strategy 2.4. Identify and apply <i>client care and client service standards</i>
3. Maintain and improve ongoing relationships with clients	3.1. Develop <i>strategies to obtain ongoing feedback</i> from clients to monitor satisfaction levels 3.2. Develop strategies to elicit feedback which provide information in a form that can be used to improve relationships with clients 3.3. Obtain feedback to develop and implement strategies which maintain and improve relationships with clients
4. Build and maintain networks	4.1. Allocate time to establish and maintain business contacts 4.2. Participate in <i>business associations</i> and/or <i>professional development activities</i> to establish and maintain a <i>network</i> of support for the business and to enhance personal knowledge of the market 4.3. Establish communication channels to exchange <i>information and ideas</i> 4.4. Provide, seek and verify information to the network

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to determine client needs and preferences through active listening and presenting ideas clearly and precisely
- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- interpersonal skills to establish rapport, and to build and maintain relationships with clients.

#### Required knowledge

- key provisions of relevant legislation from all forms of government, codes of practice and national standards that may affect aspects business operations, such as:
  - anti-discrimination legislation
  - consumer laws including appropriate state/territory legislation

**REQUIRED SKILLS AND KNOWLEDGE**

- ethical principles
- marketing code of practice
- privacy laws
- Trade Practices Act
- marketing communications concepts and processes
- principles and techniques for effective communication and networking
- sources of business related networks.

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- establishing and maintaining relationships with a range of clients related to the candidate's business
- participating in and providing, an active contribution to a business related network.

**Context of and specific resources for assessment**

Assessment must ensure:

- access to office equipment and resources.

**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- assessment of written reports or journals on client relationship activities
- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- observation of the candidate communicating with clients
- observation of presentations made to business networks
- oral or written questioning to assess knowledge and understanding

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• review of authenticated documents from the workplace or training environment</li> <li>• review of testimony from team members, colleagues, supervisors or managers.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• other relationship management units</li> <li>• marketing units.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Preferred client communication styles and methods</i></b> may include:	<ul style="list-style-type: none"> <li>• email</li> <li>• face-to-face</li> <li>• mail</li> <li>• phone</li> </ul>
<b><i>Verbal communication</i></b> may include:	<ul style="list-style-type: none"> <li>• articulation</li> <li>• clarity of speech</li> <li>• feedback</li> <li>• language</li> <li>• listening skills</li> <li>• open questions</li> <li>• questioning skills</li> <li>• voice modulation</li> <li>• voice projection</li> </ul>
<b><i>Non-verbal communication</i></b> may include:	<ul style="list-style-type: none"> <li>• active listening</li> <li>• body language</li> <li>• body orientation</li> <li>• clothing</li> <li>• colour</li> <li>• distance</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• facial expression</li> <li>• grooming</li> <li>• gestures</li> <li>• music</li> <li>• posture</li> <li>• sound</li> <li>• touching</li> <li>• voice</li> </ul>
<i>Barriers to effective communication</i> may include:	<ul style="list-style-type: none"> <li>• acting on false assumptions and stereotypes</li> <li>• cultural differences not being addressed</li> <li>• educational differences not being addressed</li> <li>• failure to prominently display contact details in all communications provided to the client</li> <li>• inappropriate word choice</li> <li>• ineffective non-verbal communication</li> <li>• lack of 'contact us' forms or pages on websites</li> <li>• lack of distribution of reply paid cards or envelopes in mail outs</li> <li>• lack of voice modulation and articulation</li> <li>• limited opening hours of call centres or office</li> <li>• not listening actively</li> <li>• organisational factors</li> <li>• physical, personal, gender and age differences not being addressed</li> </ul>
<i>Client loyalty strategies</i> include:	<ul style="list-style-type: none"> <li>• access to dedicated staff</li> <li>• added value offers</li> <li>• anniversary offers</li> <li>• client clubs</li> <li>• client reward schemes</li> <li>• credit or discount facilities</li> <li>• dedicated or private facilities</li> <li>• discounts</li> <li>• formal letter of thanks</li> <li>• frequent purchaser programs</li> <li>• handwritten note thanking the client</li> <li>• offering promotional items</li> <li>• phone call thanking client for the business</li> <li>• regular recontact with best clients</li> <li>• thank you gifts and promotions</li> </ul>
<i>Client care and client service</i>	<ul style="list-style-type: none"> <li>• accuracy of billing</li> </ul>

<b>RANGE STATEMENT</b>	
<b><i>standards</i></b> may include:	<ul style="list-style-type: none"> <li>• accuracy of product/service descriptions, specifications in marketing communications</li> <li>• complaint resolution times</li> <li>• incidences of stock outs and back orders</li> <li>• on-hold times</li> <li>• order delivery standards such as:               <ul style="list-style-type: none"> <li>• whether right product or service was delivered</li> <li>• delivered to right person or address</li> <li>• delivered on time</li> <li>• politeness, helpfulness and grooming of delivery staff</li> <li>• delivery vehicles parked properly</li> <li>• cleanliness of delivery vehicles</li> </ul> </li> <li>• shipment tracking services</li> <li>• telephone answering times and responses</li> </ul>
<b><i>Strategies to obtain ongoing feedback</i></b> may include:	<ul style="list-style-type: none"> <li>• including 'comments and queries' or 'bouquets and brickbats' on all order forms</li> <li>• complaints handling procedures</li> <li>• email</li> <li>• letter</li> <li>• soliciting complaints</li> <li>• surveys of current clients</li> <li>• surveys of lapsed clients to determine reason/s for ceasing to buy</li> <li>• telephone interviews</li> <li>• training staff to ask open questions about product or service levels</li> </ul>
<b><i>Business associations</i></b> may include:	<ul style="list-style-type: none"> <li>• chambers of commerce</li> <li>• industry associations</li> <li>• institutes</li> <li>• professional bodies</li> <li>• societies</li> </ul>
<b><i>Professional development activities</i></b> may include:	<ul style="list-style-type: none"> <li>• demonstrations</li> <li>• exhibitions</li> <li>• fairs</li> <li>• industry information seminars</li> <li>• industry training</li> <li>• pre-launch activities</li> <li>• technical information briefings</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• trade shows</li> </ul>
<i>Networks</i> may include:	<ul style="list-style-type: none"> <li>• business</li> <li>• formal</li> <li>• groups</li> <li>• individuals</li> <li>• informal</li> <li>• organisations</li> <li>• personal</li> </ul>
<i>Information and ideas</i> may include:	<ul style="list-style-type: none"> <li>• changes in the environment</li> <li>• changing customer requirements</li> <li>• information on competitors' activities</li> <li>• personal, professional or business support</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Stakeholder Relations - Relationship Management
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### Co-requisite units

<b>Co-requisite units</b>		

## BSBRES401A Analyse and present research information

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to gather, organise and present workplace information using available systems.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who are required to apply their broad knowledge of the work environment to analysis and research tasks. They may have responsibility to provide guidance or to delegate aspects of these tasks to others.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Gather and organise information	<p>1.1. Gather and organise <b><i>information</i></b> in a format suitable for analysis, interpretation and dissemination in accordance with <b><i>organisational requirements</i></b></p> <p>1.2. Access information held by the organisation ensuring accuracy and relevance in line with established organisational requirements</p> <p>1.3. Ensure that <b><i>methods of collecting information</i></b> are reliable and make efficient use of resources in accordance with organisational requirements</p> <p>1.4. Identify research requirements for combining online research with non-electronic sources of information</p> <p>1.5. Use <b><i>business technology</i></b> to access, organise and monitor information in accordance with organisational requirements</p> <p>1.6. Update, modify, maintain and store information, in accordance with organisational requirements</p>
2. Research and analyse information	<p>2.1. Clearly define <b><i>objectives of research</i></b> ensuring consistency with organisational requirements</p> <p>2.2. Ensure that data and <b><i>research strategies</i></b> used are valid and relevant to the requirements of the research and make efficient use of available resources</p> <p>2.3. Identify <b><i>key words and phrases</i></b> for use as part of any online search strategy, including the use of <b><i>Boolean operators</i></b> and other search tools</p>

ELEMENT	PERFORMANCE CRITERIA
	2.4. Use reliable <i>methods of data analysis</i> that are suitable to research purposes 2.5. Ensure that assumptions and conclusions used in analyses are clear, justified, supported by evidence and consistent with research and <i>business objectives</i>
3. Present information	3.1. Present recommendations and issues in an appropriate format, style and structure using suitable business technology 3.2. Structure and format reports in a clear manner that conforms to organisational requirements 3.3. Report and distribute research findings in accordance with organisational requirements 3.4. Obtain <i>feedback</i> and comments on suitability and sufficiency of findings in accordance with organisational requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy skills to read, write and understand a variety of texts; and to edit and proofread documents to ensure clarity of meaning, accuracy and consistency of information
- problem-solving skills to deal with information which is contradictory, ambiguous, inconsistent or inadequate
- technology skills to select and use technology appropriate to a task
- research skills to identify and access information.

#### Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - occupational health and safety (OHS)
- organisational record keeping/filing systems, security procedures and safe

**REQUIRED SKILLS AND KNOWLEDGE**

recording practices

- organisational policies and procedures relating to distribution of workplace information, and legal and ethical obligations
- research processes and strategies to identify new sources (online and print) of information and to use them most efficiently and effectively.

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- presenting information and data
- maintaining and handling data and documents systematically
- analysing and interpreting data to support organisational activities
- knowledge of research processes and strategies to identify new sources of information.

**Context of and specific resources for assessment**

Assessment must ensure:

- access to an actual workplace or simulated environment
- access to office equipment and resources
- examples of research tasks and resources.

**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- analysis of responses to case studies and scenarios
- demonstration of techniques
- observation of presentations
- review of documentation outlining recommendations and issues

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• review of reports outlining research findings.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• general administration units</li> <li>• IT use units</li> <li>• Governance units</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Information</i></b> may include:	<ul style="list-style-type: none"> <li>• demographic data</li> <li>• service delivery records</li> <li>• computer databases (library catalogue, customer records, subscription database, internet)</li> <li>• computer files (letters, memos and other documents)</li> <li>• correspondence (faxes, memos, letters, email)</li> <li>• financial figures</li> <li>• forms (insurance forms, membership forms)</li> <li>• information on training needs</li> <li>• invoices (from suppliers, to debtors)</li> <li>• marketing reports/plans/budgets</li> <li>• personnel records (personal details, salary rates)</li> <li>• production targets</li> <li>• sales records (monthly forecasts, targets achieved)</li> </ul>
<b><i>Organisational requirements</i></b> may include:	<ul style="list-style-type: none"> <li>• anti-discrimination and related policy</li> <li>• business and performance plans</li> <li>• Code of Conduct/Code of Ethics</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• defined resource parameters</li> <li>• ethical standards</li> <li>• goals, objectives, plans, systems and processes</li> <li>• information protocols</li> <li>• legal and organisational policies, guidelines and requirements</li> <li>• management and accountability channels</li> <li>• OHS policies, procedures and programs</li> <li>• procedures for updating records</li> <li>• quality assurance and/or procedures manuals</li> <li>• security and confidentiality requirements</li> </ul>
<b>Methods of collecting information</b> may include:	<ul style="list-style-type: none"> <li>• checking research provided by others</li> <li>• checking written material including referrals and client files</li> <li>• individual research</li> <li>• information from other organisations</li> <li>• interviews with community members, colleagues/customers</li> <li>• observation and listening</li> <li>• previous file records</li> <li>• questioning (in person or indirect)</li> <li>• recruitment applications and other forms</li> </ul>
<b>Business technology</b> may include:	<ul style="list-style-type: none"> <li>• answering machine</li> <li>• computer</li> <li>• fax machine</li> <li>• photocopier</li> <li>• telephone</li> </ul>
<b>Objectives of research</b> may include:	<ul style="list-style-type: none"> <li>• comparative analysis</li> <li>• hypothesis testing</li> <li>• identification of trends</li> <li>• industry pricing policies</li> <li>• process mapping</li> <li>• situational diagnosis</li> </ul>
<b>Research strategies</b> may include:	<ul style="list-style-type: none"> <li>• data analysis</li> <li>• documentation reviews</li> <li>• focus groups</li> <li>• interviewing colleagues and clients</li> <li>• online searching</li> <li>• product sampling</li> <li>• subscription databases</li> </ul>

<b>RANGE STATEMENT</b>	
<b><i>Key words and phrases</i></b> may include:	<ul style="list-style-type: none"> <li>• American spellings when searching online</li> <li>• cultural or geographic terms</li> <li>• using different thesauri in different databases</li> </ul>
<b><i>Boolean operators</i></b> may include:	<ul style="list-style-type: none"> <li>• exclude - / NOT</li> <li>• include + / AND</li> <li>• or</li> <li>• phrase searching " "( )</li> <li>• variations, depending on the resource being used</li> </ul>
<b><i>Methods of data analysis</i></b> may include:	<ul style="list-style-type: none"> <li>• data sampling</li> <li>• feedback on results</li> <li>• peer review</li> <li>• review of previous research</li> <li>• statistical analysis</li> </ul>
<b><i>Business objectives</i></b> may include:	<ul style="list-style-type: none"> <li>• community capacity building</li> <li>• community development</li> <li>• service provision</li> <li>• business planning</li> <li>• financial performance</li> <li>• flexibility, responsiveness</li> <li>• interpersonal communication</li> <li>• marketing and customer service</li> <li>• organisational values and behaviours</li> <li>• people management</li> <li>• work procedures and quality assurance manuals</li> </ul>
<b><i>Feedback</i></b> may include:	<ul style="list-style-type: none"> <li>• audit documentation and reports</li> <li>• comments from community, board members, clients and colleagues</li> <li>• customer satisfaction questionnaires</li> <li>• quality assurance data</li> <li>• returned goods</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

Competency field	Knowledge Management - Research
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## Co-requisite units

Co-requisite units		

## BSBRSK401A Identify risk and apply risk management processes

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to identify risks and to apply established risk management processes to a subset of an organisation or project's operations that are within the person's own work responsibilities and area of operation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals with a broad knowledge of risk analysis or project management who contribute well developed skills in creating solutions to unpredictable problems through analysis and evaluation of information from a variety of sources. They may have responsibility to provide guidance or to delegate aspects of these tasks to others.</p> <p>In this unit, risks applicable within own work responsibilities and area of operation, may include projects being undertaken individually or by a team, or operations within a section of the organisation.</p>
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### Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify risks	1.1. Identify the <i>context</i> for risk management 1.2. Identify <i>risks</i> using <i>tools</i> , ensuring all reasonable steps have been taken to identify all risks 1.3. Document identified risks in accordance with relevant policies, procedures and legislation
2. Analyse and evaluate risks	2.1. Analyse and document risks in consultation with relevant <i>stakeholders</i> 2.2. Undertake <i>risk categorisation</i> and determine <i>level of risk</i> 2.3. Document analysis processes and outcomes
3. Treat risks	3.1. Determine appropriate <i>control measures</i> for risks and assess for strengths and weaknesses 3.2. Identify control measures for all risks

ELEMENT	PERFORMANCE CRITERIA
	3.3.Refer risks relevant to whole of organisation or having an impact beyond own work responsibilities and area of operation to others as per established policies and procedures 3.4.Choose and implement control measures for own area of operation and/or responsibilities 3.5.Prepare and implement treatment plans
4. Monitor and review effectiveness of risk treatment/s	4.1.Regularly review implemented treatment/s against <i>measures of success</i> 4.2.Use review results to improve the treatment of risks 4.3.Provide assistance to auditing risk in own area of operation 4.4.Monitor and review management of risk in own area of operation

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy skills sufficient to read and understand a variety of texts; and to write, edit and proofread documents to ensure clarity of meaning, accuracy and consistency of information
- research and data collection skills to monitor and evaluate risks
- problem-solving skills to appropriately address identified risks.

#### Required knowledge

- Australian and international standards for risk management
- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
  - ethical principles
  - codes of practice
  - privacy laws
  - environmental issues
  - occupational health and safety
- organisational policies and procedures relating to risk management processes and

**REQUIRED SKILLS AND KNOWLEDGE**

strategies

- auditing requirements relating to risk management.

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- identification, analysis and evaluation of risks
- demonstrated understanding of personal role in relation to wider organisational or project context
- demonstrated understanding of risk management processes and procedures.

**Context of and specific resources for assessment**

Assessment must ensure:

- access to workplace documentation relating to risk management
- access to risk management tools and frameworks.

**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- review of documentation outlining risk analysis processes and outcomes
- analysis of responses to case studies and scenarios
- oral or written questioning to assess knowledge of Australian and international standards for risk management
- review of implementation of treatment plans.

**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

**EVIDENCE GUIDE**

- general administration units
- other risk management units.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Context*** may include:

- any related projects or organisations
- any resources, including physical assets, which are vital to operations
- key operational elements and service of the organisation
- organisation or project, how it is organised and its capabilities
- own role and responsibilities in relation to overall project or organisation design

***Risks*** may include:

- commercial and legal relationships
- economic circumstances and scenarios
- human behaviour
- individual activities
- management activities and controls
- natural events
- political circumstances
- positive risk
- technology - technological issues

***Tools*** may include:

- documentation to assist in process of identifying risk, and assessing impact and likelihood of occurrence
- standard instruments developed for the organisation and contextualised for sections of the workplace's operations, such as checklists and testing procedures
- tools to prioritise risks, including where relevant, numerical scoring systems for risks

<b>RANGE STATEMENT</b>	
<i>Stakeholders</i> may include:	<ul style="list-style-type: none"> <li>• contractors</li> <li>• employees</li> <li>• financial managers</li> <li>• insurance agents</li> <li>• managers</li> <li>• public</li> <li>• service providers</li> <li>• suppliers</li> <li>• unions</li> <li>• volunteers</li> </ul>
<i>Risk categorisation</i> may include:	<ul style="list-style-type: none"> <li>• likelihood of risks: <ul style="list-style-type: none"> <li>• almost certain</li> <li>• likely</li> <li>• possible</li> <li>• unlikely</li> <li>• rare</li> </ul> </li> <li>• consequences of risks: <ul style="list-style-type: none"> <li>• insignificant</li> <li>• minor</li> <li>• moderate</li> <li>• major</li> <li>• catastrophic</li> <li>• current control measures</li> </ul> </li> </ul>
<i>Level of risk</i> may include:	<ul style="list-style-type: none"> <li>• low, treated with routine procedures</li> <li>• moderate, with specific responsibility allocated for the risk, and monitoring and response procedures implemented</li> <li>• high, requiring action, as it has potential to be damaging to the organisation or project</li> <li>• extreme, requiring immediate action, as it has potential to be devastating to the organisation or project</li> </ul>
<i>Control measures</i> may include:	<ul style="list-style-type: none"> <li>• hierarchy of controls: <ul style="list-style-type: none"> <li>• reduction in likelihood of risks</li> <li>• reduction of consequences of risks</li> <li>• retention of risks</li> <li>• risk aversion</li> <li>• transfer of responsibility of risks</li> </ul> </li> </ul>

**RANGE STATEMENT**

<i>Measures of success</i> may include:	<ul style="list-style-type: none"> <li>• costs</li> <li>• reductions in impact</li> <li>• reductions in likelihood</li> <li>• reductions in occurrence</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	
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**Competency field**

<b>Competency field</b>	Regulation, Licensing and Risk - Risk Management
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**Co-requisite units**

<b>Co-requisite units</b>		



## BSBRSK501B Manage risk

### Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i>.</p> <p>Revised unit. Required knowledge updated to incorporate current Australian Standards.</p> <p>Replaces BSBRSK501A Manage risk</p>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to manage risks in a range of contexts across the organisation or for a specific business unit or area.

### Application of the Unit

This unit addresses the management of the risk across the organisation or within a business unit or area. It does not assume any given industry setting.

This unit applies to individuals who are working in positions of authority and are approved to implement change across the organisation, business unit, program or project area. They may or may not have responsibility for directly supervising others.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Establish risk context	<p>1.1 Review organisational processes, procedures and requirements for undertaking <b>risk</b> management</p> <p>1.2 Determine <b>scope</b> for risk management process</p> <p>1.3 Identify internal and external stakeholders and their issues</p> <p>1.4 Review political, economic, social, legal, technological and policy context</p> <p>1.5 Review strengths and weaknesses of existing arrangements</p> <p>1.6 Document critical success factors, goals or objectives for area included in scope</p> <p>1.7 Obtain support for risk management activities</p> <p>1.8 Communicate with <b>relevant parties</b> about the risk management process and invite participation</p>
2. Identify risks	<p>2.1 Invite relevant parties to assist in the identification of risks</p> <p>2.2 <b>Research</b> risks that may apply to scope</p> <p>2.3 Use <b>tools and techniques</b> to generate a list of risks that apply to the scope, in consultation with relevant parties</p>
3. Analyse risks	<p>3.1 Assess <b>likelihood</b> of risks occurring</p> <p>3.2 Assess <b>impact or consequence</b> if risks occur</p> <p>3.3 <b>Evaluate</b> and prioritise risks for treatment</p>
4. Select and implement treatments	<p>4.1 Determine and select most appropriate <b>options</b> for treating risks</p> <p>4.2 Develop an <b>action plan</b> for implementing risk treatment</p> <p>4.3 Communicate risk management processes to relevant parties</p> <p>4.4 Ensure all documentation is in order and appropriately stored</p>

	4.5 Implement and monitor action plan 4.6 Evaluate risk management process
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## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- communication and literacy skills to consult and negotiate, to prepare communications about risk management, and to encourage stakeholder involvement
- organisational and management skills to plan and implement risk management processes
- problem-solving and innovation skills to find practical ways to manage identified risks.

### Required knowledge

- AS/NZS ISO 31000:2009 Risk Management - Principles and Guidelines
- legislation, codes of practice and national standards, for example:
  - duty of care
  - company law
  - contract law
  - environmental law
  - freedom of information
  - industrial relations law
  - privacy and confidentiality
  - legislation relevant to organisation's operations
  - legislation relevant to operation as a business entity
- organisational policies and procedures, including:
  - risk management strategy
  - policies and procedures for risk management
- overall operations of organisation
- reasonable adjustment in the workplace for people with a disability
- types of available insurance and insurance providers.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• risk management plan which includes a detailed stakeholder analysis, explanation of the risk context, critical success factors, identified and analysed risks, and treatments for prioritised risks</li> <li>• details of monitoring arrangements for risk management plan and an evaluation of the risk management plan's efficacy in treating risks</li> <li>• knowledge of relevant legislation, codes of practice and national standards.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to workplace documentation.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• observation of presentations</li> <li>• oral or written questioning to assess knowledge of risk management policies and procedures</li> <li>• review of documented critical success factors, and goals or objectives for area</li> <li>• review of risks prioritised for treatment</li> <li>• evaluation of action plan for implementing risk treatment</li> <li>• evaluation of documentation communicating risk management processes to relevant parties.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• financial management units, governance units, human resource management units, or technology units.</li> </ul>

## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<p><b>Risks</b> may include those relating to:</p>	<ul style="list-style-type: none"> <li>• commercial relationships</li> <li>• economic circumstances and scenarios</li> <li>• human behaviour</li> <li>• individual activities</li> <li>• legislation</li> <li>• management activities and controls</li> <li>• natural events</li> <li>• political circumstances</li> <li>• technology.</li> </ul>
<p><b>Scope</b> may apply to:</p>	<ul style="list-style-type: none"> <li>• given project</li> <li>• specific business unit or area</li> <li>• specific functional such as:             <ul style="list-style-type: none"> <li>• financial management</li> <li>• OHS</li> <li>• governance</li> </ul> </li> <li>• external environment</li> <li>• internal environment</li> <li>• whole organisation.</li> </ul>
<p><b>Relevant parties</b> may include:</p>	<ul style="list-style-type: none"> <li>• all staff</li> <li>• internal and external stakeholders</li> <li>• senior management</li> <li>• specific teams or business units</li> <li>• technical experts.</li> </ul>
<p><b>Research</b> may include:</p>	<ul style="list-style-type: none"> <li>• data or statistical information</li> <li>• information from other business areas</li> <li>• lessons learned from other projects or activities</li> <li>• market research</li> <li>• previous experience</li> <li>• public consultation</li> <li>• review of literature and other information sources.</li> </ul>
<p><b>Tools and techniques</b> may include:</p>	<ul style="list-style-type: none"> <li>• brainstorming</li> <li>• checklists</li> <li>• fishbone diagrams</li> </ul>

	<ul style="list-style-type: none"> <li>• flowcharts</li> <li>• scenario analysis.</li> </ul>
<b>Likelihood</b> may refer to:	<ul style="list-style-type: none"> <li>• probability of a given risk occurring, such as: <ul style="list-style-type: none"> <li>• very likely</li> <li>• likely</li> <li>• possible</li> <li>• unlikely</li> <li>• rare.</li> </ul> </li> </ul>
<b>Impact or consequence</b> may refer to:	<ul style="list-style-type: none"> <li>• significance of outcomes if the risk occurs, such as: <ul style="list-style-type: none"> <li>• disastrous</li> <li>• severe</li> <li>• moderate impact</li> <li>• minimal impact.</li> </ul> </li> </ul>
<b>Evaluation</b> of risks includes:	<ul style="list-style-type: none"> <li>• considering the likelihood of the risk occurring</li> <li>• considering the impact of the risk</li> <li>• determining which risks are most significant and are therefore priorities for treatment.</li> </ul>
<b>Options</b> may include:	<ul style="list-style-type: none"> <li>• avoiding the risk</li> <li>• changing the consequences</li> <li>• changing the likelihood</li> <li>• retaining the risk</li> <li>• sharing the risk with a third party.</li> </ul>
<b>Action plans</b> should include:	<ul style="list-style-type: none"> <li>• what actions are required</li> <li>• who is taking responsibility</li> <li>• time lines</li> <li>• monitoring processes.</li> </ul>

## Unit Sector(s)

Management and Leadership – Management

## Custom Content Section

Not applicable.

## **BSBSLS402A Identify sales prospects**

### **Modification History**

#### **Unit Descriptor**

This unit describes the performance outcomes, skills and knowledge required to identify of potential sales prospects through application of prospecting methods.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

This unit describes the performance outcomes, skills and knowledge required to identify of potential sales prospects through application of prospecting methods.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

#### **Application of the Unit**

This unit applies to individuals in a sales related position in a small, medium or large enterprise across a wide variety of industries who identify and collate sales prospect information that can be used to generate leads. They may provide advice and support about aspects of sales solutions to support a sales team.

This unit applies to individuals in a sales related position in a small, medium or large enterprise across a wide variety of industries who identify and collate sales prospect information that can be used to generate leads. They may provide advice and support about aspects of sales solutions to support a sales team.

#### **Licensing/Regulatory Information**

Refer to Unit Descriptor

#### **Pre-Requisites**

#### **Employability Skills Information**

This unit contains employability skills.

This unit contains employability skills.

#### **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### Elements and Performance Criteria

Element	Performance Criteria
1 Employ prospecting methods	<p>1.1 Identify a range of <b>prospecting methods</b></p> <p>1.2 Consider and evaluate the strengths and limitations of primary and secondary <b>prospecting methods</b></p> <p>1.3 Select prospecting methods to match the market to which the <b>product</b> is targeted</p> <p>1.4 Target present, previous and new <b>clients</b> through chosen prospecting methods</p>
2 Qualify prospects	<p>2.1 Research and establish criteria for qualifying leads</p> <p>2.2 Ensure criteria are established according to buyer accessibility, <b>buyer motives</b>, product affordability, purchase authority, legal compliance and return for the seller</p> <p>2.3 Ensure the established criteria represent a standard against which the buying potential of individuals and groups is gauged</p>
3 Manage prospect information	<p>3.1 Develop a system to record prospect information</p> <p>3.2 Implement the system for recording prospect information</p> <p>3.3 Monitor the system for recording prospect information for effectiveness</p> <p>3.4 Evaluate the system for recording prospect information</p>



### 3.5 Refine the system for recording prospect information based on evaluation of system

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

literacy skills to interpret legal requirements, company policies and procedures

research and data analysis skills to determine prospect requirements

technology skills to design and record formats to facilitate information storage and retrieval.

### Required knowledge

principles of buyer motives

identification and overview knowledge of key provisions of relevant legislation from all levels of government that affects business operations, codes of practice and national standards, such as:

anti-discrimination

ethical principles

consumer protection

contract law

privacy laws

Trade Practices Act

benefits and key features of own organisation's and competitors' products

information management strategies used to manage prospect data

prospecting methods used in the sales process.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- demonstration of the use and management of different prospecting methods targeting a present, previous and new client
- research and establishment of criteria used in qualifying leads identified through prospecting methods
- recording, storage and retrieval of prospect information.

#### Context of and specific resources for assessment

Assessment must ensure:

- access to an actual workplace or simulated environment
- access to organisational sales prospect information, databases and records.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- analysis of responses to case studies and scenarios
- assessment of criteria developed to qualify sales leads
- demonstration of prospecting methods
- direct questioning combined with portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- observation of use of prospecting methods
- oral or written questioning to assess knowledge of principles of buyer motives
- review of research undertaken to establish criteria for qualifying leads
- evaluation of the system developed to record prospect information.

**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

customer service units

other sales units.

**Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Prospecting methods** may include:

brokers

cold canvassing

databases

direct mail

internet

intra organisational leads

journals

magazines

media advertising

networking

newspapers

personal observation

public records

referrals

spotters

telemarketing

**Products** may include:

goods

ideas

services

**Clients** may include:

consumers  
customers  
members  
patients  
members of other business units within an organisation  
other work teams within an organisation  
person or organisation who receives or has the potential to receive products, services or ideas supplied by the organisation

**Buyer motives** may include:

browsing  
buying for unqualified prospect e.g. dependant  
gift  
housekeeping  
replacement item  
self reward  
self-gratification

**Unit Sector(s)**

empty

empt

**Competency field**

Business Development - Sales

Business Development - Sales

## BSBSMB403A Market the small business

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to develop and implement marketing strategies, and to monitor and improve market performance.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This work is undertaken by individuals who operate a small business.</p> <p>This unit is suitable for micro and small businesses or a department in a larger organisation.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop marketing strategies	<p>1.1. Analyse the business and its key products or services to determine the focus of marketing activities, in accordance with the objectives of the business plan</p> <p>1.2. Evaluate the customer base and target market for the small business as a basis for the <b><i>marketing objectives and strategies</i></b></p> <p>1.3. Determine marketing objectives and strategies that are ethically and culturally appropriate, in consultation with <b><i>relevant people</i></b> and in accordance with the business plan</p>
2. Determine a marketing mix for the business	<p>2.1. Balance product mix, volumes and pricing to optimise sales and profit</p> <p>2.2. Evaluate the costs and benefits of using different <b><i>distribution channels</i></b> and/or providing different <b><i>levels of customer service</i></b> and consider the results in determining the <b><i>marketing mix</i></b></p> <p>2.3. Determine promotional activities to suit the target market</p> <p>2.4. Consider customer needs and preferences in determining the marketing mix</p> <p>2.5. Determine the marketing mix according to market and business needs</p>
3. Implement marketing	<p>3.1. Brief persons involved in the marketing effort on their roles and responsibilities, to ensure the success</p>

ELEMENT	PERFORMANCE CRITERIA
strategies	of marketing strategies 3.2. Plan and implement <i>promotional activities</i> , in accordance with marketing objectives and budgetary requirements
4. Monitor and improve marketing performance	4.1. Monitor marketing activities and evaluate business performance according to the objectives and targets of the business plan 4.2. Analyse <i>performance gaps</i> and take corrective action or set new targets 4.3. Encourage all relevant people to propose ways to improve marketing performance 4.4. Seek and analyse <i>customer reaction</i> to all aspects of the marketing mix, using culturally appropriate processes, to improve targeting and outcomes 4.5. Conduct ongoing research of customer requirements to identify opportunities for change and improvement 4.6. Monitor and investigate changes in the market for new opportunities to aid business development

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to question, clarify and report
- literacy and numeracy skills to research information, to analyse data and to interpret market data.

#### Required knowledge

- industry market trends
- methods of analysing costs and benefits of marketing strategies
- methods of developing marketing objectives and marketing mix
- methods of monitoring customer satisfaction
- relevant market analysis and research
- relevant marketing concepts and methods.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>developing a marketing strategy and choosing a marketing mix for the small business that are culturally appropriate and that complement the business plan</li> <li>implementing and monitoring the marketing strategy/plan to optimise the chances of small business success</li> <li>knowledge of relevant marketing concepts and methods.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>access to relevant documentation</li> <li>candidate's individual circumstances and work in the context of running a small business, are the basis for assessment.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>portfolio of evidence including marketing strategy and monitoring of marketing performance</li> <li>oral or written questioning to assess knowledge of industry market trends</li> <li>review of analysis of performance gaps and corrective action taken or new targets set</li> <li>review of promotional activities implemented.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>BSBSMB404A Undertake small business planning.</li> </ul>



## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><b><i>Marketing objectives and strategies</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• achieving lower costs of production and distribution than competitors</li> <li>• creating a very different product line or service so that the business becomes a class leader in the industry</li> <li>• distribution</li> <li>• pricing, presentation and display of products/services</li> <li>• product design and packaging</li> <li>• product range and mix</li> <li>• promotion and advertising</li> <li>• pursuing cost leadership and/or product differentiation within a specialist market segment</li> </ul>
<p><b><i>Relevant people</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• accountant or other specialist services</li> <li>• family members, work team members, sub-contractors, community members</li> <li>• franchise agency</li> <li>• financial backers, clients</li> <li>• owner/operator, partners, directors, shareholders</li> <li>• regulatory bodies</li> <li>• trade or industry associations</li> </ul>
<p><b><i>Distribution channels</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• dealer, re-seller, franchisee</li> <li>• distributor, delivery service, mail order, telesales</li> <li>• self-access, wholesale, retail</li> </ul>
<p><b><i>Levels of customer service</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• after sales service</li> <li>• one-on-one personal service</li> <li>• sales assistance for problems/queries only</li> </ul>
<p><b><i>Marketing mix</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• distribution</li> <li>• level of service</li> <li>• pricing</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• promotion</li> <li>• quality, range</li> <li>• safety features</li> <li>• technical features, design</li> </ul>
<i>Promotional activities</i> may include:	<ul style="list-style-type: none"> <li>• advertising in national, suburban or local newspapers</li> <li>• advertising on radio or television</li> <li>• canvassing</li> <li>• development of networks and strategic alliances</li> <li>• display posters</li> <li>• exhibitions, in-store promotions</li> <li>• involvement in community projects</li> <li>• mail drops</li> <li>• professional/industry journals</li> <li>• sponsorship</li> <li>• staff development programs to enhance customer service orientation</li> <li>• website</li> <li>• word of mouth, referral, testimonials</li> </ul>
<i>Performance gaps</i> may include:	<ul style="list-style-type: none"> <li>• over achievement of performance targets</li> <li>• under achievement of performance targets</li> </ul>
<i>Customer reaction</i> may be determined through:	<ul style="list-style-type: none"> <li>• customer meetings, focus groups</li> <li>• identification of new business opportunities</li> <li>• informal discussion</li> <li>• sales to contact ratio</li> <li>• survey/other feedback mechanisms</li> <li>• trend analysis</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

<b>Competency field</b>	Management and Leadership - Small and Micro Business
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## Co-requisite units

<b>Co-requisite units</b>	

# BSBSMB405B Monitor and manage small business operations

## Modification History

Release	Comments
Release 1	<p>This version first released with <i>BSB07 Business Training Package version 6.0</i></p> <p>Revised unit. Required knowledge and Range Statement changed to include environmentally sustainable practices</p> <p>Replaces BSBSMB405A Monitor and manage small business operations</p>

## Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to operate a small business and to implement a business plan. The strategies involve monitoring, managing and reviewing operational procedures.

Specific legal requirements apply to the management of a small business.

## Application of the Unit

This work is undertaken by individuals who operate a small business.

The unit is suitable for existing micro and small businesses or a department in a larger organisation.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Develop <i>operational strategies and procedures</i>	<p>1.1 Develop an action plan to provide a clear and coherent direction, in accordance with the <i>business goals and objectives</i></p> <p>1.2 Identify <i>occupational health and safety (OHS) and environmental issues</i> and implement strategies to minimise risk factors</p> <p>1.3 Develop a <i>quality system</i> for the business in line with industry standards, compliance requirements and cultural criteria</p> <p>1.4 Develop performance measures and <i>operational targets</i> to conform with the business plan</p> <p>1.5 Develop strategies for innovation, including the utilisation of existing, new or emerging technologies, where practicable, to optimise business performance</p>
2. Implement operational strategies and procedures	<p>2.1 Implement systems and key performance indicators/targets to monitor business performance and customer satisfaction</p> <p>2.2 Implement systems to control stock, expenditure/cost, wastage/shrinkage and risks to health and safety in accordance with the business plan</p> <p>2.3 Maintain staffing requirements, where applicable, within budget to maximise productivity</p> <p>2.4 Carry out the provision of goods/services in accordance with established legal, ethical cultural and <i>technical standards</i></p> <p>2.5 Provide goods/services in accordance with time, cost and quality specifications, and customer requirements</p> <p>2.6 Apply quality procedures to address product/service and customer requirements</p>
3. Monitor business performance	3.1 Regularly monitor/review the achievement of operational targets to ensure optimum business performance, in accordance

	<p>with the business plan goals and objectives</p> <p>3.2 Review systems and structures, with a view to more effectively supporting business performance</p> <p>3.3 Investigate and analyse operating problems to establish causes and implement changes as required as part of the business quality system</p> <p>3.4 Amend operational policies and procedures to incorporate corrective action</p>
4. Review business operations	<p>4.1 Review and adjust business plan, as required, to maintain business viability, in accordance with business goals and objectives</p> <p>4.2 Clearly record proposed changes to aid future planning and evaluation</p> <p>4.3 Undertake ongoing research into new business opportunities and adjust business goals and objectives as new business opportunities arise</p>

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- analytical skills to develop criteria and targets for the business plan
- communication skills to question, clarify and report
- literacy skills to interpret legal requirements, company policies and procedures
- numeracy skills to manage performance information and to control the finances
- technology skills to use relevant business equipment.

### Required knowledge

- methods for developing and maintaining networks
- methods for implementing operation and revenue control systems
- methods for monitoring performance and implementing improvements
- OHS responsibilities and procedures for managing hazards
- principles of risk management relevant to the business, including risk assessment
- quality system principles and methods
- relevant industry codes of practice
- relevant marketing, sales and financial concepts
- relevant performance measures

- role of innovation
- systems to manage staff, stock, expenditure, services and customer service
- environmentally sustainable business practice and operation
- technical or specialist skills relevant to the business operation.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• developing strategies and procedures to successfully manage the operation of the business</li> <li>• making appropriate adjustments to the business operations as required</li> <li>• knowledge of quality system principles and methods.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to relevant documentation</li> <li>• candidate's individual circumstances and work in the context of running a small business, are the basis for assessment.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• portfolio of evidence including operational strategies and procedures</li> <li>• oral or written questioning to assess knowledge of principles of risk management relevant to the business, including risk assessment</li> <li>• review of analysis of operating problems (establishing causes and implementing changes as required as part of the business quality system)</li> <li>• review of records proposing changes to the business operations.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• BSBSMB406A Manage small business finances</li> </ul>

	<ul style="list-style-type: none"> <li>• BSBSMB407A Manage a small team.</li> </ul>
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## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<p><b><i>Operational strategies and procedures</i></b> may be determined by:</p>	<ul style="list-style-type: none"> <li>• business premises (size, location, layout)</li> <li>• financial control systems and procedures</li> <li>• management and administrative systems and procedures</li> <li>• methods/techniques/technology</li> <li>• physical and natural resources</li> <li>• plant and equipment , including OHS requirements</li> <li>• premises, plant and equipment, which may be new or previously owned</li> <li>• purchase (sole or shared ownership) or leasing</li> <li>• raw materials</li> <li>• requirements, which may be one-off requirements or recurrent requirements (such as equipment maintenance) specific to the nature of the business</li> <li>• technology</li> <li>• environmentally sustainable principles of business operation</li> <li>• use of existing, new and emerging technologies including e-commerce.</li> </ul>
<p><b><i>Business goals and objectives</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• customer needs/marketing projections</li> <li>• family or community benefits</li> <li>• financial projections</li> <li>• goals, objectives, plans, systems and processes</li> <li>• lifestyle issues</li> <li>• proposed size and scale of the business, market focus of the business</li> <li>• short-, medium- or long-term goals</li> <li>• social responsibility.</li> </ul>
<p><b><i>Occupational health and safety and environmental issues</i></b> must include:</p>	<ul style="list-style-type: none"> <li>• controls, which may include instructions to workplace personnel concerning site hazards and controls, material safety data sheets, use of personal protective equipment,</li> </ul>



	<p>vehicle access, signs and barricades, traffic control, outside contractors</p> <ul style="list-style-type: none"> <li>• establishment and maintenance of procedures for assessing and controlling risks</li> <li>• establishment and maintenance of procedures for identifying risks to health and safety</li> <li>• environmentally sustainable purchase and supply of goods and services</li> <li>• waste and by-products.</li> </ul>
<i>Quality system</i> may include:	<ul style="list-style-type: none"> <li>• manual or computer quality control systems</li> <li>• quality assurance/management approaches</li> <li>• random inspections and assessments of goods and services against predetermined standards</li> <li>• random inspections and assessments of processes against predetermined standards</li> <li>• random sampling and follow-up of customers.</li> </ul>
<i>Operational targets</i> may include:	<ul style="list-style-type: none"> <li>• external targets, which may relate to market share and positioning and may involve exploring new markets, building national or international trade links</li> <li>• internal targets, which may relate to size, quality, quantity and diversity, wages to sales, sales to area/stock levels/stock turnover/average debtor payment periods and levels</li> <li>• staffing level and skills mix</li> <li>• targets, which may be short-, medium- or long-term.</li> </ul>
<i>Technical standards</i> may include:	<ul style="list-style-type: none"> <li>• current and generally agreed descriptions of what the product/service is, how it should be produced/delivered and the environmental sustainability, quality, safety, efficiency or other measures to determine the activity is done effectively.</li> </ul>

## Unit Sector(s)

Management and Leadership – Small and Micro Business

## Custom Content Section

Not applicable.

## BSBSMB406A Manage small business finances

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to implement, monitor and review strategies for the ongoing management of a small business's finances. It also includes day to day financial management of the small business.</p> <p>Specific legal requirements apply to the management of a small business.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This work is undertaken by individuals who operate a small business.</p> <p>The unit is suitable for existing micro and small businesses or a department in a larger organisation.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement financial plan	<p>1.1. Identify <i>financial information</i> requirements and obtain <i>specialist services</i>, as required, to profitably operate and extend the business in accordance with the business plan</p> <p>1.2. Produce financial budgets/projections, including <i>cash flow</i> estimates, as required for each forward period, and distribute to <i>relevant people</i> in accordance with legal requirements</p> <p>1.3. Negotiate, secure and manage business capital to best enable implementation of the business plan and to meet the requirements of <i>financial backers</i></p> <p>1.4. Develop and maintain strategies to enable adequate financial provision for taxation in accordance with legal requirements</p> <p>1.5. Develop, monitor and maintain client <i>credit policies</i>, including contingencies for debtors in default, to maximise cash flow</p> <p>1.6. Select key performance indicators to enable ongoing monitoring of financial performance</p> <p>1.7. Record and communicate financial procedures to relevant people to facilitate implementation of the business plan</p>
2. Monitor financial performance	2.1. Regularly monitor and report on financial performance targets and analyse data to establish the

ELEMENT	PERFORMANCE CRITERIA
	<p>extent to which the <i>financial plan</i> has been met</p> <p>2.2. Monitor marketing and operational strategies for their effects on the financial plan</p> <p>2.3. Calculate and evaluate <i>financial ratios</i> according to own/industry benchmarks</p> <p>2.4. Assess financial plan to determine whether variations or alternative plans are needed, and change as required</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analytical skills to interpret financial data
- communication skills to negotiate capital and to report on performance
- literacy skills to interpret legal requirements and financial reports
- numeracy skills to calculate costs, prices, profit and other financial information.

#### Required knowledge

The following knowledge must be assessed as part of this unit:

- benchmarking
- financial decision making relevant to the business
- financial indicators
- purpose of financial reports
- preparation and interpretation of budget/actual reports
- principles for preparation of balance sheets and their interpretation
- principles for preparation of profit and loss statements and their interpretation
- stock records/stock control relevant to the business.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• development, implementation and review of strategies for the ongoing management of finance</li> <li>• maintenance of day-to-day financial management of the business as well as implementation of broad financial strategies</li> <li>• knowledge of purpose of financial reports.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to relevant documentation</li> <li>• candidate's individual circumstances and work in the context of establishing or running a small business, are the basis for assessment.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• portfolio of evidence including financial reports</li> <li>• preparation and review of financial ratios</li> <li>• review of cash flow projections</li> <li>• analysis of development, monitoring and maintenance of client credit policies</li> <li>• oral or written questioning to assess knowledge of principles for preparation of balance sheets and their interpretation.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• BSBSMB402A Plan small business finances</li> <li>• BSBSMB405A Monitor and manage small business operations.</li> </ul>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different

**RANGE STATEMENT**

work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Financial plan*** may include:

- analysis of sales by product/service, identifying where they were sold and to whom
- cash flow estimates for each forward period
- current financial state of the enterprise (or owner/operator)
- estimates of profit and loss projections for each forward period
- financial performance to date (if applicable)
- likely return on investment
- monthly, quarterly or annual returns
- non-recurrent assets calculations
- profit, turnover, capital and equity targets
- projected profit targets, pricing strategies, margins
- projections of likely financial results (budgeting)
- projections, which may vary depending on the importance of such information and the stage in the life of the business
- resources required to implement the proposed marketing and production strategies (staff, materials, plant and equipment)
- review of financial inputs required (sources and forms of finance)
- risks and measures to manage or minimise risks
- working, fixed, debt and equity capital
- working in conjunction with external consultants e.g. investment analysts, accountants, financiers

***Financial information*** may include:

- accrual of staff leave/entitlements
- asset management strategies which may include:
  - owning, leasing, sharing, syndicating
  - maintaining and deploying assets
- asset registers
- balance sheets
- bookkeeping/accounting/stock/job costing records
- business activity statements
- business capital
- cash book

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• cash flow forecasts</li> <li>• financial budgets</li> <li>• financial indicators, which may be short-, medium- and/or long-term</li> <li>• payroll records, superannuation entitlements</li> <li>• profit and loss statements</li> <li>• ratios for profitability, liquidity/efficiency/financial structure</li> <li>• risk management</li> <li>• statements/forecasts</li> <li>• taxation returns including goods and services tax</li> </ul>
<i>Specialist services</i> may include:	<ul style="list-style-type: none"> <li>• accountants</li> <li>• business brokers/business consultants</li> <li>• government agencies</li> <li>• industry/trade associations</li> <li>• lawyers and providers of legal advice</li> <li>• mentors</li> <li>• online gateways</li> <li>• providers of training in accounting software</li> </ul>
<i>Cash flow</i> may include:	<ul style="list-style-type: none"> <li>• anticipated payments</li> <li>• anticipated receipts</li> <li>• customer credit policy/debt recovery</li> <li>• taxation provisions</li> </ul>
<i>Relevant people</i> may include:	<ul style="list-style-type: none"> <li>• family members</li> <li>• financial backers</li> <li>• franchise agency</li> <li>• owner/operator</li> <li>• partners</li> <li>• regulatory bodies</li> <li>• trade or industry associations</li> </ul>
<i>Financial backers</i> may include:	<ul style="list-style-type: none"> <li>• financiers/banks/lending institutions</li> <li>• leasing and hire purchase financiers</li> <li>• providers of venture capital</li> <li>• shareholders/partners/owners/family/friends</li> </ul>
<i>Credit policies</i> may include:	<ul style="list-style-type: none"> <li>• collateral</li> <li>• credit limits</li> <li>• credit references</li> <li>• debt collection</li> <li>• payment options</li> <li>• proof of Indigenous identity</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• trading terms</li> </ul>
<i>Financial ratios</i> may include:	<ul style="list-style-type: none"> <li>• current ratio</li> <li>• days debtors outstanding</li> <li>• days stock on hand</li> <li>• expense percentages</li> <li>• gross profit percentage</li> <li>• liquid ratio</li> <li>• net profit percentage</li> <li>• proprietary/debt ratio</li> <li>• return on investment/return on total assets</li> <li>• staff productivity measures</li> <li>• stock turn rates</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Management and Leadership - Small and Micro Business
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### Co-requisite units

<b>Co-requisite units</b>		



## BSBSUS301A Implement and monitor environmentally sustainable work practices

### Modification History

Not applicable.

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit describes the performance outcomes, skills and knowledge required to effectively analyse the workplace in relation to environmentally sustainable work practices and to implement improvements and monitor their effectiveness.</p> <p>This unit requires the ability to access industry information, applicable legislative and occupational health and safety (OHS) guidelines.</p> <p>While no licensing, legislative, regulatory or certification requirements apply holistically to this unit at the time of publication, relevant national, state and territory legislation, regulations and codes of practice impact upon this unit.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit applies to those with responsibility for a specific area of work or who lead a work group or team. It addresses the knowledge, processes and techniques necessary to implement and monitor environmentally sustainable work practices, including the development of processes and tools, such as:</p> <ul style="list-style-type: none"> <li>• identifying areas for improvement</li> <li>• developing plans to make improvements</li> <li>• implementing and monitoring improvements in environmental performance.</li> </ul> <p>A person who demonstrates competence in this unit must be able to provide evidence of the ability to implement and monitor integrated environmental and resource efficiency management policies and procedures within an organisation. Evidence must be strictly relevant to the</p>
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	particular workplace role.
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Prerequisite units	

## Employability Skills Information

Employability skills	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Investigate current practices in relation to resource usage	1.1. Identify environmental regulations applying to the enterprise 1.2. Analyse procedures for assessing <i>compliance</i> with environmental/sustainability regulations 1.3. Collect information on environmental and resource

ELEMENT	PERFORMANCE CRITERIA
	<p>efficiency systems and procedures, and provide to the work group where appropriate</p> <p>1.4. Collect, analyse and organise information from a range of <i>sources</i> to provide information/advice and tools/resources for improvement opportunities</p> <p>1.5. Measure and document current resource usage of members of the work group</p> <p>1.6. Analyse and document current <i>purchasing strategies</i></p> <p>1.7. Analyse current work processes to access information and data to assist in identifying areas for improvement</p>
2. Set targets for improvements	<p>2.1. Seek input from <i>stakeholders, key personnel and specialists</i></p> <p>2.2. Access external sources of information and data as required</p> <p>2.3. Evaluate alternative solutions to workplace environmental issues</p> <p>2.4. Set efficiency targets</p>
3. Implement performance improvement strategies	<p>3.1. Source and use appropriate <i>techniques and tools</i> to assist in achieving efficiency targets</p> <p>3.2. Apply continuous improvement strategies to own work area of responsibility, including ideas and possible solutions to communicate to the work group and management</p> <p>3.3. Implement and integrate <i>environmental and resource efficiency improvement plans</i> for own work group with other operational activities</p> <p>3.4. Supervise and support team members to identify possible areas for improved practices and resource efficiency in work area</p> <p>3.5. Seek <i>suggestions</i> and ideas about environmental and resource efficiency management from stakeholders and act upon where appropriate</p> <p>3.6. Implement costing strategies to fully value environmental assets</p>
4. Monitor performance	<p>4.1. Use and/or develop evaluation and monitoring, tools and technology</p> <p>4.2. Document and communicate outcomes to report on efficiency targets to key personnel and stakeholders</p> <p>4.3. Evaluate strategies and improvement plans</p>

ELEMENT	PERFORMANCE CRITERIA
	4.4. Set new efficiency targets, and investigate and apply new tools and strategies 4.5. Promote successful strategies and reward participants where possible

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- analytical skills to analyse problems, to devise solutions and to reflect on approaches taken
- change management skills
- communication skills to answer questions, clarify and acknowledge suggestions relating to work requirements and efficiency
- communication/consultation skills to support information flow from stakeholders to the work group
- innovation skills to identify improvements, to apply knowledge about resource use to organisational activities and to develop tools
- literacy skills to comprehend documentation, to interpret environmental and energy efficiency requirements, to create tools to measure and monitor improvements and to report outcomes
- numeracy skills to analyse data on organisational resource consumption and waste product volumes
- planning and organising skills to implement environmental and energy efficiency management policies and procedures relevant to own work area
- problem-solving skills to devise approaches to improved environmental sustainability and to develop alternative approaches as required
- technology skills to operate and shut down equipment; where relevant, to use software systems for recording and filing documentation to measure current usage; and to use word processing and other basic software for interpreting charts, flowcharts, graphs and other visual data and information
- supervisory skills to work effectively with a team

#### Required knowledge

- best practice approaches relevant to own area of responsibility and industry
- compliance requirements within work area for all relevant environmental/sustainability legislation, regulations and codes of practice including resource hazards/risks associated with work area, job specifications and procedures

## REQUIRED SKILLS AND KNOWLEDGE

- environmental and energy efficiency issues, systems and procedures specific to industry practice
- external benchmarks and support for particular benchmarks to be used within organisation, including approaches to improving resource use for work area and expected outcomes
- OHS issues and requirements
- organisational structure and reporting channels and procedures
- quality assurance systems relevant to own work area
- strategies to maximise opportunities and to minimise impact relevant to own work area
- supply chain procedures
- terms and conditions of employment including policies and procedures, such as daily tasks, work area responsibilities, employee, supervisor and employer rights, equal opportunity

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- knowledge of relevant compliance requirements within work area
- developing plans to make improvements
- planning and organising work group activities in relation to measuring current use and devising strategies to improve usage
- monitoring resource use and improvements for environmental performance relative to work area and supervision
- ensuring appropriate action is taken within work area in relation to environmental/sustainability compliance and potential hazards
- implementing new approaches to work area in an effort to resolve and improve environmental and resource efficiency issues and reporting as required.

<b>EVIDENCE GUIDE</b>	
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to an actual workplace or simulated environment</li> <li>• access to a range of environment/sustainability legislation, standards, guidelines and procedural requirements relevant to specific work area, daily responsibilities and supervision</li> <li>• access to a range of information, workplace documentation and resources such as compliance obligations, organisation plans, work supervision and responsibilities</li> <li>• access to reports from other parties involved in the process of identifying and implementing improvements</li> <li>• evidence is relevant to the particular workplace role, including work area, staff, stakeholders, equipment, systems and documentation.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• response to case studies</li> <li>• review of reports of activities of work group in relation to measuring resource use and developing improvement strategies</li> <li>• review of work plans outlining approaches to improved practices with documented benchmarks</li> <li>• analysis of the way in which advice is sought and suggestions are made about improvements</li> <li>• observation over time and in a range of situations in relation to review of overall work area and staff, to assess and measure resource use, hazards and compliance</li> <li>• review of checklists to identify and assess resource usage at the beginning and end of the unit; reports on meetings around procedures and improvement processes and monitoring within the workplace; lists of environmental hazards/risks or inefficiencies or opportunities for improvements identified in the workplace</li> <li>• analysis of implementation of programs such as a</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>green office program, supply chain program for purchasing sustainable products, or an environmental management framework</p> <ul style="list-style-type: none"> <li>oral or written questioning to assess knowledge of environmental and energy efficiency issues, systems and procedures specific to industry practice.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>BSBATSIC411C Communicate with the community</li> <li>BSBINN301A Promote innovation in a team environment</li> <li>BSBLED401A Develop teams and individuals</li> <li>BSBMGT402A Implement operational plan</li> <li>BSBMGT403A Implement continuous improvement</li> <li>BSBRSK401A Identify risk and apply risk management processes.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b><i>Compliance</i></b> may include:	<ul style="list-style-type: none"> <li>meeting relevant laws, by-laws and regulations or best practice or codes of practice to support compliance in environmental performance and sustainability at each level as required (such as Environmental Protection or Biodiversity Conservation Act): <ul style="list-style-type: none"> <li>international</li> <li>commonwealth</li> <li>state/territory</li> <li>industry</li> <li>organisation.</li> </ul> </li> </ul>

<b>RANGE STATEMENT</b>	
<i>Sources</i> may include:	<ul style="list-style-type: none"> <li>• organisation specifications</li> <li>• regulatory sources</li> <li>• relevant stakeholders</li> <li>• resource use.</li> </ul>
<i>Purchasing strategies</i> may include:	<ul style="list-style-type: none"> <li>• influencing suppliers to take up environmental sustainability approaches</li> <li>• researching and participating in programs such as a supply chain program to purchase sustainable products.</li> </ul>
<i>Stakeholders, key personnel and specialists</i> may include:	<ul style="list-style-type: none"> <li>• individuals and groups both inside and outside the organisation who have direct or indirect interest in the organisation's conduct, actions, products and services, including: <ul style="list-style-type: none"> <li>• customers</li> <li>• employees at all levels of the organisation</li> <li>• government</li> <li>• investors</li> <li>• local community</li> <li>• other organisations</li> <li>• suppliers</li> </ul> </li> <li>• key personnel within the organisation, and specialists outside the organisation who may have particular technical expertise.</li> </ul>
<i>Techniques and tools</i> may include:	<ul style="list-style-type: none"> <li>• examination of invoices from suppliers</li> <li>• examination of relevant information and data</li> <li>• measurements made under different conditions</li> <li>• others as appropriate to the specific industry context.</li> </ul>
<i>Environmental and resource efficiency improvement plans</i> may include:	<ul style="list-style-type: none"> <li>• addressing environmental and resource sustainability initiatives such as environmental management systems, action plans, green office programs, surveys and audits</li> <li>• applying the waste management hierarchy in the workplace</li> <li>• determining organisation's most appropriate waste treatment including waste to landfill, recycling, re-use, recoverable resources and wastewater treatment</li> <li>• initiating and/or maintaining appropriate organisational procedures for operational energy consumption, including stationary</li> </ul>



<b>RANGE STATEMENT</b>	
	<p>energy and non-stationary (transport)</p> <ul style="list-style-type: none"> <li>• preventing and minimising risks, and maximising opportunities such as: <ul style="list-style-type: none"> <li>• improving resource/energy efficiency</li> <li>• reducing emissions of greenhouse gases</li> </ul> </li> <li>• reducing use of non-renewable resources</li> <li>• referencing standards, guidelines and approaches such as: <ul style="list-style-type: none"> <li>• ecological footprinting</li> <li>• Energy Efficiency Opportunities Bill 2005</li> <li>• Global Reporting Initiative</li> <li>• green office program - a cultural change program</li> <li>• green purchasing</li> <li>• Greenhouse Challenge Plus (Australian government initiative)</li> <li>• ISO 14001:1996 Environmental management systems life cycle analyses</li> <li>• product stewardship</li> <li>• supply chain management</li> <li>• sustainability covenants/compacts</li> <li>• triple bottom line reporting.</li> </ul> </li> </ul>
<p><i>Suggestions</i> may include ideas that help to:</p>	<ul style="list-style-type: none"> <li>• prevent and minimise risks and maximise opportunities such as: <ul style="list-style-type: none"> <li>• usage of solar or renewable energies where appropriate</li> <li>• reducing emissions of greenhouse gases</li> <li>• reducing use of non-renewable resources</li> <li>• making more efficient use of resources, energy and water</li> </ul> </li> <li>• maximising opportunities to re-use, recycle and reclaim materials</li> <li>• identifying strategies to offset or mitigate environmental impacts: <ul style="list-style-type: none"> <li>• purchasing carbon credits</li> <li>• energy conservation</li> <li>• reducing chemical use</li> <li>• reducing material consumption</li> </ul> </li> <li>• expressing purchasing power through the selection of suppliers with improved</li> </ul>

**RANGE STATEMENT**

	<p>environmental performance e.g. purchasing renewable energy</p> <ul style="list-style-type: none"> <li>eliminating the use of hazardous and toxic materials.</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	
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**Competency field**

<b>Competency field</b>	Industry Capability - Sustainability
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**Co-requisite units**

<b>Co-requisite units</b>		

## BSBWHS302A Apply knowledge of WHS legislation in the workplace

### Modification History

Release	Comments
Release 1	<p>This Unit first released with <i>BSB07 Business Training Package version 7.0</i>.</p> <p>Replaces and is equivalent to BSBOHS301B Apply knowledge of OHS legislation in the workplace.</p>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to understand work health and safety (WHS) Acts, regulations and codes of practice, and to contribute to actions to achieve compliance with WHS legislation in the workplace.

### Application of the Unit

This unit applies to individuals who contribute to achieving compliance with WHS legislation in the workplace as part of their WHS responsibilities, which are in addition to their main duties.

*NOTE: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.*

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

### Elements and Performance Criteria

1. Determine the legal framework for WHS in the workplace	<p>1.1 Identify and access <b><i>current WHS legislation and related documentation</i></b> relevant to the workplace, occupation and industry</p> <p>1.2 Apply knowledge of the relationship between WHS Acts, regulations and codes of practice to assist in identifying WHS legislative requirements in the workplace</p> <p>1.3 Identify <b><i>duty holders</i></b></p> <p>1.4 Identify legal obligations and duties for consultation with and training of workers, health and safety representatives, and others</p> <p>1.5 Identify consequences of <b><i>non-compliance</i></b> with WHS Acts, regulations, codes of practice, standards and organisational WHS policies, procedures, processes and systems</p>
2. Contribute to activity that reflects WHS legislative requirements	<p>2.1 Contribute to monitoring compliance with legislation</p> <p>2.2 Contribute to ensuring that workplace complies with legislation</p> <p>2.3 Identify and take <b><i>appropriate action</i></b> on non-compliance with legislation</p> <p>2.4 Recognise limits of own expertise and legal duties, and access help and advice when required</p>
3. Keep up-to-date with legislation and relevant publications	<p>3.1 Use relevant <b><i>sources</i></b> to keep up-to-date with legislation and <b><i>relevant publications</i></b></p> <p>3.2 Communicate information on relevant legislative changes and relevant publications to others</p>

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- communication skills to contribute effectively to formal and informal WHS meetings
- computer skills to search for, access and download electronic documents and software
- literacy skills to read and understand documents and publications.

### Required knowledge

- legislative duties of self and others
- organisational WHS policies, procedures, processes and systems
- relevant commonwealth and state or territory WHS Acts, regulations, codes of practice, standards and guidance material, and other relevant publications
- ways to get information about compliance with legislation.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• current knowledge of relevant WHS Acts, regulations and codes of practice</li> <li>• identifying and applying WHS legislative requirements applicable to the workplace, occupation and industry</li> <li>• referring issues of non-compliance to responsible persons or authorities</li> <li>• seeking advice from appropriate sources.</li> </ul>
<b>Context of and specific resources</b>	Assessment must ensure access to:

<b>for assessment</b>	<ul style="list-style-type: none"> <li>• relevant information and documentation on compliance requirements, such as:             <ul style="list-style-type: none"> <li>• organisational policies, procedures, plans and standard operating procedures</li> <li>• relevant Acts, regulations, codes of practice, licensing requirements and standards</li> </ul> </li> <li>• relevant internal and external data files</li> <li>• appropriate office equipment and resources used in the identification and rectification of WHS compliance breaches.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third-party reports of on-the-job performance by the candidate</li> <li>• review of documents on WHS Acts, regulations, codes of practice, standards, policies and procedures developed and communicated to workers</li> <li>• analysis of responses to case studies and scenarios</li> <li>• demonstration of applying WHS legislation in conducting work safely</li> <li>• oral or written questioning to assess knowledge of research and data-collection methods to obtain evidence of compliance with WHS legislation.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• other BSB07 WHS units.</li> </ul>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><b><i>Current WHS legislation and related documentation</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• current applicable commonwealth and relevant state or territory WHS Acts, regulations and codes of practice</li> <li>• organisational WHS policies, procedures, processes and systems</li> <li>• other documents, such as standards, guidance material and alerts issued by the relevant WHS regulator</li> <li>• other legislation relevant to WHS.</li> </ul>
<p><b><i>Duty holders</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• as specified in WHS Acts:             <ul style="list-style-type: none"> <li>• persons conducting businesses or undertakings (PCBUs) or their officers</li> <li>• workers</li> <li>• other persons at a workplace.</li> </ul> </li> </ul>
<p><b><i>Non-compliance</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• failure to meet legal requirements</li> <li>• inadequate systems of information, instruction, training or supervision</li> <li>• plant, equipment or substances not maintained, or used or stored in an unsafe condition</li> <li>• poor consultation practices</li> <li>• poor design</li> <li>• workplace hazards not identified or controlled</li> <li>• workplace systems not in place or inadequate.</li> </ul>
<p><b><i>Appropriate action</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• contributing to a WHS audit</li> <li>• contributing to a WHS inspection</li> <li>• contributing to engaging external specialists and consultants</li> <li>• contributing to identifying non-compliance with WHS legislation</li> <li>• contributing to implementing, monitoring and evaluating actions to ensure compliance with WHS legislation</li> <li>• making recommendations about how compliance with WHS legislation could be achieved</li> </ul>

	<ul style="list-style-type: none"> <li>• reporting breaches of compliance to responsible persons or authorities</li> <li>• where required, carrying out roles or functions specified in legislation or workplace policies and procedures.</li> </ul>
<i>Sources</i> may include:	<ul style="list-style-type: none"> <li>• audits</li> <li>• Australian and international standards</li> <li>• hazard, incident and investigation reports</li> <li>• industry bodies or groups</li> <li>• manufacturer manuals and specifications</li> <li>• regulatory authorities</li> <li>• training or information sessions and forums</li> <li>• unions</li> <li>• websites, journals and newsletters</li> <li>• WHS professional bodies</li> <li>• WHS specialists.</li> </ul>
<i>Relevant publications</i> may include:	<ul style="list-style-type: none"> <li>• Australian, international, union and industry standards</li> <li>• computer software</li> <li>• electronic or paper documents</li> <li>• WHS guidance notes, fact sheets, guidelines, alerts and other publications issued by commonwealth and state or territory governments, WHS regulators, other bodies and organisations.</li> </ul>

## Unit Sector(s)

Regulation, Licensing and Risk – Work Health and Safety



# BSBWHS503A Contribute to the systematic management of WHS risk

## Modification History

Release	Comments
Release 1	<p>This Unit first released with <i>BSB07 Business Training Package version 7.0</i>.</p> <p>Replaces and is equivalent to BSBOHS504B Apply principles of OHS risk management.</p>

## Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to contribute to the systematic management of work health and safety (WHS) risk. It addresses the processes and techniques necessary to contribute to the systematic management of WHS risk.

## Application of the Unit

This unit applies to people who work in a range of WHS roles across all industries and who apply a substantial knowledge base and well-developed skills in a wide variety of WHS contexts.

*NOTE: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.*

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

### Elements and Performance Criteria

1. Access information and data to contribute to the systematic management of WHS risk	1.1 Identify <i>sources of information and data</i> 1.2 Obtain information and data to determine the purposes, objectives, principles and framework of a systematic approach to managing WHS risk
2. Contribute to effective consultation and participation during all stages of the risk-management process	2.1 Identify <i>individuals and parties</i> who need to participate and be consulted 2.2 Apply knowledge of effective consultation and participation to contribute to ensuring effective consultation and participation processes occur
3. Contribute to establishing the context for risk management	3.1 Apply knowledge of <i>WHS legislation</i> to identify <i>duty holders</i> and legislative requirements for WHS risk management 3.2 Identify individuals and parties impacting on risk management 3.3 Apply knowledge of organisation to identify factors that will impact on risk control 3.4 Contribute to establishing the <i>context of the risk-management process</i> 3.5 Contribute to defining <i>risk criteria</i>
4. Contribute to risk assessment	4.1 Apply knowledge of workplace hazards and risks to contribute to <i>risk identification</i> 4.2 Apply knowledge of WHS legislation, risk assessment and workplace WHS information and data to contribute to <i>risk</i>

	<i>analysis and evaluation</i>
5. Contribute to risk treatment	<p>5.1 Apply knowledge of WHS hazard and risk control, and WHS legislation to contribute to the selection of <i>risk treatment options</i></p> <p>5.2 Apply knowledge of the organisation's WHS management system (WHSMS) and WHS information system (WHSIS) to prepare and implement risk treatments</p>
6. Contribute to monitoring, reviewing and recording risk-management process	<p>6.1 Apply knowledge of the organisation's WHSMS to contribute to monitoring and reviewing risk-management process</p> <p>6.2 Apply knowledge of the organisation's WHSIS to contribute to recording risk-management process</p>

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- analytical skills to read and interpret relevant workplace information and data
- communication skills to:
  - conduct effective formal and informal meetings and communicate effectively with personnel at all levels of the organisation, and with external parties and individuals
  - use language appropriate to the work team and the task
- consultation and negotiation skills to:
  - develop plans
  - implement and monitor designated actions
- information technology skills to:
  - access and download internal and external information and data on WHS
  - use a range of communication media
- literacy skills to write policies, procedures and plans
- numeracy skills to:
  - analyse workplace information and data
  - carry out calculations
  - identify trends
- organisational skills to manage own tasks within a timeframe
- project-management skills to:
  - achieve continuous improvement
  - action processes about WHS matters

- research skills to:
  - access relevant WHS information and data
  - identify areas for improvement
  - interpret information and data.

## Required knowledge

- difference between hazard and risk
- formal and informal communication and consultation processes, and key personnel related to communication
- how the characteristics and composition of the workforce impact on WHS risk and the management of WHS, including:
  - communication skills
  - cultural background and diversity
  - gender
  - labour market changes
  - language, literacy and numeracy levels of the workforce
  - structure and organisation of the workforce, including part time, casual and contract workers; shift rosters; and geographical location
  - workers with specific needs and limitations
  - workplace culture towards alcohol and other drug use
- internal and external sources of WHS information and data, and how to access them
- limitations of generic hazard identification and risk assessment checklists, and risk ranking processes
- nature of workplace processes (work flow, planning and control) and hazards relevant to the workplace
- organisational behaviour and culture as they impact on WHS and on change
- organisational culture as it impacts on the work team
- organisational WHS policies, procedures, processes and systems
- other functional areas that impact on the management of WHS
- pertinent sections of relevant Australian standards and publications, including:
  - AS/NZS ISO 31000–2009 Risk Management – Principles and Guidelines
  - Standards Australia publication HB 327:2010 Communicating and consulting about risk (Companion to AS/NZS ISO 31000:2009)
  - Standards Australia publication HB 158-2010 Delivering assurance based on ISO 31000:2009 – Risk management – Principles and guidelines
- principles and practices of a systematic approach to managing WHS
- principles of duty of care, including concepts of causation, foreseeability and preventability
- principles of incident causation and injury processes

- range of risk analysis and assessment techniques and tools, and their application and limitations
- relevant commonwealth and state or territory WHS Acts, regulations, codes of practice, standards and guidance material, and other relevant publications, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks
- risk as the effect of uncertainty on objectives
- risk management as a duty of persons conducting businesses or undertakings (PCBUs) or their officers under WHS legislation
- roles and responsibilities of individuals and parties under WHS legislation
- sources of occupational disease and their prevention
- standard industry controls for a range of hazards
- techniques, tools and processes for identifying and controlling health and safety hazards and risks, including:
  - hazard and risk checklists
  - hazard hunts
  - job safety analyses
  - manifests and registers, including for dangerous goods, hazardous chemicals and plant
  - safe work method statements
  - surveys using questionnaires, interviews and other survey techniques
  - workplace inspections and walk throughs
- toxicology of hazardous chemicals and potential health effects in the workplace.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• contributing to the development, implementation and evaluation of a systematic approach to WHS risk management</li> <li>• knowledge of pertinent sections of relevant Australian standards and WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks</li> <li>• preparing an action plan to implement a systematic approach to WHS risk management</li> <li>• preparing positive performance indicators for</li> </ul>

	evaluation of a systematic approach to WHS risk management.
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> <li>• actual workplaces and stakeholder groups</li> <li>• office equipment and resources</li> <li>• relevant legislation, standards and guidelines</li> <li>• workplace documentation</li> <li>• reports from other parties consulted during the approach to WHS risk management.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• analysis of responses to case studies and scenarios</li> <li>• demonstration of techniques used to identify, analyse, evaluate, control and monitor risks</li> <li>• direct questioning combined with review of portfolios of evidence and third-party reports of on-the-job performance by the candidate</li> <li>• observation of performance in role plays</li> <li>• observation of presentations</li> <li>• review of information and data communicated to stakeholders about the WHS risk process</li> <li>• assessment of comparison of outcomes of WHS risk analysis with criteria</li> <li>• review of documentation of process and outcomes of analysis and evaluation of WHS risk of a task or process.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• BSBWHS502A Manage effective WHS consultation and participation processes</li> <li>• BSBWHS504A Manage WHS hazards and risks</li> <li>• BSBWHS506A Contribute to developing, implementing and maintaining WHS management systems</li> <li>• BSBWHS507A Contribute to managing WHS information systems</li> </ul>

	<ul style="list-style-type: none"> <li>• BSBWHS508A Manage WHS hazards associated with plant.</li> </ul>
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## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<b>Sources of information and data</b> may include:	<ul style="list-style-type: none"> <li>• Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines</li> <li>• Standards Australia publication HB 327:2010 Communicating and consulting about risk (Companion to AS/NZS ISO 31000:2009)</li> <li>• Standards Australia publication HB 158-2010 Delivering assurance based on ISO 31000:2009 – Risk management – Principles and guidelines</li> <li>• industry associations</li> <li>• Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks</li> <li>• unions</li> <li>• WHS professionals</li> <li>• WHS professional associations</li> <li>• WHS specialists.</li> </ul>
<b>Individuals and parties</b> may include:	<ul style="list-style-type: none"> <li>• contractors and suppliers</li> <li>• health and safety committees</li> <li>• health and safety representatives</li> <li>• industry associations</li> <li>• managers and supervisors</li> <li>• PCBUs or their officers</li> <li>• unions</li> <li>• WHS inspectors</li> <li>• WHS professionals</li> <li>• WHS professional associations</li> <li>• WHS regulators</li> <li>• WHS specialists</li> <li>• workers.</li> </ul>
<b>WHS legislation</b> may include:	<ul style="list-style-type: none"> <li>• WHS Acts, regulations and codes of practice,</li> </ul>

	including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks.
<b><i>Duty holders</i></b> may include:	<ul style="list-style-type: none"> <li>• as specified in WHS Acts: <ul style="list-style-type: none"> <li>• PCBUs or their officers</li> <li>• workers</li> <li>• other persons at a workplace.</li> </ul> </li> </ul>
<b><i>Context of the risk-management process</i></b> may include:	<ul style="list-style-type: none"> <li>• as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines</li> <li>• as specified in WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks</li> <li>• organisational requirements, such as integration with work processes, and other organisational systems, for example information technology, human resources, quality, management and environment.</li> </ul>
<b><i>Risk criteria</i></b> may include:	<ul style="list-style-type: none"> <li>• as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines</li> <li>• as specified in WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks.</li> </ul>
<b><i>Risk identification</i></b> may include:	<ul style="list-style-type: none"> <li>• analysing existing WHS information – desktop identification</li> <li>• as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines</li> <li>• as specified in the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks</li> <li>• incident investigations</li> <li>• using hazard registers</li> <li>• workplace inspections.</li> </ul>
<b><i>Risk analysis and evaluation</i></b> may include:	<ul style="list-style-type: none"> <li>• as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines</li> <li>• meeting requirements of WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks</li> </ul>



	<ul style="list-style-type: none"> <li>• gathering information on hazards to see what harms they may cause</li> <li>• assessing who and how many may be harmed by a hazard</li> <li>• examining acceptability of a risk</li> <li>• examining severity and likelihood of harm occurring</li> <li>• using risk level matrices to rate and prioritise risks.</li> </ul>
<p><i>Risk treatment options</i> may include:</p>	<ul style="list-style-type: none"> <li>• as specified in Australian Standard AS/NZS ISO 31000–2009 Risk management – Principles and guidelines</li> <li>• options based on the hierarchy of control</li> <li>• options based on the as low as reasonably practicable (ALARP) principle</li> <li>• options that meet the requirements of WHS Acts, regulations, codes of practice and standards, including the Safe Work Australia model Code of Practice: How to Manage Work Health and Safety Risks.</li> </ul>

## Unit Sector(s)

Regulation, Licensing and Risk – Work Health and Safety

## BSBWHS508A Manage WHS hazards associated with plant

### Modification History

Release	Comments
Release 1	<p>This Unit first released with <i>BSB07 Business Training Package version 7.0</i>.</p> <p>Replaces and is equivalent to BSBOHS506B Monitor and facilitate the management of hazards associated with plant.</p>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to manage work health and safety (WHS) hazards associated with plant and to comply with WHS legislation as it applies to plant.

### Application of the Unit

This unit applies to individuals with responsibility for managing WHS hazards associated with plant and eliminating, or where this is not practicable, minimising the risks associated with plant.

The focus is on businesses or undertakings involving management or control of plant.

The focus is not on businesses or undertakings associated with the design of plant; manufacture of plant; supply of plant; installation, construction or commissioning of plant; or issuing of licences associated with plant.

The unit applies to people who work in a range of WHS roles across all industries and who apply a substantial knowledge base and well-developed skills in a wide variety of WHS contexts.

*NOTE: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.*

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Comply with WHS legislation as it applies to plant	<p>1.1 Apply knowledge of <b>WHS legislation</b> to advise <b>individuals and parties</b> of their duties, rights and obligations with regard to plant as appropriate to their <b>job roles and the nature of the organisation</b></p> <p>1.2 Ensure the management of <b>hazards</b> associated with plant, complies with relevant WHS legislation and organisational policies, procedures, processes and systems</p>
2. Ensure organisational policies, procedures, processes and systems incorporate management of hazards associated with plant	<p>2.1 Apply knowledge of organisational policies, procedures, processes and systems to determine if they effectively manage hazards associated with plant</p> <p>2.2 Develop and implement modifications to organisational policies, procedures, processes and systems as necessary to ensure hazards associated with plant are effectively managed</p> <p>2.3 Follow organisational policies, procedures, processes and systems when managing hazards associated with plant</p>
3. Identify WHS hazards	3.1 Access <b>sources of information, data and advice</b> to assist with

associated with plant	<p>identifying hazards associated with plant</p> <p>3.2 Identify and consult with <i>others</i>, as necessary, as part of hazard identification</p> <p>3.3 <b>Record and report</b> on hazard identification</p>
4. Assess WHS risks associated with plant	<p>4.1 Access sources of information, data and advice to assist with assessing WHS risks associated with plant hazards</p> <p>4.2 Identify and consult with others, as necessary, as part of WHS risk assessments</p> <p>4.3 Record and report on WHS risk assessments</p>
5. Control WHS risks associated with maintenance and continued safe use of plant	<p>5.1 Access sources of information, data and advice, including the outcomes of risk assessments, to assist with developing risk-control options for hazards associated with the maintenance and continued safe use of plant</p> <p>5.2 Identify, consult with and report to others as necessary during all stages of risk control</p> <p>5.3 Develop <b>risk control options</b> and determine which options will be implemented</p> <p>5.4 Implement, evaluate and monitor risk controls</p> <p>5.5 Record and report on risk controls</p> <p>5.6 Review implemented risk controls and recommend improvements, where necessary</p>
6. Advise on registration, licensing and certification issues associated with plant	<p>6.1 Identify types of plant requiring registration and tasks requiring operator licensing and/or certification, according to legislative requirements</p> <p>6.2 Document registration, licensing and certification requirements and communicate them to individuals and parties</p> <p>6.3 Identify, document and communicate training requirements to individuals and parties to meet registration, licensing and certification, according to legislative requirements</p> <p>6.4 Determine training needs required for new plant and/or new operating methods</p> <p>6.5 Ensure training is undertaken and completed prior to commencement of work using new plant and/or new operating methods</p> <p>6.6 Monitor and report compliance with regulatory requirements for registration, licensing and certification</p> <p>6.7 Identify, document and maintain appropriate records for plant and operator skill requirements</p>

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- analytical skills to:
  - analyse relevant workplace information and data
  - contribute to the assessment of resources needed to manage WHS and where appropriate access these resources
  - identify areas for risk control
  - make observations of workplace tasks and interactions between people, their activities, equipment, environment and systems
- communication skills to:
  - conduct effective formal and informal meetings and communicate effectively with personnel at all levels of the organisation and WHS specialists
  - prepare reports for a range of target groups, including health and safety committees, health and safety representatives, managers, supervisors, and persons conducting businesses or undertakings (PCBUs) or their officers
- consultation and negotiation skills to:
  - develop plans
  - implement and monitor designated actions
- information technology skills to:
  - access and download internal and external information and data on WHS
  - use a range of communication media
- organisational skills to manage own tasks within a timeframe
- project-management skills to achieve change in WHS matters
- research skills to:
  - access relevant WHS information and data
  - identify areas for improvement
  - interpret information and data
- technical skills to use basic measuring equipment, such as scales and dials applicable to specific hazards.

### Required knowledge

- basic principles of incident causation and injury processes
- difference between hazard and risk

- factors that impact on risk
- hierarchy of control and considerations for choosing between different risk controls
- high-risk work licences required for specific plant
- internal and external sources of WHS information and data, and how to access them
- language, literacy and cultural profile of the work team
- management of risk associated with plant as a duty of PCBUs or their officers under WHS legislation
- methods for providing evidence of compliance with WHS legislation
- nature of workplace processes (work flow, planning and control) and hazards relevant to the workplace
- organisational behaviour and culture as they impact on WHS and on change
- organisational culture as it impacts on the work team
- organisational WHS policies, procedures, processes and systems
- other functional areas that impact on the management of WHS
- plant-specific knowledge:
  - basic physics of fluids under pressure and pressure vessels, and the behaviour of pressurised fluid when pressure is released
  - duties, rights and obligations of individuals and parties specified in WHS legislation
  - hazards associated with plant and systems of work associated with plant
  - industry practices related to permit to work, and isolation and tag out systems
  - registration requirements of plant, licensing and certification competencies
- principles and practices of a systematic approach to managing WHS
- strategies for guarding moving parts in machinery; human factors related to machine guarding; and safe design principles, features and limitations
- WHS Acts, regulations, codes of practice and other instruments issued by WHS regulators.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• managing effective identification of hazards and developing risk control options for a range of plant, as defined in WHS legislation</li> <li>• knowledge of relevant WHS Acts, regulations and codes of practice</li> </ul>

	<ul style="list-style-type: none"> <li>• using relevant procedures and systems in the maintenance of plant</li> <li>• implementing general licensing and training requirements associated with plant</li> <li>• using machinery safety control measures to control plant risks.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> <li>• manufacturer manuals, including specifications and operational information and data</li> <li>• relevant WHS Acts, regulations, codes of practice, standards and guidelines</li> <li>• sources of information, data and advice</li> <li>• workplace equipment and resources</li> <li>• workplace or simulated workplace.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• analysis of case studies and scenarios</li> <li>• assessment of written reports on the effectiveness of hazard identification, risk assessment, and control and management actions taken</li> <li>• demonstration of techniques used to identify hazards; assess associated risks; and determine, implement, monitor and evaluate risk control options</li> <li>• direct questioning combined with review of portfolios of evidence and third-party reports of on-the-job performance by the candidate</li> <li>• observation of performance in role plays</li> <li>• presentations</li> <li>• review of recording and reporting on hazards associated with plant</li> <li>• review of the system for managing WHS associated with plant.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• other BSB07 WHS units.</li> </ul>

## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<b>WHS legislation</b> may include:	<ul style="list-style-type: none"> <li>• Acts</li> <li>• regulations</li> <li>• codes of practice.</li> </ul>
<b>Individuals and parties</b> may include:	<ul style="list-style-type: none"> <li>• contractors and subcontractors</li> <li>• duty holders as specified in WHS Acts: <ul style="list-style-type: none"> <li>• PCBUs or their officers</li> <li>• workers</li> <li>• other persons at a workplace</li> </ul> </li> <li>• WHS entry permit holders</li> <li>• WHS inspectors.</li> </ul>
<b>Plant</b> may include:	<ul style="list-style-type: none"> <li>• any machinery, equipment (including scaffolding), or appliance</li> <li>• electrical installation and plant, such as wiring, accessories, fittings, consuming devices, control and protective gear, converters and generators</li> <li>• mobile plant and load-shifting equipment</li> <li>• pressure equipment, such as boilers, pressure vessels and pressure piping.</li> </ul>
<b>Job roles and the nature of the organisation</b> may include:	<ul style="list-style-type: none"> <li>• job roles associated with plant in the organisation</li> <li>• how the organisation is involved with one or more of the following: <ul style="list-style-type: none"> <li>• management or control of plant</li> <li>• design of plant</li> <li>• manufacture of plant</li> <li>• supply of plant</li> <li>• installation, construction or commissioning of plant</li> <li>• plant training</li> <li>• issuing of licences associated with plant.</li> </ul> </li> </ul>
<b>Hazards</b> may include:	<ul style="list-style-type: none"> <li>• source of potential harm in relation to:</li> </ul>



	<ul style="list-style-type: none"> <li>• human injury or ill health</li> <li>• damage to property</li> <li>• damage to the environment</li> <li>• a combination of the above.</li> </ul>
<b>Sources of information, data and advice</b> may include:	<ul style="list-style-type: none"> <li>• accident and incident reports</li> <li>• audits</li> <li>• Australian and international standards</li> <li>• commonwealth and state or territory WHS regulators</li> <li>• industry bodies and groups</li> <li>• internet and the organisation's intranet</li> <li>• manufacturer and supplier manuals, specifications and other forms of advice and information</li> <li>• minutes of organisational WHS and other meetings, and other in-house information</li> <li>• Safe Work Australia</li> <li>• unions</li> <li>• WHS legislation</li> <li>• workplace inspections.</li> </ul>
<b>Others</b> may include:	<ul style="list-style-type: none"> <li>• experts in different aspects of the management of hazards associated with plant</li> <li>• individuals and parties as specified above</li> <li>• plant manufacturers, suppliers and designers</li> <li>• WHS inspectors</li> <li>• WHS regulators.</li> </ul>
<b>Recording and reporting</b> may include:	<ul style="list-style-type: none"> <li>• documents describing how tasks, projects, inspections, jobs and processes are undertaken</li> <li>• job and task statements</li> <li>• job safety analysis worksheets</li> <li>• maintenance and service logs, sheets, cards and diaries</li> <li>• standard operating procedures.</li> </ul>
<b>Risk control options</b> may include:	<ul style="list-style-type: none"> <li>• controls for access and egress risks, such as: <ul style="list-style-type: none"> <li>• to parts of plant that require cleaning or maintenance</li> <li>• to operator's workstation for normal and emergency conditions</li> <li>• systems that enable safe access and egress, such as emergency lighting, safety doors and alarm systems</li> </ul> </li> <li>• controls for dangerous part risks, such as potential contact or entrapment points to which the operator</li> </ul>

	<p>may be exposed during adjustment, examination, lubrication, maintenance and operation</p> <ul style="list-style-type: none"><li>• controls for guarding risks, such as:<ul style="list-style-type: none"><li>• permanently fixed physical barriers where no access of any part of a person is required</li><li>• interlocking physical barriers where access to dangerous areas is required during operation</li><li>• fixing physical barriers securely by means of fasteners or devices</li><li>• sensing safeguarding systems</li></ul></li><li>• controls for operational control risks, such as:<ul style="list-style-type: none"><li>• being capable of locking in 'off' position to enable disconnection of all motive power and forces</li><li>• being guarded to prevent unintentional activation</li><li>• being of fail-safe type</li><li>• being readily and conveniently located</li><li>• being suitability identified</li><li>• having nature and function clearly indicated</li></ul></li><li>• controls for emergency stops and warning devices, such as:<ul style="list-style-type: none"><li>• being able to avoid electrical or electronic circuit malfunction</li><li>• colouring push buttons, bars or handles red</li><li>• prominent, clear and durable markings</li></ul></li><li>• controls for registrations and design of plant</li><li>• controls for operator certification risks</li><li>• developing, documenting and communicating maintenance procedures to ensure plant is safe for use</li><li>• ensuring modifications to plant are safe and suitable for the task and are appropriately documented, and modifying work practices as required for safe operation of plant</li><li>• ensuring purchasing procedures include actions to address WHS implications of plant</li><li>• identifying when permit to work procedures or certification are required to assist in ensuring a safe work environment</li><li>• implementing and monitoring isolation procedures in liaison with individuals and parties to ensure continued safety of maintenance and other</li></ul>
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	<p>personnel</p> <ul style="list-style-type: none"><li>• monitoring and evaluating maintenance systems for effectiveness, suitability and accuracy to ensure safe operation of plant, and taking action as appropriate</li><li>• responding to and monitoring implementation of permit to work procedures or certification in liaison with individuals and parties.</li></ul>
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## Unit Sector(s)

Regulation, Licensing and Risk – Work Health and Safety

## BSBWOR204A Use business technology

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to select, use and maintain a range of business technology. This technology includes the effective use of computer software to organise information and data.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who use business technology to perform a range of routine tasks. They use a limited range of practical skills and fundamental knowledge of equipment use and the organisation of data or files in a defined context, under direct supervision or with limited individual responsibility.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and use technology	<p>1.1. Select appropriate <b><i>technology</i></b> and <b><i>software applications</i></b> to achieve the requirements of the task</p> <p>1.2. Adjust workspace, furniture and equipment to suit user ergonomic requirements</p> <p>1.3. Use technology according to <b><i>organisational requirements</i></b> and in a way which promotes a safe work environment</p>
2. Process and organise data	<p>2.1. Identify, open, generate or amend files and records according to task and organisational requirements</p> <p>2.2. Operate <b><i>input devices</i></b> according to organisational requirements</p> <p>2.3. <b><i>Store data</i></b> appropriately and exit applications without damage to or loss of, data</p> <p>2.4. Use manuals, training booklets and/or online help or help-desks to overcome basic difficulties with applications</p>
3. Maintain technology	<p>3.1. Identify and replace used <b><i>technology consumables</i></b> in accordance with manufacturer's instructions and organisational requirements</p> <p>3.2. Carry out and/or arrange <b><i>routine maintenance</i></b> to ensure equipment is maintained in accordance with manufacturer's instructions and organisational requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. <i>Identify equipment faults</i> accurately and take action in accordance with manufacturer's instructions or report fault to designated person

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy skills to identify work requirements; to understand and process basic, relevant workplace information; and to follow written instructions
- communication skills to request advice, to receive feedback and to work with a team
- problem-solving skills to solve routine technology problems.

#### Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
  - anti-discrimination legislation
- ethical principles
  - codes of practice
  - privacy laws
  - occupational health and safety (OHS)
- organisational policies, plans and procedures, especially in regard to file-naming and storage conventions
- organisational IT procedures including back-up and virus protection procedures
- basic technical terminology in relation to reading help-files and manuals.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• selection and application of appropriate equipment and software applications in relation to assigned task/s</li> <li>• access, retrieval and storage of required data</li> <li>• performance of basic maintenance on a range of office equipment</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to an actual workplace or simulated environment</li> <li>• access to office equipment and resources</li> <li>• examples of files and data for storage</li> <li>• manuals and training booklets for equipment.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• analysis of responses to case studies and scenarios</li> <li>• demonstration of techniques</li> <li>• oral or written questioning to assess knowledge of office equipment</li> <li>• evaluation of maintaining technology.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• IT use units</li> <li>• other industry capability units.</li> </ul>

## Range Statement

### **RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Bold italicised**

<b>RANGE STATEMENT</b>	
wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Technology</b> may include:	<ul style="list-style-type: none"> <li>• computer technology, such as laptops and personal computers</li> <li>• digital cameras</li> <li>• modems</li> <li>• printers</li> <li>• scanners</li> <li>• zip drives</li> <li>• photocopiers</li> <li>• shredders</li> <li>• binders</li> <li>• laminators</li> <li>• cutters</li> </ul>
<b>Software applications</b> may include:	<ul style="list-style-type: none"> <li>• email, internet</li> <li>• word processing, spreadsheet, database, accounting or presentation packages</li> </ul>
<b>Organisational requirements</b> may include:	<ul style="list-style-type: none"> <li>• correctly identifying and opening files</li> <li>• legal and organisation policies, guidelines and requirements</li> <li>• locating data</li> <li>• log-on procedures</li> <li>• manufacturer's guidelines</li> <li>• OHS policies, procedures and programs</li> <li>• saving and closing files</li> <li>• storing data</li> </ul>
<b>Input devices</b> may include:	<ul style="list-style-type: none"> <li>• keyboard</li> <li>• mouse</li> <li>• numerical key pad</li> <li>• scanner</li> </ul>
<b>Storage of data</b> may include:	<ul style="list-style-type: none"> <li>• appropriate storage/filing of hard copies of computer generated documents</li> <li>• storage in directories and sub-directories</li> <li>• storage on CD-ROMs, hard and floppy disk drives or back-up systems</li> </ul>
<b>Technology consumables</b> may include:	<ul style="list-style-type: none"> <li>• back-up tapes</li> <li>• CD-ROM</li> <li>• floppy disks</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• print heads</li> <li>• printer ribbons and cartridges</li> <li>• toner cartridges</li> <li>• zip disks</li> </ul>
<i>Routine maintenance</i> may include:	<ul style="list-style-type: none"> <li>• in-house cleaning and servicing of equipment according to manufacturer's guidelines</li> <li>• periodic servicing by qualified or manufacturer approved, technician</li> <li>• regular checking of equipment</li> <li>• replacing consumables</li> </ul>
<i>Identifying equipment faults</i> may include:	<ul style="list-style-type: none"> <li>• checking repairs have been carried out</li> <li>• encouraging feedback from work colleagues</li> <li>• keeping a log book of detected faults</li> <li>• preparing a maintenance program</li> <li>• regular back-ups of data</li> <li>• regular OHS inspections</li> <li>• routine checking of equipment</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Competency field

<b>Competency field</b>	Industry Capability - Workplace Effectiveness
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### Co-requisite units

<b>Co-requisite units</b>	



## BSBWOR402A Promote team effectiveness

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to promote teamwork. It involves developing team plans to meet expected outcomes, leading the work team, and proactively working with the management of the organisation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>Frontline managers have an important leadership role in the development of efficient and effective work teams. They play a prominent part in team planning, supervising the performance of the team and developing team cohesion. They provide leadership for the team and bridge the gap between the management of the organisation and the team members. As such they must 'manage up' as well as manage their team/s.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan to achieve team outcomes	<p>1.1. Identify, establish and document <b><i>team purpose, roles, responsibilities, goals, plans and objectives</i></b> in <b><i>consultation</i></b> with team members</p> <p>1.2. Support team members in meeting expected outcomes</p>
2. Develop team cohesion	<p>2.1. Provide opportunities for input of team members into planning, decision making and operational aspects of work team</p> <p>2.2. Encourage and support team members to take <b><i>responsibility for own work</i></b> and to assist each other in undertaking required roles and responsibilities</p> <p>2.3. Provide <b><i>feedback</i></b> to team members to encourage, value and reward individual and team efforts and contributions</p> <p>2.4. Recognise and address issues, concerns and problems identified by team members or refer to <b><i>relevant persons</i></b> as required</p>

ELEMENT	PERFORMANCE CRITERIA
3. Participate in and facilitate work team	3.1. Actively encourage team members to participate in and take responsibility for team activities and communication processes 3.2. Give the team support to identify and resolve problems which impede its performance 3.3. Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with clients/customers
4. Liaise with management	4.1. Maintain open <i>communication</i> with <i>line manager/management</i> at all times 4.2. Communicate information from line manager/management to the team 4.3. Communicate unresolved issues, concerns and problems raised by the team/team members to line manager/management and ensure follow-up action is taken 4.4. Communicate unresolved issues, concerns and problems related to the team/team members raised by line managers/management to the team and ensure follow-up to action is taken

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to:
  - boost team morale
  - deal with team conflict
  - deliver messages from management
  - facilitate discussion
  - mentor and coach
- leadership skills
- planning and organising skills.

#### Required knowledge

## REQUIRED SKILLS AND KNOWLEDGE

- organisational goals, objectives and plans
- organisational policy and procedures framework
- organisational structure, including organisational chart
- principles and techniques associated with:
  - delegation and work allocation
  - goal setting
  - group dynamics and processes
  - individual behaviour and difference
  - leadership
  - motivation
  - negotiation
  - planning.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- teamwork plan with details of how it was generated and how it will be monitored so that team goals can be met
- techniques in communicating information, dealing with team conflict and resolving issues
- knowledge of organisational goals, objectives and plans.

#### Context of and specific resources for assessment

Assessment must ensure:

- access to appropriate documentation and resources normally used in the workplace.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- analysis of responses to case studies and scenarios

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• observation of demonstrated techniques in working with team dynamics</li> <li>• observation of performance in role plays</li> <li>• oral or written questioning to assess knowledge of principles and techniques associated with group dynamics and processes</li> <li>• evaluation of opportunities provided for input of team members into planning, decision making and operational aspects of work team</li> <li>• review of feedback provided to team members</li> <li>• review of teamwork plan.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• other units from the Certificate IV in Frontline Management.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b><i>Team purpose, roles, responsibilities, goals, plans and objectives</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• action plans, business plans and operational plans linked to strategic plans</li> <li>• expected outcomes and outputs</li> <li>• goals for individuals and the work team</li> <li>• individual and team performance plans and key performance indicators</li> <li>• occupational health and safety (OHS) responsibilities</li> </ul>
<p><b><i>Consultation</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• attending meetings, interviews, brainstorming sessions</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• using email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual effectiveness</li> <li>• using mechanisms to provide feedback to the work team in relation to consultation outcomes</li> </ul>
<i>Responsibility for own work</i> may involve:	<ul style="list-style-type: none"> <li>• individual and joint actions</li> <li>• individuals and teams</li> </ul>
<i>Feedback</i> may refer to:	<ul style="list-style-type: none"> <li>• formal/informal gatherings between team members where there is communication on work related matters</li> <li>• informal communication of ideas and thoughts on specific tasks, outcomes, decisions, issues or behaviours</li> </ul>
<i>Relevant persons</i> may include:	<ul style="list-style-type: none"> <li>• colleagues</li> <li>• direct superior or other management representatives</li> <li>• OHS committees and other people with specialist responsibilities</li> </ul>
<i>Communication</i> may include:	<ul style="list-style-type: none"> <li>• face-to-face</li> <li>• formal/informal interaction</li> <li>• verbal, written or electronic communication</li> </ul>
<i>Line manager/management</i> may refer to:	<ul style="list-style-type: none"> <li>• direct superior or other management representatives</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

<b>Competency field</b>	Management and Leadership - Management
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## Co-requisite units

Co-requisite units		

## BSBWOR404B Develop work priorities

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to plan one's own work schedules, to monitor and to obtain feedback on work performance and development. It also addresses the requirement to take responsibility for one's own career planning and professional development.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to individuals who are required to design their own work schedules and work plans, and to establish priorities for their work. They will typically hold some responsibilities for the work of others and have some autonomy in relation to their own role.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

Employability skills	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and complete own work schedule	<p>1.1. Prepare <b>Workgroup</b> plans which reflect consideration of resources, client needs and workgroup targets</p> <p>1.2. Analyse and incorporate <b>Work objectives</b> and priorities into personal schedules and responsibilities</p> <p>1.3. Identify <b>Factors affecting the achievement of work objectives</b> and establish contingencies and incorporate them into work plans</p> <p>1.4. Efficiently and effectively use <b>Business technology</b> to manage and monitor planning completion and scheduling of tasks</p>
2. Monitor own work performance	<p>2.1. Identify and analysed personal performance through self-assessment and feedback from others on the achievement of work objectives</p> <p>2.2. Seek and evaluate <b>Feedback on performance</b> from colleagues and clients in the context of individual and group requirements</p> <p>2.3. Routinely identify and report on variations in the quality of service and performance in accordance with organisational requirements</p>
3. Coordinate	3.1. Assess personal knowledge and skills against

ELEMENT	PERFORMANCE CRITERIA
professional development	<p>organisational benchmarks to determine development needs and priorities</p> <p>3.2. Research and identify sources and plan for opportunities for improvement in consultation with colleagues</p> <p>3.3. Use <i>Feedback</i> to identify and develop ways to improve competence within available opportunities</p> <p>3.4. Identify, access and complete <i>professional development activities</i> to assist career development</p> <p>3.5. Store and maintain records and documents relating to achievements and assessments in accordance with organisational requirements</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- learning skills to recognise and develop new and necessary skills and knowledge
- literacy skills to understand the organisation's policies, procedures and communications, to write personal work plans and professional development plans, and to request and receive feedback about performance
- organising skills to prioritise, manage time and meet deadlines
- problem solving skills to develop contingency plans

#### Required knowledge

- knowledge of relevant business technology applications to schedule tasks and plan work
- knowledge of techniques to prepare personal plans and establish priorities
- methods to identify and prioritise personal learning needs
- understanding of a range of professional development options
- understanding of methods to elicit, analyse and interpret feedback
- understanding of methods to evaluate own performance

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• preparing and communicating own work plan</li> <li>• scheduling work objectives and tasks to support the achievement of goals</li> <li>• seeking and acting on feedback from clients and colleagues</li> <li>• reviewing own work performance against achievements through self-assessment</li> <li>• accessing learning opportunities to extend own personal work competencies</li> <li>• using business technology to monitor self development.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• the learner and trainer should have access to appropriate documentation and resources normally used in the workplace</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• observation of performance in role plays</li> <li>• observation of presentations</li> <li>• review of work and professional development plans.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• Other units from the Certificate IV in Frontline Management.</li> </ul>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Workgroup plans</i></b> may include:	<ul style="list-style-type: none"> <li>• budgetary plans</li> <li>• production plans</li> <li>• reporting plans</li> <li>• sales plans</li> <li>• team and individual learning goals</li> <li>• team participation</li> <li>• work schedules</li> </ul>
<b><i>Work objectives</i></b> may include:	<ul style="list-style-type: none"> <li>• budgetary targets</li> <li>• production targets</li> <li>• reporting deadlines</li> <li>• sales targets</li> <li>• team and individual learning goals</li> <li>• team participation</li> </ul>
<b><i>Factors affecting the achievement of work objectives</i></b> may include:	<ul style="list-style-type: none"> <li>• budget constraints</li> <li>• competing work demands</li> <li>• environmental factors such as time, weather, etc</li> <li>• personnel</li> <li>• resource and materials availability</li> <li>• technology/equipment breakdowns</li> <li>• unforeseen incidents</li> </ul>
<b><i>Business technology</i></b> may include:	<ul style="list-style-type: none"> <li>• computer applications</li> <li>• computers</li> <li>• email and internet/intranet/extranet</li> <li>• facsimile machines</li> <li>• modems</li> <li>• personal schedules</li> <li>• photocopiers</li> <li>• printers</li> <li>• scanners</li> </ul>
<b><i>Feedback on performance</i></b> may include:	<ul style="list-style-type: none"> <li>• formal/informal performance appraisals</li> <li>• obtaining comments from clients</li> <li>• obtaining comments from supervisors and</li> </ul>

<b>RANGE STATEMENT</b>	
	colleagues <ul style="list-style-type: none"> <li>• personal, reflective behaviour strategies</li> <li>• routine organisational methods for monitoring service delivery</li> </ul>
<i>Professional development activities</i> may include:	<ul style="list-style-type: none"> <li>• career planning/development</li> <li>• coaching, mentoring and/or supervision</li> <li>• formal/informal learning programs</li> <li>• internal/external training provision</li> <li>• performance appraisals</li> <li>• personal study</li> <li>• Recognition of Prior Learning</li> <li>• work experience/exchange/opportunities</li> <li>• workplace skills assessment</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>

### Competency field

<b>Competency field</b>	Management and Leadership - Management
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### Co-requisite units

<b>Co-requisite units</b>	





# BSBWOR501B Manage personal work priorities and professional development

## Modification History

Not applicable.

## Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to manage own performance and professional development. Particular emphasis is on setting and meeting priorities, analysing information and using a range of strategies to develop further competence.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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## Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to managers and focuses on the need for managers to be organised, focussed and skilled, in order to effectively manage the work of others. As such it is an important unit for most managers, particularly as managers serve as role models and have a significant influence on the work culture and patterns of behaviour.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

Employability skills	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish personal work goals	<p>1.1. Serve as a positive role model in the workplace through personal work planning and organisation</p> <p>1.2. Ensure personal work goals, plans and activities reflect the organisation's plans, and <b><i>own responsibilities and accountabilities</i></b></p> <p>1.3. Measure and maintain personal performance in varying work conditions, work contexts and contingencies</p>
2. Set and meet own work priorities	<p>2.1. Take initiative to prioritise and facilitate competing demands to achieve personal, team and organisational goals and objectives</p> <p>2.2. Use <b><i>technology</i></b> efficiently and effectively to manage work priorities and commitments</p> <p>2.3. Maintain appropriate work-life balance, and ensure stress is effectively managed and health is attended to</p>
3. Develop and maintain professional competence	<p>3.1. Assess personal knowledge and skills against <b><i>competency standards</i></b> to determine development needs, priorities and plans</p> <p>3.2. Seek feedback from employees, <b><i>clients and colleagues</i></b> and use this feedback to identify and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>develop ways to improve competence</p> <p>3.3. Identify, evaluate, select and use <i>development opportunities</i> suitable to personal learning style/s to develop competence</p> <p>3.4. Undertake participation in networks to enhance personal knowledge, skills and work relationships</p> <p>3.5. Identify and develop new skills to achieve and maintain a competitive edge</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to receive, analyse and report on feedback
- literacy skills to interpret written and verbal information about workplace requirements
- organisational skills to set and achieve priorities.

#### Required knowledge

- principles and techniques involved in the management and organisation of:
  - performance measurement
  - personal behaviour, self-awareness and personality traits identification
  - personal development plan
  - personal goal setting
  - time management
- management development opportunities and options for self
- organisation's policies, plans and procedures
- types of learning style/s and how they relate to the individual
- types of work methods and practices that can improve personal performance.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the

<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• systems and processes (electronic or paper-based) used to organise and prioritise tasks, which show how work is managed</li> <li>• personal development plan, with career objectives and an action plan</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to appropriate documentation and resources normally used in the workplace.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• analysis of responses to case studies and scenarios</li> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate</li> <li>• observation of presentations</li> <li>• oral or written questioning to assess knowledge of work methods and practices that can improve personal performance</li> <li>• review of personal work goals, plans and activities</li> <li>• evaluation of work-life balance</li> <li>• review of documentation assessing personal knowledge and skills against competency standards.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• other units from the Diploma of Management.</li> </ul>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different

<b>RANGE STATEMENT</b>	
work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Own responsibilities and accountabilities</i> may include:	<ul style="list-style-type: none"> <li>• expectations of workplace performance as expressed in a performance plan</li> <li>• outputs as expressed in position descriptions or duty statements</li> <li>• statement of conduct outlining an individual's responsibilities/actions/performance</li> </ul>
<i>Technology</i> may include:	<ul style="list-style-type: none"> <li>• computerised systems and software, databases, project management and word processing</li> <li>• electronic diary</li> <li>• personal digital assistant (PDA)</li> </ul>
<i>Competency standards</i> may include:	<ul style="list-style-type: none"> <li>• enterprise-specific units of competency consistent with work requirements</li> <li>• nationally endorsed units of competency consistent with work requirements</li> </ul>
<i>Clients and colleagues</i> may be:	<ul style="list-style-type: none"> <li>• colleagues at the same level and more senior managers</li> <li>• internal or external customers</li> <li>• people from a wide range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities</li> <li>• team members</li> </ul>
<i>Development opportunities</i> may include:	<ul style="list-style-type: none"> <li>• action learning</li> <li>• coaching</li> <li>• exchange/rotation</li> <li>• induction</li> <li>• mentoring</li> <li>• shadowing</li> <li>• structured training programs</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Competency field

Competency field	Management and Leadership - Management
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## Co-requisite units

Co-requisite units		

## CHCCD404E Develop and implement community programs

### Modification History

CHC08 Version 3	CHC08 Version 4	Comments
CHCCD404D Develop and implement community programs	CHCCD404E Develop and implement community programs	ISC upgrade changes to remove references to old OHS legislation and replace with references to new WHS legislation. Formatting and grammatical corrections. No change to competency outcome.

### Unit Descriptor

#### Descriptor

This unit describes the knowledge and skills required to develop community programs to ensure maximum participation

### Application of the Unit

#### Application

This unit is intended for application within a community work or community development work context

### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

Not Applicable

### Employability Skills Information

#### Employability Skills

This unit contains Employability Skills

## Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |  |   |
|--|---|
| 1. Develop program parameters                | <p>1.1 Analyse issues of wide community concern to develop an agency position and to ascertain the need for new program /s</p> <p>1.2 Undertake appropriate work to ascertain support, capacity for a coordinated effort and factors which will effect provision of services</p> <p>1.3 Undertake research to identify key people, issues to be addressed, possible <i>strategies and options for action</i></p> <p>1.4 Undertake appropriate planning and liaison including developing concept plans in consultation with relevant communities and <i>stakeholders</i></p> |
| 2. Design programs with the <i>community</i> | <p>2.1 Develop a program plan which reflects identified parameters and incorporates an <i>evaluation of a range of program options</i></p> <p>2.2 Undertake consultation to determine preferred program options particularly in areas of high need or with targeted communities</p> <p>2.3 Seek help from participating agencies for implementation arrangements</p> <p>2.4 Identify and seek <i>resources</i></p>  |
| 3. Implement programs                        | <p>3.1 Where appropriate, conduct and evaluate pilots and make adjustments to ensure the program achieves its objectives</p> <p>3.2 Implement programs in accordance with the development plan</p> <p>3.3 Develop and implement <i>promotion and marketing</i></p>  |



**ELEMENT****PERFORMANCE CRITERIA**

*strategies*

3.4 Develop and maintain systems and resources for administrative support of *community programs*

3.5 Encourage target group to participate fully in the program

4. Evaluate programs

4.1 Evaluate program design and outcomes according to criteria and specifications identified in the program plan

4.2 Use results of evaluation for revision and ongoing development

4.3 Involve interested and/or relevant people in program evaluation

**Required Skills and Knowledge****REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

*Essential knowledge:*

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

These include knowledge of:

- The cultures, concerns, beliefs and aspirations of the community in question
- The impact of cultural or community attitudes on appropriate roles, relationships and approaches of the worker
- The impact of cultural and community attitudes within that community
- The implications of differences in attitudes and values
- Community development as a social change strategy
- Decision-making structures and processes at organisation, community, regional and system level
- Relevant legislation and public policies

## REQUIRED SKILLS AND KNOWLEDGE

- Social, community and youth issues
- Nature of community development work
- Definitions of community
- 'Community' as ideological tool
- Personal values and community development
- Emergence of community development
- Contemporary community development practice
- Social movements
- Sociology
- Social theories
- Social inequality
- Sociology of class
- Sociology of gender
- Contemporary economics and politics and their impact on community development

### *Essential skills:*

It is critical that the candidate demonstrate the ability to:

- Demonstrate effective management of community programs through the application of current accepted best practice

In addition, the candidate must be able to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

These include the ability to:

- Undertake research and consultation
- Apply a range of community development approaches
- Coordinate people, processes and information
- Analyse data, information and relationships
- Provide support to a diverse range of people/organisations
- Analyse complex issues
- Work with and through community leaders
- Demonstrate application of skills in:
  - advocacy
  - conflict resolution/negotiation and mediation
  - cross cultural communication and negotiation
  - verbal and written communication
  - literacy adequate to prepare a range of resource material appropriate to the target group

## REQUIRED SKILLS AND KNOWLEDGE

- Maintain documentation as required, including effective use of relevant information technology in line with work health and safety (WHS) guidelines

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

*Critical aspects for assessment and evidence required to demonstrate this unit of competency:*

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- This unit can be assessed in the community or in a simulation which related closely to the experience of the workplace and the community
- Consistency in performance should consider specific program and community requirements

*Access and equity considerations:*

- All workers in community services should be aware of access, equity and human rights issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on Aboriginal and/or Torres Strait Islander clients and communities

*Context of and specific resources for assessment:*

- This unit can be assessed independently, however holistic assessment practice with other community services units of competency is encouraged
- Resources required for assessment include access to

## EVIDENCE GUIDE

an appropriate workplace or an environment that effectively simulates workplace and community conditions

### *Method of assessment:*

- In cases where the learner does not have the opportunity to cover all relevant aspects in the work environment, the remainder should be assessed through realistic simulations, projects, previous relevant experience or oral questioning on 'What if?' scenarios
- Assessment of this unit of competence will usually include observation of processes and procedures, oral and/or written questioning on Essential knowledge and skills and consideration of required attitudes
- Where performance is not directly observed and/or is required to be demonstrated over a 'period of time' and/or in a 'number of locations', any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

### *Community may be:*

- Individuals and groups defined by organisation programs and services
- Other agencies providing services to the designated individuals and groups
- People with specified needs and interests
- People using the organisation's services/programs
- Geographic

## RANGE STATEMENT

*Community programs may include:*

- Community development activities and strategies
- Education and information projects

*Stakeholders may include:*

- Residents within a community
- Businesses within or related to a community
- Advocacy and special interest groups
- Decision-makers and community leaders
- Individuals, groups and communities affected by issues or strategies
- Owners or managers of resources required
- Grants/funding agencies
- Government and non government organisations
- Peak bodies
- Colleagues and collaborators

*Strategies and options for action may include:*

- Community/public education, awareness raising
- Lobbying and advocacy
- Development of new services, opportunities
- Developing the capacity of individuals, groups and communities to meet their own needs and objectives
- Non violent direct action
- Participatory action research
- Development of new businesses or employment opportunities
- Health promotion, development of healthy communities/attitudes and environmental causes of ill health
- Development of community resources and facilities
- Development of recreational/entertainment
- Adjustments to existing programs/services to make them more accessible to young people
- Strategies to increase access to facilities, services
- Decision-making including cost, physical, information
- Public processes

*Resources may include:*

- Information
- Knowledge/skills

## RANGE STATEMENT

- Equipment and materials
- Facilities, buildings, transport
- Organisation structures, networks
- Sector/regional networks
- Access to decision-makers
- Management support
- Personnel
- Money

*Evaluation of a range of program options may include:*

- Projected outcomes to achieve objectives
- Cost efficiency and effectiveness
- Relevance to high needs and priorities
- Scope and coverage
- Capacity to evaluate
- Availability of resources/skills
- Consistency of philosophy
- Ethical considerations
- Impact on organisation/other services/programs
- Personnel/industrial/employment implications
- Legislative/statutory/accountability implications

*Promotion and marketing strategies may include:*

- Letters (by fax, mail, or any other means of transmission)
- Newsletters/journals
- Internal organisation communication (e.g. Internal memos, minutes of meetings)
- Artwork, graphics
- Reports, discussion papers, briefing papers
- Brochures, fliers and written advertisements
- Posters
- Audio and audio visual productions
- Performing arts presentations
- Verbal/public presentations
- Meetings, seminars, workshops and forums
- Print or telecommunications media

*Consultation strategies may include:*

- Meetings, seminars, workshops or other forums
- Interviews (formal and informal)

## **RANGE STATEMENT**

- Written surveys (questionnaires, letters, submissions)
- Suggestion boxes
- Alternative communication such as graffiti walls
- Networks
- Professional associations
- Call for submissions

## **Unit Sector(s)**

Not Applicable

# CPCCCM2010B Work safely at heights

## Modification History

Photovoltaic (solar) panels added to range statement

Equivalent to CPCCCM2010A

## Unit Descriptor

This unit of competency specifies the outcomes required to work safely on construction sites where the work activity involves working above 1.5 metres from ground level and where fall protection measures are required.

## Application of the Unit

Construction work is undertaken on domestic and commercial work sites within new construction, renovation or refurbishment, and maintenance.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

CPCCOHS2001A      Apply OHS requirements, policies and procedures in the construction industry

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

- |   |                                  |     |   |
|---|----------------------------------|-----|---|
| 1 | Identify work area requirements. | 1.1 | Site of proposed <i>work at heights</i> is identified from relevant <i>information</i> .  |
|   |                                  | 1.2 | Method of accessing work area is identified.  |
|   |                                  | 1.3 | Tasks to be completed are identified from work orders and supervisor instructions.  |
|   |                                  | 1.4 | Fall protection equipment is identified if required by site job <i>workplace health and safety (WHS)</i> analysis and <i>statutory and regulatory</i> requirements.   |
|   |                                  | 1.5 | Approved methods of moving tools and equipment to work area are identified to minimise potential of falling objects, removal of scaffold components, inappropriate carrying of materials on ladders, and excessive bending or twisting in pass-up situations. |
| 2 | Access work area.                | 2.1 | Fall protection equipment where required is correctly fitted, adjusted and anchored.  |
|   |                                  | 2.2 | Arrangements are made to appropriately install required equipment taking account of all potential <i>hazards</i> .  |
|   |                                  | 2.3 | Appropriate methods are used to access work area for self, <i>tools and equipment</i> , and <i>materials</i> .  |
|   |                                  | 2.4 | Tools and materials are placed to eliminate or at least minimise the risk of items being knocked down.  |
| 3 | Conduct work tasks.              | 3.1 | Work is conducted following workplace approved procedures.  |
|   |                                  | 3.2 | Fall protection equipment is kept in place and adjusted appropriately to cater for movement during work.  |
|   |                                  | 3.3 | Scaffold components and fall barriers are kept in place during work.  |
|   |                                  | 3.4 | Egress from work area is completed following work site supervisor approved methods for self, tools, materials   |

and *environmental requirements*.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Required skills for this unit are:

- communication skills to:
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication, such as hand signals
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
  - use a range of mobile technology
  - voice and hand signals to access and understand site-specific instructions.

### Required knowledge

Required knowledge for this unit is:

- construction terminology
- job safety analysis (JSA) and safe work method statements
- material safety data sheets (MSDS)
- quality requirements
- types, characteristics, uses and limitation of plant, tools and equipment
- workplace and equipment safety requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

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Guidelines for the Training Package.

**Overview of assessment**

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan, OHS regulations and state and territory legislation applicable to workplace operations
- safely and effectively use tools, plant and equipment
- communicate and work effectively and safely with others
- select and use appropriate height access and fall protection equipment and work methods, including inspecting fall protection equipment, scaffold and fall barriers for faults
- apply knowledge of industry products to identify:
  - manual handling risks
  - types of lifting and support structures approved for use
- modify work activities to cater for variations in work site procedures, contexts and environment and use appropriate behaviour for safe work at heights
- use safe handling requirements, based on information provided, for equipment, products and materials.

**Context of and specific resources for assessment**

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement

- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

## Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning

experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

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The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Work at heights*** includes:

- assessment of conditions and hazards
- determination of work requirements
- identification of equipment defects
- inspection of work sites.

***Information*** includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- material safety data sheets (MSDS)
- memos
- signage
- verbal or written and graphical instructions
- work bulletins
- work schedules, plans and specifications.

***Workplace health and safety*** is to be in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan

- emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation
- handling of materials
- hazard control

and may include:

- hazardous materials and substances
- safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
  - earth leakage boxes
  - lighting
  - photovoltaic (solar) panels
  - power cables, including overhead service trays, cables and conduits
  - restricted access barriers
  - surrounding structures
  - traffic control
  - trip hazards
  - work site visitors and the public
  - working in confined spaces
  - working in proximity to others
  - working with dangerous materials
- organisational first aid
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- relevant OHS legislation applying in the jurisdiction where work is carried out, including:
  - AS6001 - 1999 Working platforms for domestic application
  - AS1576 - Scaffolding
  - AS/NZS4576 - 1995 Guidelines for scaffolding
- use of tools and equipment
- workplace environment and safety.

***Statutory and regulatory*** authorities include:

- federal, state and local authorities administering applicable Acts, regulations and codes of practice.

***Hazards*** include:

- air temperature
- construction activity involving other workers and contractors
- dust and vapours
- electrical equipment
- energy sources
- equipment and materials
- hazardous materials

- light
- manual handling
- moisture
- noise
- photovoltaic (solar) panels
- stationary and moving plant
- work at heights.

**Tools and equipment** include:

- air compressors and hoses
- hand and power tools
- nail guns
- power leads
- scaffolding.

**Materials** include:

- materials used on the construction work site.

**Environmental requirements** include:

- clean-up management
- noise and dust
- vibration
- waste management.

## Unit Sector(s)

### Functional area

Unit sector                      Construction

## Custom Content Section

Not applicable.

# CPCCCM3001C Operate elevated work platforms

## Modification History

Prerequisite unit identifier code updated

Equivalent to CPCCCM3001B

## Unit Descriptor

### Unit descriptor

This unit of competency specifies the outcomes required to safely and effectively operate some types of elevated work platforms (EWPs) in a variety of different terrains and situations to access isolated work areas. The unit includes locating, setting up, operating and shutting down EWPs.

In addition to achievement of this competency, an EWP operator may need to obtain additional certification of training and experience before being allowed to operate the equipment.

## Application of the Unit

### Application of the unit

This unit of competency assists in the safe and effective operation of electrical, hydraulic or mechanical EWPs. The unit does not cover powered telescoping devices, hinged devices or articulated devices, or any combination of these used to support a platform on which personnel, equipment and materials may be elevated to perform work and which has a boom length of 11 metres or more. An OHS authority Certificate of Competency may be required to operate boom type EWPs of 11 metres or more in some jurisdictions.

## Licensing/Regulatory Information

Not Applicable



## Pre-Requisites

CPCCCM2010B	Work safely at heights
CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry

## Employability Skills Information

**Employability skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare.	<p>1.1. <b><i>Work planning and preparation</i></b> are conducted using plans, specifications, quality requirements and operational details, obtained, confirmed and applied from relevant <b><i>information</i></b>.</p> <p>1.2. <b><i>Safety (OHS)</i></b> requirements for the <b><i>types of EWP</i></b> to be operated are followed in accordance with safety plans and policies.</p> <p>1.3. Signage and barricade requirements are identified and implemented.</p> <p>1.4. Plant, <b><i>tools and equipment</i></b> and <b><i>personal protective equipment</i></b> are selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>1.5. Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.</p> <p>1.6. <b>Environmental requirements</b> are identified for the project in accordance with environmental plans and <b>statutory and regulatory authority</b> obligations, and are applied.</p>
2. Conduct routine checks of platform.	<p>2.1. Power source is determined and connected to platform equipment according to manufacturer specifications.</p> <p>2.2. Routine pre-operational equipment checks are carried out in accordance with checklist from operator's manual or manufacturer specifications.</p> <p>2.3. Equipment is switched on in accordance with start up procedures and controls are checked for correct operation and ease of movement.</p> <p>2.4. <b>Emergency safety devices</b> are checked to comply with instructions from operator's manual and checked for manual operation.</p> <p>2.5. Work location is checked for level ground or floor surface to determine stabilising and safe working area requirements.</p>
3. Locate equipment in place for work application.	<p>3.1. Platform is positioned for work application and stabilisers are engaged to set equipment base level into place according to <b>safe operating procedures</b>.</p> <p>3.2. Tools, equipment and materials are placed into bucket or on platform according to job application requirements.</p>
4. Elevate platform to work location.	<p>4.1. <b>Harness</b> is fitted securely and lanyard connected to attachment point.</p> <p>4.2. <b>EWP operation</b> and controls are operated to manufacturer recommendations and platform is elevated to work position.</p> <p>4.3. Power is switched off where specified and locking devices are engaged according to operator's manual.</p> <p>4.4. Work is carried out to job specification and safety (OHS) requirements of operator's manual.</p>
5. Lower platform and shut down.	<p>5.1. Controls are operated to manufacturer recommendations and platform is lowered to down position.</p> <p>5.2. Shut down procedures are carried out to operator's manual and equipment is switched off.</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
6. Clean up.	<p>6.1. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.</p> <p>6.2. Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.</p> <p>6.3. Work completion procedures are applied and relevant personnel notified that work is finished.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills for this unit are:

- communication skills to:
  - determine requirements
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - follow instructions
  - read and interpret:
    - documentation from a variety of sources
    - drawings and specifications
  - report faults
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication, such as hand signals
  - written skills to complete inspection log and handover
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- numeracy skills to apply measurements and make calculations
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:

## REQUIRED SKILLS AND KNOWLEDGE

- use a range of mobile technology, such as two-way radio and mobile phones
- voice and hand signals to access and understand site-specific instructions.

### Required knowledge

Required knowledge for this unit is:

- designs, functions and operational limitations of EWP equipment
- EWP equipment types and OHS authority certification of competency requirements
- EWP techniques
- fault finding and identification
- general construction terminology
- job safety analysis (JSA) and safe work method statements
- material safety data sheets (MSDS)
- materials storage and environmentally friendly waste management
- plans, specifications and drawings
- processes for the calculation of load mass requirements
- quality requirements
- relevant Acts, regulations and codes of practice
- safe working at heights
- signalling methods and communications
- types, characteristics, uses and limitations of plant, tools and equipment
- workplace and equipment safety requirements.

## Evidence Guide

### EVIDENCE GUIDE

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The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

#### Critical aspects for assessment

A person who demonstrates competency in this

## EVIDENCE GUIDE

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**and evidence required to demonstrate competency in this unit**

unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations
- comply with organisational policies and procedures, including quality requirements
- safely and effectively use tools, plant and equipment
- communicate and work effectively and safely with others
- complete set up and operation of a range of EWPs as listed in the range statement, including all functions.

**Context of and specific resources for assessment**

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources,

## EVIDENCE GUIDE

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and the provision of appropriate assessment support.

### Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training

## EVIDENCE GUIDE

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staff.

## Range Statement

### RANGE STATEMENT

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The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Work planning and preparation*** include:

- assessment of conditions and hazards
- consideration that EWPs must not be operated anywhere with overhead powerlines above, or within specified clearance distances set out in documentation such as Electrical Safety - Power line NO GO Zones, unless permission has been obtained from the power authority and a JSA has been developed
- determination of work requirements
- equipment defect identification
- work site inspection.
- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions where specified
- MSDS
- memos
- regulatory and legislative requirements pertaining to EWPs
- relevant Australian standards
- safe work procedures related to operating EWPs, including the safe working load written on the EWP which must be checked to ensure it is not exceeded
- signage
- verbal or written and graphical instructions
- work bulletins

***Information*** includes:

## RANGE STATEMENT

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**Safety (OHS)** is to be in accordance with legislation, regulations, codes of practice, organisational safety policies and procedures, and project safety plan and may include:

- work schedules, plans and specifications.
- procedures related to equipment operation, including emergency shutdown and stopping, extinguishing equipment fires, organisational first aid requirements and evacuation
- handling of materials
- hazard control
- hazardous materials and substances
- organisational first aid
- personal protective clothing and equipment
- use of firefighting equipment
- use of tools and equipment
- workplace environment and safety.

**Types of EWP:**

- EWPs include scissor lifts, boom and knuckle boom lifts with a boom length under 11 metres
- EWPs are classified as:
  - trailer mounted boom lift (TL)
  - self-propelled boom lift (BL)
  - vertical lift (VL)
  - scissor lift (SL)
  - truck-mounted boom lift (TM), which is not covered by this unit of competency.

**Tools and equipment** include:

- EWPs, extension leads, logbooks, service manuals, operation manuals, safety harnesses and lanyards
- special attachments, which may have to be installed if equipment is to be shifted with the EWP, as lifting loads via cables and ropes from an EWP is not permitted.

**Personal protective equipment** includes:

- that prescribed under legislation, regulations, codes of practice and workplace policies and practices.

**Environmental requirements** include:

- clean-up protection
- noise and dust
- sedimentation control
- vibration
- waste management.

**Statutory and regulatory authorities** include:

- federal, state and local authorities administering applicable Acts, regulations and codes of practice.



## RANGE STATEMENT

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- Emergency safety devices*** include:
- bleed valves
  - electronic override
  - emergency descent devices
  - ground controls
  - hydraulic accumulators.
- Safe operating procedures*** include:
- conduct of operational risk assessment and treatments associated with:
    - earth leakage boxes
    - lighting
    - power cables, including overhead service trays, cables and conduits
    - restricted access barriers
    - surrounding structures
    - traffic control
    - trip hazards
    - work site visitors and the public
    - working at heights
    - working in confined spaces
    - working in proximity to others
    - working with dangerous materials
  - not using slab terrain EWP's on any surface other than concrete or level asphalt.
- Harnesses*** include:
- energy or shock absorbers that must be used with all fall arrest lanyard, harness and inertia reel systems
  - full body rescue harness
  - lanyards and inertia reels, which should be attached to the harness installed so that the maximum distance a person equipped with a harness would free fall before the fall arrest system takes effect is 2 metres.
- EWP operation*** includes:
- boom up and down
  - operate attachments
  - operate outriggers
  - slew left and right
  - telescope in and out.

## **Unit Sector(s)**

**Unit sector**                      Construction

## **Co-requisite units**

**Co-requisite units**              Nil

## **Functional area**

**Functional area**

# CPCCCM3003A Work safely around power sources, services and assets

## Modification History

Not Applicable

## Unit Descriptor

**Unit descriptor** This unit of competency specifies the outcomes required to work with or operate plant in or around close proximity of power sources, services and assets for the general safety of personnel and equipment. It includes all occupational areas that may require working near electricity.

## Application of the Unit

**Application of the unit** This unit of competency supports achievement of skills and knowledge to work safely around power sources when undertaking construction tasks.

## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

### Prerequisite units

CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry
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## Employability Skills Information

**Employability skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. Plan and prepare.	<p>1.1. Work instructions, including plans, specifications, quality requirements and operational details, are obtained, confirmed and applied from relevant <b><i>information</i></b> for <b><i>planning and preparation</i></b>.</p> <p>1.2. <b><i>Safety (OHS)</i></b> requirements are followed in accordance with safety plans and policies.</p> <p>1.3. Signage and barricade requirements are identified and implemented.</p> <p>1.4. <b><i>Plant, tools and equipment</i></b> are selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement.</p> <p>1.5. <b><i>Environmental requirements</i></b> are identified for the project in accordance with environmental plans and <b><i>statutory and regulatory authority</i></b> obligations, and are applied.</p>
2. Apply safe work practices.	<p>2.1. Relevant authorities are contacted to identify <b><i>electrical sources</i></b> and type.</p> <p>2.2. Plant is positioned according to work method statement and job safety analyses (JSAs).</p> <p>2.3. Plant procedures are followed to comply with work method statement and JSAs.</p> <p>2.4. Work is conducted in or around the power source,</p>

ELEMENT	PERFORMANCE CRITERIA
3. Clean up.	<p>service or asset.</p> <p>2.5. Personnel, plant and equipment are retracted from powered area following safe work method statement and JSAs.</p> <p>3.1. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.</p> <p>3.2. Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.</p> <p>3.3. Work completion procedures are applied and relevant personnel are notified that work is finished.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills for this unit are:

- communication skills to:
  - determine requirements
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - follow instructions
  - identify electrical source and type from relevant authorities
  - read and interpret:
    - documentation from a variety of sources
    - drawings and specifications
  - report faults
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication, such as hand signals
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- numeracy skills to apply measurements and make calculations
- organisational skills, including the ability to plan and set out work

## REQUIRED SKILLS AND KNOWLEDGE

- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
  - use a range of mobile technology, such as two-way radio and mobile phones
  - voice and hand signals to access and understand site-specific instructions.

### Required knowledge

Required knowledge for this unit is:

- construction terminology
- electrical safety on construction work sites
- first aid including cardiopulmonary resuscitation (CPR)
- JSA and safe work method statements
- material safety data sheets (MSDS)
- materials storage and environmentally friendly waste management
- plans, specifications and drawings
- quality requirements
- site specific emergency procedures
- types, characteristics, uses and limitations of plant, tools and equipment
- working at heights
- working with electrical power techniques
- workplace and equipment safety requirements.

## Evidence Guide

### EVIDENCE GUIDE

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The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

#### Critical aspects for assessment

A person who demonstrates competency in this

## EVIDENCE GUIDE

**and evidence required to demonstrate competency in this unit**

unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations
- comply with organisational policies and procedures, including quality requirements
- safely and effectively use tools, plant and equipment
- communicate and work effectively and safely with others
- contact relevant authorities
- apply work method statements and JSAs to oversee plant positioning and operation for one project, including erection and/or placement of barriers and safeguards.

**Context of and specific resources for assessment**

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes

## EVIDENCE GUIDE

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where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

### Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated



## EVIDENCE GUIDE

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documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

### RANGE STATEMENT

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The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Information*** includes:

- verbal or written and graphical instructions
- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions where specified
- memos
- MSDS
- organisation work specifications and requirements
- plans and specifications
- regulatory and legislative requirements pertaining to working safely around power
- relevant Australian standards
- safe work procedures related to working safely around power
- signage
- work bulletins
- work schedules.
- work site inspection
- equipment defect identification
- assessment of conditions and hazards
- determination of work requirements.
- emergency procedures, including extinguishing fires, organisational first aid

***Planning and preparation*** include:

***Safety (OHS)*** is to be in accordance with legislation,

## RANGE STATEMENT

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regulations, codes of practice, organisational safety policies and procedures, and project safety plan and may include:

- requirements and evacuation
- handling of materials
- hazard control
- hazardous materials and substances
- safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
  - earth leakage boxes
  - lighting
  - power cables, including overhead service trays, cables and conduits
  - restricted access barriers
  - surrounding structures
  - traffic control
  - trip hazards
  - work site visitors and the public
  - working at heights
  - working in confined spaces
  - working in proximity to others
  - working with dangerous materials
- organisational first aid
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- use of firefighting equipment
- use of tools and equipment
- workplace environment and safety.
- barricades
- isolation
- other physical barriers
- site safety signage.
- back hoes
- booms
- cranes
- EWPs
- excavators
- scaffold.
- those associated with the task at hand.
- clean-up protection

***Signage and barricade requirements*** include:

***Plant*** includes:

***Tools and equipment*** include:

***Environmental requirements***

## RANGE STATEMENT

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include:

- noise and dust
- vibration
- waste management.

*Statutory and regulatory authorities:*

- include federal, state and local authorities administering applicable Acts, regulations and codes of practice
- must include federal, state and local electrical authorities.

*Electrical sources* include:

- distribution towers
- generators
- poles
- sub-stations
- temporary services
- train and tram assets
- transmission towers
- underground and overhead wires
- underground conductors
- all other services, sources and assets.

## Unit Sector(s)

Unit sector                      Construction

## Co-requisite units

Co-requisite units              Nil

## Functional area

Functional area



## CPCDDO3001A Perform dogging

### Modification History

Not applicable.

### Unit Descriptor

This unit of competency specifies the outcomes required to undertake basic dogging work, both in sight and out of sight of the crane operator, for the purpose of shifting loads mechanically.

The unit includes selecting sling types and sizes and maintaining the stability of the load.

This unit of competency specifies the outcomes required to undertake basic dogging work, both in sight and out of sight of the crane operator, for the purpose of shifting loads mechanically.

The unit includes selecting sling types and sizes and maintaining the stability of the load.

### Application of the Unit

This unit of competency supports the attainment of the understanding and skills to use dogging tools and equipment, which may include working with others and as a member of a team.

This unit of competency supports the attainment of the understanding and skills to use dogging tools and equipment, which may include working with others and as a member of a team.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

CPCCOHS1001A

Work safely in the  
construction industry

## Employability Skills Information

This unit contains employability skills.

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### Elements and Performance Criteria

Element	Performance Criteria
1 Plan and prepare.	<p>1.1 Work instructions and operational details are obtained using relevant <b>information</b> , confirmed and applied for <b>planning and preparation</b> purposes.</p> <p>1.2 <b>Safety (OHS)</b> requirements are followed in accordance with safety plans and policies.</p> <p>1.3 Signage and barricade requirements are identified and implemented.</p> <p>1.4 <b>Tools and equipment</b> selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement.</p> <p>1.5 Materials quantity requirements are calculated in accordance with plans, specifications and <b>quality requirements</b> .</p> <p>1.6 Materials appropriate to the work application are identified, obtained, prepared, safely handled and</p>

located ready for use.

- 1.7 **Environmental requirements** are identified for the project in accordance with environmental plans and regulatory obligations and applied.
- 2 Select dogging equipment.
  - 2.1 Resources, materials and equipment are selected and inspected for compliance with job specifications.
  - 2.2 Job sequencing schedule is communicated with team members and others to ensure coordination.
  - 2.3 Load mass is **calculated** and confirmed using load charts and standard calculations.
  - 2.4 Loads in **slings** and equipment are calculated to suit job requirements.
- 3 Sling loads.
  - 3.1 **Lifting devices** are assembled and erected for the movement of load.
  - 3.2 Using appropriate **load slinging method**, loads are slung to **crane** ready for lifting.
- 4 Shift loads.
  - 4.1 Loads are shifted ensuring stability and in compliance with work method statement.
  - 4.2 Load is directed to landing position using communications in compliance with Australian standards and recognised work practices.
  - 4.3 Load is landed in required position on packing or bearers.
- 5 Remove dogging equipment.
  - 5.1 Load shifting equipment is dismantled and inspected for wear.
  - 5.2 Logbook and site records are completed to company requirements.
- 6 Clean up.
  - 6.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.
  - 6.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.

- 6.3 Work completion procedures are applied and relevant personnel notified that work is finished.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Required skills for this unit are:

communication skills to:

evaluating own actions and making judgments about performance and necessary improvements

identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials

organisational skills, including the ability to plan and set out work

recognising procedures, following instructions, responding to change and contributing to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems

teamwork skills to coordinate own work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities

technological skills to:

determine requirements

enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand

follow instructions

read and interpret:

report faults

use language and concepts appropriate to cultural differences

use and interpret non-verbal communication, such as hand signals

documentation from a variety of sources

drawings and specifications

use a range of mobile technology, such as two-way radio and mobile phones

voice and hand signals to access and understand site-specific instructions.



## Required knowledge

Required knowledge for this unit is:

crane operations and limitations

designs and functions of lifting equipment

dogging equipment

dogging techniques

elevated work platforms

general construction terminology

job safety analysis (JSA) and safe work method statements

logbooks

material safety data sheets (MSDS)

materials storage and environmentally friendly waste management

plans, drawings and specifications

processes for the calculation of material requirements

quality requirements

relevant Acts, regulations and codes of practice

safe working at heights and fall arrest

safe working load tags

signalling methods and communications

types, characteristics, uses and limitations of plant, tools and equipment

weather and ground considerations

workplace and equipment safety requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction

Critical aspects for assessment and evidence required to demonstrate competency in this unit

workplace conditions, materials, activities, responsibilities and procedures.

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

locate, interpret and apply relevant information, standards and specifications

comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations

comply with organisational policies and procedures including quality requirements

safely and effectively operate and use tools, plant and equipment

communicate and work effectively and safely with others

as a minimum, read tags, sling, load, direct and land loads in conjunction with a slewing mobile crane with a telescopic boom and a winch, out of sight for:

rigid heavy loads to two thirds capacity of the crane

luff movements, boom retract and boom extend, slew right and slew left, winch up and down in combination

a flexible load with a minimum of three lifting points

using hand signals and whistle from minimum radius to maximum radius.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment

include:

an induction procedure and requirement  
realistic tasks or simulated tasks covering the  
mandatory task requirements

relevant specifications and work instructions  
tools and equipment appropriate to applying  
safe work practices

support materials appropriate to activity

workplace instructions relating to safe work  
practices and addressing hazards and  
emergencies

material safety data sheets

research resources, including industry related  
systems information.

Reasonable adjustments for people with  
disabilities must be made to assessment  
processes where required. This could include  
access to modified equipment and other  
physical resources, and the provision of  
appropriate assessment support.

#### Method of assessment

Assessment methods must:

satisfy the endorsed Assessment Guidelines  
of the Construction, Plumbing and Services  
Integrated Framework Training Package

include direct observation of tasks in real or  
simulated work conditions, with questioning  
to confirm the ability to consistently identify  
and correctly interpret the essential  
underpinning knowledge required for  
practical application

reinforce the integration of employability  
skills with workplace tasks and job roles

confirm that competency is verified and able  
to be transferred to other circumstances and  
environments.

Validity and sufficiency of evidence requires  
that:

competency will need to be demonstrated  
over a period of time reflecting the scope of  
the role and the practical requirements of the

workplace

where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Information** includes:

diagrams or sketches

instructions issued by authorised organisational or external personnel

manufacturer specifications and instructions, where specified

MSDS

memos  
regulatory and legislative requirements  
pertaining to performing dogging  
relevant Australian standards  
safe work procedures relating to performing  
dogging  
signage  
verbal, written and graphical instructions  
work bulletins  
work schedules, plans and specifications.

**Planning and preparation** include:

assessment of conditions and hazards  
determination of work requirements and  
safety plans and policies  
equipment defect identification  
work site inspection.

**Safety (OHS)** is to be in accordance with  
state and territory legislation and regulations  
and project safety plan and may include:

emergency procedures, including  
extinguishing fires, organisational first aid  
requirements and evacuation  
handling activities that may require the  
assistance of others or the use of manual or  
mechanical lifting devices where size, weight  
or other issues, such as a disability are a  
factor  
hazard control  
hazardous materials and substances  
organisational first aid  
PPE prescribed under legislation, regulations  
and workplace policies and practices  
safe operating procedures, including the  
conduct of operational risk assessment and  
treatments associated with:  
use of firefighting equipment  
use of tools and equipment  
workplace environmental requirements and  
safety.  
earth leakage boxes  
lighting

power cables, including overhead service trays, cables and conduits  
restricted access barriers  
surrounding structures  
traffic control  
trip hazards  
work site visitors and the public  
working at heights  
working in confined spaces  
working in proximity to others

**Tools and equipment** include:

brick cages  
kibbles  
personnel cages  
rescue cages  
rubbish bins  
spreader bars and beams.

**Quality requirements** include:

internal company quality policy and standards  
manufacturer specifications, where specified  
relevant regulations, including Australian standards  
workplace operations and procedures.

**Environmental requirements** include:

clean-up management  
noise  
vibration  
waste management.

**Calculations** include:

delivery dockets  
load charts  
load share  
pre-cast compliance charts  
safe working loads  
standard calculations.

**Slings** include:

chain

flexible steel wire rope  
natural or synthetic fibre.

**Lifting devices :**

include:

may include:

eye bolts

lifting clutches

shackles

snatch blocks

tags

collared eye bolts

equalizing sheaves

lifting lugs

rigging screws

turn buckles.

**Load slinging methods include:**

straight sling

adjustable sling

reeved sling

inclined sling.

**Cranes include:**

fixed cranes

hydraulic mobile cranes

lattice boom mobile cranes

slewing cranes

tower cranes.

**Unit Sector(s)**

Construction

Construction

**Functional Area**

empty

empt





## **CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry**

### **Modification History**

Not Applicable

### **Unit Descriptor**

**Unit descriptor** This unit of competency specifies the outcomes required to carry out OHS requirements through safe work practices at any on or off-site construction workplace. It requires the performance of work in a safe manner through awareness of risks and work requirements, and the planning and performance of safe work practices with concern for personal safety and the safety of others.

### **Application of the Unit**

**Application of the unit** This unit of competency covers fundamental OHS necessary to undertake work tasks within any sector in the construction industry. It includes the identification of hazardous materials, including asbestos, and compliance with legislated work safety practices. It does not cover removal of asbestos, which is a licensed activity.

The unit relates directly to the general induction training program specified by the *National Code of Practice for Induction for Construction Work* (ASCC 2007) required to enter a construction work site. Completion of unit CPCCOHS1001A covers this requirement.

### **Licensing/Regulatory Information**

Not Applicable

## Pre-Requisites

**Prerequisite units** Nil

## Employability Skills Information

**Employability skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

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Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

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- |   |   |
|---|---|
| 1. Identify and assess risks.             | 1.1. <b><i>Hazards</i></b> in the work area are identified, assessed and reported to <b><i>designated personnel</i></b> .<br>1.2. Safety risks in the work area are identified, assessed and reported to designated personnel.<br>1.3. <b><i>Safe work practices, duty of care</i></b> requirements and safe work instructions are followed for controlling risks.<br>1.4. OHS, hazard, accident or <b><i>incident</i></b> reports are contributed to according to workplace procedures and <b><i>Australian government and state or territory OHS legislation</i></b> and relevant <b><i>information</i></b> . |
| 2. Identify hazardous materials and other | 2.1. <b><i>Hazardous materials</i></b> on a work site are correctly identified and, if appropriate, handled and used  |

## ELEMENT

## PERFORMANCE CRITERIA

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hazards on work sites.	according to company and legislated procedures. 2.2. <b>Measures for controlling risks</b> and construction hazards are applied effectively and immediately. 2.3. Hazardous materials that have safety implications for self and other workers are secured immediately they are identified, using appropriate <b>signs and symbols</b> . 2.4. Asbestos-containing materials are identified on a work site and reported to designated personnel.
3. Plan and prepare for safe work practices.	3.1. Correct <b>personal protective equipment</b> and clothing for each area of construction work are identified, worn, correctly fitted, used and stored according to enterprise procedures. 3.2. Selection of <b>tools, equipment and materials</b> , and organisation of tasks are performed in conjunction with other personnel on site and in accordance with enterprise procedures. 3.3. Required barricades and signage are determined and erected at the appropriate site location. 3.4. Material safety data sheets (MSDS), and job safety analysis (JSA) and safe work method statements relevant to the work to be carried out are identified and applied.
4. Apply safe work practices.	4.1. Tasks are performed in a manner that is safe for operators, other personnel and the general community in accordance with legislative requirements, and enterprise policies and procedures. 4.2. Plant and equipment guards are used in accordance with manufacturer specifications, work site regulations and Australian standards where applicable. 4.3. Procedures and relevant authorities for reporting hazards, incidents and injuries are used. 4.4. <b>Prohibited tools and equipment</b> in areas with identified asbestos are recognised and not used. 4.5. Work site safety signs and symbols are identified and followed. 4.6. Work site area is cleared and maintained to prevent and protect self and others from incidents and accidents and to meet <b>environmental requirements</b> .
5. Follow emergency procedures.	5.1. Designated personnel are identified in the event of an emergency for communication purposes. 5.2. Safe workplace procedures for dealing with accidents,

## ELEMENT

## PERFORMANCE CRITERIA

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various *types of fire* and other emergencies are followed, including identification or use, if appropriate, of *fire equipment* within scope of responsibilities.

5.3. *Emergency response and evacuation procedures* are known, practised and carried out effectively when required.

5.4. Emergency first aid treatment of minor injuries is carried out correctly and details of any treatment administered are reported accurately to designated personnel as soon as possible.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills for this unit are:

- ability to accurately recognise OHS hazards, including asbestos and take all opportunities to alleviate safety problems in a variety of construction work sites and environments
- capacity to deal calmly and effectively with any potential safety problems and work closely with other team members and supervisors to ensure safe working conditions are maintained
- communication skills to:
  - determine and report hazards and risks
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - follow instructions
  - read and interpret:
    - MSDS, JSA and safe work method statements
    - other relevant documentation
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication, such as hand signals
  - written skills to contribute to reports
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials

## REQUIRED SKILLS AND KNOWLEDGE

- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
  - use a range of mobile technology, such as two-way radio and mobile phones
  - voice and hand signals to access and understand site-specific instructions.

### Required knowledge

Required knowledge for this unit is:

- asbestos management code prevention of exposure
- basic first aid procedures
- common construction industry terminology
- common workplace safety hazards and risks and procedures for reporting these to designated personnel
- construction industry communications equipment and use
- construction industry health and safety signage
- emergency response and evacuation procedures
- JSA and safe work method statements
- MSDS
- OHS hierarchy of control and role of OHS committees and representatives
- relevant legislation, regulations and workplace requirements relating to OHS, including hazard reduction and personal safety, including duty of care responsibilities, workers' compensation and injury management requirements
- safe manual handling techniques
- safe work practices in normal working environment
- safety equipment, policies and requirements for working in confined spaces and at height, including on rooves
- tools and equipment prohibited for use near identified asbestos-containing materials (ACM)
- types of fires and basic firefighting equipment
- types, possible location and risks of ACM, including serpentine and amphibole groups, and their use in common building materials
- types, purpose and use of construction industry personal protective equipment and clothing
- workplace and equipment safety requirements.

## Evidence Guide

### EVIDENCE GUIDE

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The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- correctly locate, interpret and apply relevant information, standards and specifications
- comply with a site safety plan, organisational policies, OHS regulations and state and territory legislation applicable to workplace operations, including quality requirements
- correctly identify ACM and policies and procedures for reporting this to designated personnel
- effectively communicate and work safely with others
- apply general procedures for responding to incidents and reporting hazards and injuries
- select and use firefighting equipment to extinguish a simulated mechanical fire
- evacuate a site through simulated response to an emergency, complying with workplace procedures.

#### Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements

## EVIDENCE GUIDE

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- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

### Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct,

## EVIDENCE GUIDE

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indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

### RANGE STATEMENT

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The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

*Hazards* include:

- chemical spills
- electrical safety work in confined spaces
- excavations, including trenches
- falling objects
- fires
- gases
- hazardous materials
- high or very low temperatures
- HIV and other infectious diseases
- liquids under pressure
- manual handling
- moving machinery and equipment
- noise, dust and vapours
- overhanging beams
- protrusions
- sharp equipment
- traffic
- ultraviolet (UV) radiation
- unplanned collapse



## RANGE STATEMENT

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**Designated personnel** to be contacted in case of an emergency, accident, fire or to report a risk such as identification of ACM are:

- working at heights.
- designated safety officers, determined by the enterprise, who have undertaken specific safety response training
- managers or other senior personnel
- personnel competent and/or licensed in the safe handling of asbestos
- supervisors.

**Safe work practices:**

- include:
  - day to day observation of OHS policies and procedures
  - emergency procedures
  - risk assessment
  - use of basic firefighting equipment
- relate to:
  - access to site amenities, such as drinking water and toilets
  - general requirements for safe use of plant and equipment
  - general requirements for use of personal protective equipment and clothing
  - housekeeping to ensure a clean, tidy and safer work area
  - no drugs and alcohol at work
  - preventing bullying and harassment
  - smoking in designated areas
  - storage and removal of debris.

**Duty of care** requirements:

- relate to:
  - legal responsibility under duty of care to do everything reasonably practicable to protect others from harm
  - relevant state and territory OHS requirements and include employers and self-employed persons, persons in control of the work site, construction supervisors, designers, manufacturers and suppliers, construction workers, subcontractors and inspectors
- may relate to:
  - own responsibilities to comply with safe work practices, including activities that

## RANGE STATEMENT

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require licences, tickets or certificates of competency.

*Incidents* include:

- accidents resulting in personal injury or damage to property
- near misses or dangerous occurrences that do not cause injury but may pose an immediate and significant risk to persons or property, and need to be reported so that action can be taken to prevent recurrence, for example:
  - breathing apparatus malfunctioning to the extent that the user's health is in danger
  - collapse of the floor, wall or ceiling of a building being used as a workplace
  - collapse or failure of an excavation more than 1.5 metres deep (including any shoring)
  - collapse or partial collapse of a building or structure
  - collapse, overturning or failure of the load bearing of any scaffolding, lift, crane, hoist or mine-winding equipment
  - damage to or malfunction of any other major plant
  - electric shock
  - electrical short circuit, malfunction or explosion
  - uncontrolled explosion, fire or escape of gas, hazardous substance or steam
  - any other unintended or uncontrolled incident or event arising from operations carried on at a workplace.

*Australian government and state or territory OHS legislative requirements* include:

- Australian standards
- construction industry OHS standards and guidelines
- duty of care
- health and safety representatives, committees and supervisors
- JSA and safe work method statements
- licences, tickets or certificates of competency
- National Code of Practice for Induction Training for Construction Work
- national safety standards

## RANGE STATEMENT

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**Information** includes:

- OHS and welfare Acts and regulations
- safety codes of practice.
- diagrams or sketches
- emergency situation contacts
- evacuation plans
- instructions issued by authorised organisational or external personnel
- labels
- manufacturer specifications and instructions
- memos
- MSDS
- organisation work specifications and requirements
- plans and specifications
- regulatory and legislative requirements, such as Acts, regulations and codes of practice
- relevant Australian standards
- reports of near misses or accidents
- safe work procedures or equivalent documentation
- safety meeting minutes
- signage
- verbal or written and graphical instructions
- work bulletins
- work schedules.

**Hazardous materials** include:

- ACM
- cleaning chemicals, including those in pressurised containers
- glues
- insulation materials
- solvents
- treated timber products.

**Measures for controlling risk** or minimising hazards in accordance with the hierarchy of control include:

- elimination
- substitution
- isolation
- engineering control
- administrative control
- personal protective equipment.

**Signs and symbols** include:

- emergency information signs (exits, equipment, first aid)
- fire signs (location of fire alarms and

## RANGE STATEMENT

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	<ul style="list-style-type: none"><li>firefighting equipment)</li><li>hazard identification, facility or location signs</li><li>regulatory signs (e.g. prohibition, mandatory and limitation or restriction), such as hazard signs (danger and warning)</li><li>safety tags and lockout (danger tags, out of service tags)</li><li>site safety, directional, traffic and warning signs and symbols.</li></ul>
<b><i>Asbestos-containing materials are identified:</i></b>	<ul style="list-style-type: none"><li>includes recognising common types of ACM that may be found in construction materials and buildings</li><li>covers asbestos rope/fabrics, asbestos cement sheeting, asbestos cement piping and lagging on pipes, bituminous waterproof membrane, fire doors, electrical switchboards, millboard, and sheeting under ceramic or vinyl floor tiles in wet areas.</li></ul>
Asbestos-containing materials are <b><i>reported</i></b> to:	<ul style="list-style-type: none"><li>person in control of the workplace as set out in the relevant Asbestos Management Code.</li></ul>
<b><i>Personal protective equipment</i></b> is to include:	<ul style="list-style-type: none"><li>aprons</li><li>arm guards</li><li>caps</li><li>dust mask/respirators</li><li>ear muffs/plugs</li><li>gloves</li><li>hard hats</li><li>high visibility retro reflective vests</li><li>jackets</li><li>overalls</li><li>safety glasses/goggles</li><li>steel capped boots</li><li>UV protective clothing and sunscreen.</li></ul>
<b><i>Tools and equipment</i></b> include:	<ul style="list-style-type: none"><li>firefighting equipment</li><li>first aid kit</li><li>ladders and work platforms</li><li>personal protective equipment.</li></ul>
<b><i>Materials</i></b> include:	<ul style="list-style-type: none"><li>first aid materials suitable for emergency first aid treatment of minor injuries.</li></ul>
<b><i>Prohibited tools and equipment</i></b> that cannot be used near identified	<ul style="list-style-type: none"><li>high-speed abrasive power and pneumatic tools, high pressure water cleaners, compressed</li></ul>

## RANGE STATEMENT

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ACM include:

air or abrasive blasting

- any vacuum cleaning equipment not specifically designed for safe work with asbestos.

*Environmental requirements* are to cover workplace quality management and include:

- clean-up protection
- stormwater protection
- waste management.

*Types of fire* includes:

- electrical, chemical, gas, mechanical, paper, wood or natural fire.

*Fire equipment* includes:

- breathing apparatus
- fire extinguishers
- fire hydrant and hoses
- fire reel
- fire truck
- manual firefighting instruments, such as fire blankets.

*Emergency response and evacuation procedures* include:

- emergencies, such as fire, toxic and/or flammable vapours emission, vehicle/mobile plant accident, structural collapse, chemical spill and injury to personnel
- extinguishing fires, organisational first aid requirements and evacuation.

## Unit Sector(s)

Unit sector

Construction

## Co-requisite units

Co-requisite units

Nil

## **Functional area**

**Functional area**

## CPCPCM2007A Carry out levelling

### Modification History

Not applicable.

### Unit Descriptor

This unit of competency specifies the outcomes required to plan and use levelling equipment to establish, record and apply those levels to plumbing work applications.

This unit of competency specifies the outcomes required to plan and use levelling equipment to establish, record and apply those levels to plumbing work applications.

### Application of the Unit

This unit of competency supports skills to undertake levelling operations for application in plumbing work.

Site location for work application may be either domestic or commercial and may be a new work site or an existing structure being renovated, extended, restored or maintained.

This unit of competency supports skills to undertake levelling operations for application in plumbing work.

Site location for work application may be either domestic or commercial and may be a new work site or an existing structure being renovated, extended, restored or maintained.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

CPCPCM2004A	Read plans and calculate plumbing quantities
CPCPCM2003A	Carry out OHS requirements

## Employability Skills Information

This unit contains employability skills.

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### Elements and Performance Criteria

Element	Performance Criteria
1 Prepare for work.	<p>1.1 Requirements of the job are determined and various levels are obtained.</p> <p>1.2 <b>Safety (OHS)</b> requirements associated with levelling activities and workplace <b>environmental requirements</b> are adhered to throughout the work.</p> <p>1.3 <b>Quality assurance</b> requirements are identified and adhered to in accordance with workplace requirements.</p> <p>1.4 <b>Tools and equipment</b>, including personal protective equipment, are selected and checked for serviceability.</p>
2 Perform levelling.	<p>2.1 Height to be transferred is identified from drawings, plans or instructions.</p> <p>2.2 <b>Levelling equipment</b> is set up in accordance with manufacturer instructions and workplace procedures.</p>



- 2.3 Laser levels are operated in accordance with the relevant Australian standards.
  - 2.4 Levels are shot, recorded and marked in accordance with job requirements and workplace procedures within the required tolerance and specifications.
- 3 Clean up.
  - 3.1 Work area is cleared and materials are disposed of or recycled in accordance with state or territory **statutory and regulatory authority** legislation and workplace procedures.
  - 3.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and workplace procedures.
  - 3.3 **Information** is accessed and documentation completed in accordance with workplace requirements.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Required skills for this unit are:

communication skills to:

identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials

numeracy skills to apply measurements and calculations

operating levelling equipment to read, record, establish and check:

organisational skills, including the ability to plan and set out work

teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities

technological skills to:

complete workplace documentation

determine requirements, follow instructions and access information

enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand

read and interpret:

use language and concepts appropriate to cultural differences

use and interpret non-verbal communication, such as hand signals

drawings and specifications

documentation from a variety of sources

levels, both horizontal and vertical used for the placement of pipe and piping

recording levels at specific points along a set out

recording and checking levels in drainage and sanitary excavations and plumbing operations

access and understand site-specific instructions in a variety of media

use a range of mobile technology, such as two-way radio.

Required knowledge

Required knowledge for this unit is:

different types of levelling equipment, their applications and their method of operation

how to access relevant information, including codes and technical standards

job safety analysis (JSA) and safe work method statements

process of establishing, recording and checking levels and alignment

relevant statutory and authority requirements related to establishing, recording and checking levels

SI system of measurements

workplace and equipment safety requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials,

Critical aspects for assessment and evidence required to demonstrate competency in this unit

activities, responsibilities and procedures.

A person who demonstrates competency in this unit must be able to provide evidence of:

locating, interpreting and applying relevant information, standards and specifications for the establishment, recording and checking of levels

applying safety requirements throughout the work sequence, including the use of personal protective clothing and equipment

as a minimum, the ability to:

use either a pipe or rotary laser and either a boning rod or string line

grade a pipe (or equivalent) over 10 metres on a grade to a tolerance of + and - 5mm, ensuring:

correctly identifying, recording and checking level

correctly selecting and using appropriate processes, tools and equipment

completing all work to specification

complying with regulations, standards and organisational quality procedures and processes

communicating and working effectively and safely with others.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

an induction procedure and requirement

realistic tasks or simulated tasks covering the

mandatory task requirements  
relevant specifications and work instructions  
tools and equipment appropriate to applying safe work practices  
support materials appropriate to activity  
workplace instructions relating to safe working practices and addressing hazards and emergencies  
material safety data sheets  
research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

#### Method of assessment

Assessment methods must:

satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Integrated Framework Training Package

include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application

reinforce the integration of employability skills with workplace tasks and job roles

confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace

where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances

assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Safety (OHS)** is to be in accordance with state and territory legislation and regulations and may include:

handling of materials

hazard control and hazardous materials and substances

personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices

use of firefighting equipment

use of first aid equipment

use of tools and equipment

	workplace environment and safety.
<b>Environmental requirements</b> covers water quality management and may include:	clean-up protection stormwater protection waste management.
<b>Quality assurance</b> requirements include:	Environment Protection Authority (EPA) internal company quality assurance policy and risk management strategy International Standards Organisation site safety plan workplace operations and procedures.
<b>Tools and equipment</b> may include:	hand tools measuring equipment string line.
<b>Levelling equipment</b> may includes:	boning rods rotating laser level and pipe laser level spirit level tripod mounted automatic level water level (U tube).
<b>Statutory and regulatory authorities</b> shall include:	state or territory statutory authority statutory plumbing authority.
<b>Information</b> includes:	building codes charts and hand drawings diagrams or sketches instructions issued by authorised organisational or external personnel job drawings manufacturer specifications and instructions material safety data sheets (MSDS) memos OHS and environmental requirements organisation work specifications and requirements regulatory and legislative requirements,

particularly those pertaining to plumbing and gasfitting authority regulations

relevant Australian standards

safe work procedures relating to handling and storing plumbing materials, including the disposal of waste

signage

verbal, written and graphical instructions

work bulletins

work schedules, plans and specifications.

## **Unit Sector(s)**

Plumbing and services

Plumbing and services

## **Functional Area**

empty

empt

## CPCPCM2014A Carry out simple concreting and rendering

### Modification History

Not applicable.

### Unit Descriptor

This unit of competency specifies the outcomes required to perform minor repairs and undertake minor concreting and rendering tasks.

This unit of competency specifies the outcomes required to perform minor repairs and undertake minor concreting and rendering tasks.

### Application of the Unit

This unit of competency supports development of basic concreting skills needed for plumbing applications.

Site location for work application may be either domestic or commercial and may be a new work site or an existing structure being renovated, extended, restored or maintained.

This unit of competency supports development of basic concreting skills needed for plumbing applications.

Site location for work application may be either domestic or commercial and may be a new work site or an existing structure being renovated, extended, restored or maintained.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

CPCPCM2003A

Carry out OHS requirements

### Employability Skills Information

This unit contains employability skills.

This unit contains employability skills.



## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### Elements and Performance Criteria

Element	Performance Criteria
1 Prepare for work.	1.1 Job requirements are determined and various levels are obtained.
	1.2 <b>Safety (OHS)</b> requirements associated with levelling activities and workplace <b>environmental requirements</b> are adhered to throughout the work.
	1.3 <b>Quality assurance</b> requirements are identified and adhered to in accordance with workplace requirements.
	1.4 <b>Tools and equipment</b> , including personal protective equipment, are selected and checked for serviceability.
2 Place concrete.	2.1 Concrete mixture is prepared to meet manufacturer requirements.
	2.2 Formwork or excavation area is cleaned of excess material and debris prior to concrete placement.
	2.3 Concrete is safely transported by an approved method.
	2.4 Concrete is placed in formwork or placement site to specified depth ensuring all cavities are filled.

- 2.5 Concrete is screeded to the alignment of formwork and project specified datums.
- 2.6 Surface of concrete is finished according to specifications.
- 3 Place rendering.
  - 3.1 Render mixture is prepared to meet manufacturer requirements.
  - 3.2 Render is safely transported by an approved method.
  - 3.3 Render is applied in the required location.
  - 3.4 Surface of render is finished in accordance with specifications.
- 4 Clean up.
  - 4.1 Work area is cleared and materials disposed of or recycled in accordance with state or territory **statutory and regulatory authority** legislation and workplace procedures.
  - 4.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and workplace procedures.
  - 4.3 **Information** is accessed and documentation completed in accordance with workplace requirements.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Required skills for this unit are:

communication skills to:

contributing to workplace responsibilities, such as current work site environmental or sustainability frameworks, or management systems

evaluating own actions and making judgements about performance and necessary improvements

identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials

organisational skills, including the ability to plan and set out work

recognising procedures

responding to change

teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities

technological skills to:

complete workplace documentation

enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand

follow instructions

report hazards

use and interpret non-verbal communication, such as hand signals

use language and concepts appropriate to cultural differences

access and understand site-specific instructions in a variety of media

use a range of mobile technology, such as two-way radio.

Required knowledge

Required knowledge for this unit is:

basic levelling techniques

categories of materials and their safe handling, storage and transport requirements

concrete and plastering materials

concreting and plastering techniques

job safety analysis (JSA) and safe work method statements

material safety data sheets (MSDS)

OHS and environmental legislation and requirements

plans, drawings and specifications

processes for the calculation of material requirements

simple formwork and reinforcing componentry

types of waste and their disposal, including an awareness only of the requirements for asbestos handling and disposal

workplace safety requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

locating, interpreting and applying relevant information, standards and specifications as required to carry out concreting and rendering to a simple form

applying safety requirements throughout the work sequence, including the use of personal protective clothing and equipment

as a minimum the ability to, given the plans and specifications, carry out one of the following:

all activities carried out should ensure:

bench an access chamber

install thrust blocks

pipe penetration through a floor or wall

place concrete as required within AS/NZS3500 National plumbing and drainage set: Part 1.2 Water supply - acceptable solutions

pour a concrete slab up to 600mm square

repair concrete up to 600mm square

repair pipe chases in a brick wall

correct identification of location, design and details of proposed tasks

correct selection and use of appropriate processes, tools and equipment

Context of and specific resources for assessment

completing all work to plans and specification

compliance with regulations, standards and organisational quality procedures and processes

communicating and working effectively and safely with others.

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

an induction procedure and requirement

realistic tasks or simulated tasks covering the mandatory task requirements

relevant specifications and work instructions

tools and equipment appropriate to applying safe work practices

support materials appropriate to activity

workplace instructions relating to safe working practices and addressing hazards and emergencies

material safety data sheets

research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

satisfy the endorsed Assessment Guidelines

of the Construction, Plumbing and Services Integrated Framework Training Package

include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application

reinforce the integration of employability skills with workplace tasks and job roles

confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace

where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Safety (OHS)** is to be in accordance with state and territory legislation and regulations and may include:

handling of materials  
 hazard control  
 hazardous materials and substances  
 personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices  
 use of firefighting equipment  
 use of first aid equipment  
 use of tools and equipment  
 workplace environment and safety.

**Environmental requirements** cover water quality management and may include:

clean-up protection  
 stormwater protection  
 waste management.

**Quality assurance** includes:

Environment Protection Authority (EPA)  
 internal company quality assurance policy and risk management strategy  
 International Standards Organisation  
 site safety plan  
 workplace operations and procedures.

**Tools and equipment** may include:

brooms  
 bull floats  
 edging tools  
 hand floats (steel and wood)  
 levels  
 shovels  
 stipple devices

trowels

wheel barrows.

**Statutory and regulatory authorities** shall include:

state or territory statutory authority  
statutory plumbing authority.

**Information** includes:

charts and hand drawings  
diagrams or sketches  
instructions issued by authorised organisational or external personnel  
job drawings  
manufacturer specifications and instructions  
material safety data sheets (MSDS)  
memos  
organisation work specifications and requirements  
regulatory and legislative requirements, particularly those pertaining to:  
relevant Australian standards  
safe work procedures relating to handling and storing plumbing materials, including the disposal of waste  
signage  
verbal, written and graphical instructions  
work bulletins  
work schedules, plans and specifications.  
building codes  
OHS and environmental requirements  
plumbing and gasfitting authority regulations

## Unit Sector(s)

Plumbing and services

Plumbing and services



## Functional Area

empty

empt

## CPCPIG2011A Design domestic urban irrigation systems

### Modification History

Not Applicable

### Unit Descriptor

**Unit descriptor** This unit of competency specifies the outcomes required to prepare basic designs and irrigation drawings for domestic and small commercial projects.

### Application of the Unit

**Application of the unit** Work is normally undertaken in a drafting office environment. Location for drawing and design application may be either domestic or commercial, and may be a new work site or an existing structure being renovated, extended, restored or maintained.

### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

**Prerequisite units** Nil

### Employability Skills Information

**Employability skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

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Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- | ELEMENT                           | PERFORMANCE CRITERIA  |
|-----------------------------------|---|
| 1. Prepare for work.              | <p>1.1. Site survey is conducted of proposed irrigation area in accordance with client requirements.</p> <p>1.2. <b>Safety (OHS)</b> requirements associated with design of domestic irrigation systems, and workplace <b>environmental requirements</b>, are adhered to throughout the work.</p> <p>1.3. <b>Quality assurance</b> requirements are identified and adhered to in accordance with workplace requirements.</p> <p>1.4. Tasks are planned and sequenced in conjunction with others involved in or affected by the work and <b>statutory and regulatory authority</b> requirements.</p> <p>1.5. <b>Tools and equipment</b> for preparing basic irrigation designs and drawings, including personal protective equipment, are selected and checked for serviceability.</p> <p>1.6. Work area is prepared to support efficient design of domestic irrigation systems.</p> |
| 2. Identify drawing requirements. | <p>2.1. Areas requiring irrigation and <b>system design components</b> are identified.</p> <p>2.2. <b>Information</b> is obtained on the soil type, ground slope, contours and prevailing wind.</p> <p>2.3. Underground cables and services, buildings, paths and other permanent structures are located and noted.</p> <p>2.4. Water supply is located and its influence on design requirements is determined.</p> <p>2.5. Appropriate emitters are selected to suit function and</p>  |

ELEMENT	PERFORMANCE CRITERIA
3. Install and commission irrigation system.	<p>design requirements.</p> <p>3.1.Site plan is drawn to include structures, paths and property boundaries.</p> <p>3.2.Garden areas are sketched to include locations of lawns, garden beds, trees, vegetable patches or ferneries.</p> <p>3.3.Pipe runs and water emitters are sketched to design requirements.</p> <p>3.4.Sizes of pipes are calculated using standard data and information is recorded in required format.</p> <p>3.5.List of <i>materials</i> is compiled to include number and type of water emitters, control valves, quantities of pipes, fittings and components.</p> <p>3.6.Drawing and design are submitted to client for approval and adjusted.</p>
4. Clean up.	<p>4.1.Work area is cleared and materials disposed of or recycled in accordance with state and territory legislation and workplace procedures.</p> <p>4.2.Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and workplace procedures.</p> <p>4.3.Documentation is completed in accordance with workplace requirements.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills for this unit are:

- communication skills to:
  - access information
  - determine requirements
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand

## REQUIRED SKILLS AND KNOWLEDGE

- follow instructions
- plan and sequence tasks with others
- read and interpret:
  - documentation from a variety of sources
  - drawings and specifications
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication, such as hand signals
- written skills to:
  - compile list of materials
  - complete workplace documentation
  - record information
- designing and drawing a domestic urban irrigation system, including:
  - identifying material requirements
  - selecting and locating components
  - site layout
  - site requirements and structures
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- numeracy skills to apply measurements and calculations
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
  - access and understand site-specific instructions in a variety of media
  - use mobile communication technology.

### Required knowledge

Required knowledge for this unit is:

- accessing information and the processes for calculating material requirements
- job safety analysis (JSA) and safe work method statements (SWMS)
- process and workplace requirements for basic irrigation design
- properties of water, including pressure and flow rates
- relevant statutory and authority requirements related to drawing and installing irrigation systems
- SI system of measurement
- specifications of the range of irrigation products available
- standards applicable to the installation
- technologies for irrigation measurement and drawings
- various types of irrigation systems, including types of materials and components

## REQUIRED SKILLS AND KNOWLEDGE

used

- workplace and equipment safety requirements.

## Evidence Guide

### EVIDENCE GUIDE

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The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

- locating, interpreting and applying relevant information, standards and specifications to the design of domestic irrigation systems
- applying safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- as a minimum the ability to, given the site plan and customer requirements for the irrigation of a 500m<sup>2</sup> garden (of lawn, shrubs, trees and flowers), design and prepare a drawing of the system, incorporating automatic timers and controls, varying sprinkler heads and zones, and indicating the materials required (by number and type), ensuring:
  - correct identification of location, design and details of proposed system
  - correct selection and use of appropriate processes, tools and equipment
  - completing all work to specification
  - compliance with regulations, standards and

## EVIDENCE GUIDE

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	<p>organisational quality procedures and processes</p> <ul style="list-style-type: none"><li>• communicating and working effectively and safely with others.</li></ul>
<b>Context of and specific resources for assessment</b>	<p>This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.</p> <p>Assessment of essential underpinning knowledge will usually be conducted in an off-site context.</p> <p>Assessment is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"><li>• an induction procedure and requirement</li><li>• realistic tasks or simulated tasks covering the minimum task requirements</li><li>• relevant specifications and work instructions</li><li>• tools and equipment appropriate to applying safe work practices</li><li>• support materials appropriate to activity</li><li>• workplace instructions relating to safe working practices and addressing hazards and emergencies</li><li>• material safety data sheets</li><li>• research resources, including industry related systems information.</li></ul> <p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p>
<b>Method of assessment</b>	<p>Assessment methods must:</p> <ul style="list-style-type: none"><li>• satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package</li><li>• include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application</li><li>• reinforce the integration of employability skills</li></ul>

## EVIDENCE GUIDE

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with workplace tasks and job roles

- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

### RANGE STATEMENT

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The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and



## RANGE STATEMENT

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regional contexts) may also be included.

**Safety (OHS)** is to be in accordance with commonwealth, state and territory legislation and regulations and may include:

- handling of materials, including hazardous materials and substances
- hazard control
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- use of firefighting equipment
- use of first aid equipment
- use of tools and equipment
- workplace environment and safety.
- clean-up protection
- stormwater protection
- waste management.

**Environmental requirements** cover water quality management and may include:

- Environment Protection Authority (EPA)
- internal company quality assurance policy and risk management strategy
- International Standards Organisation
- site safety plan
- workplace operations and procedures.
- state or territory statutory authority
- statutory plumbing authority.

**Quality assurance** requirements may include:

**Statutory and regulatory authorities** include:

**Tools and equipment** may include:

- calculator
- computer design software
- drawing and drafting equipment
- laser measuring devices
- measuring equipment.
- backflow prevention devices
- controls
- pipework
- valves
- water emitters, which may include:
  - hear drive
  - impact
  - in-line turbo drippers
  - mist sprays
  - oscillating
  - pop up (full circle, half, quarter)
  - pulsating

**System design components** include:

## RANGE STATEMENT

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*Information* may include:

- selection of water emitters, based on:
    - automatic control systems
    - manufacturer specifications
    - physical site conditions
    - site requirements
    - types of plants requiring irrigated water.
  - charts and hand drawings
  - diagrams or sketches
  - instructions issued by authorised organisational or external personnel
  - job drawings
  - manufacturer specifications and instructions
  - material safety data sheets (MSDS)
  - memos
  - maps
  - organisation work specifications and requirements
  - regulatory and legislative requirements, particularly those pertaining to:
    - building codes
    - OHS and environmental requirements
    - plumbing regulations
  - relevant Australian standards
  - safe work procedures relating to the design of domestic irrigation systems
  - signage
  - verbal, written and graphical instructions
  - work bulletins
  - work schedules, plans and specifications.
- Materials* may include:
- drafting and drawing materials
  - plans.

## Unit Sector(s)

**Unit sector**

Plumbing and services

## **Co-requisite units**

**Co-requisite units** Nil

## **Functional area**

**Functional area**

# CPCPWT3007A Connect irrigation systems from drinking water supply

## Modification History

Not applicable.

## Unit Descriptor

This unit of competency specifies the outcomes required to connect irrigation and watering systems from a drinking water supply. It does not include the commissioning of backflow prevention devices or arrangements.

This unit of competency specifies the outcomes required to connect irrigation and watering systems from a drinking water supply. It does not include the commissioning of backflow prevention devices or arrangements.

## Application of the Unit

Site location for work application may be either domestic or commercial, and may be a new work site or an existing structure being renovated, extended, restored or maintained.

Site location for work application may be either domestic or commercial, and may be a new work site or an existing structure being renovated, extended, restored or maintained.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

CPCPCM2003A

Carry out OHS requirements

## Employability Skills Information

This unit contains employability skills.

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### Elements and Performance Criteria

Element	Performance Criteria
1 Prepare for work.	<p>1.1 Plans and specifications are obtained.</p> <p>1.2 <b>Safety (OHS)</b> requirements associated with connecting irrigation systems from a drinking water supply, and workplace <b>environmental requirements</b> , are adhered to throughout the work.</p> <p>1.3 <b>Quality assurance</b> requirements are identified and adhered to in accordance with workplace requirements.</p> <p>1.4 Tasks are planned and sequenced in conjunction with others involved in or affected by the work and <b>statutory and regulatory authority</b> requirements.</p> <p>1.5 <b>Tools and equipment</b> for connecting irrigation systems, including personal protective equipment, are selected and checked for serviceability.</p> <p>1.6 Work area is prepared to support efficient connection of irrigation systems from a drinking water supply.</p>
2 Identify installation requirements.	<p>2.1 Connection size and hazard rating are determined from plans, specification, standards and/or site inspection using relevant <b>information</b> .</p>

- 2.2 Valve is sized in accordance with plans and specification.
  - 2.3 Back flow prevention devices are confirmed as being in accordance with hazard rating.
  - 2.4 **Materials** and equipment are identified, ordered and collected in accordance with workplace procedures.
  - 2.5 Materials and equipment are checked for compliance with standards, docket and order form, and for acceptable condition.
- 3 Connect and test system.
    - 3.1 Excavation is set out and made in accordance with plans and specifications and undertaken with consideration to existing structures and services.
    - 3.2 Service pipe is isolated and cut to accommodate take off branch in accordance with authorities' requirements.
    - 3.3 Back flow prevention device is fitted in accordance with standards and manufacturer specifications.
    - 3.4 System is connected and flushed to required standard.
    - 3.5 Water supply is restored and system tested in accordance with standards.
    - 3.6 Ground surface is restored.
- 4 Clean up.
    - 4.1 Work area is cleared and materials disposed of or recycled in accordance with state and territory legislation and workplace procedures.
    - 4.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and workplace procedures.
    - 4.3 Documentation is completed in accordance with workplace requirements.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Required skills for this unit are:

communication skills to:

cutting into a water supply and installing a take off branch and fitting valves and backflow prevention devices for an irrigation or watering system.

identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials

numeracy skills to apply measurements and calculations

organisational skills, including the ability to plan and set out work

teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities

technological skills to:

access information

complete workplace documentation

enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand

follow instructions

identify requirements

plan and sequence tasks with others

read and interpret:

use language and concepts appropriate to cultural differences

use and interpret non-verbal communication, such as hand signals

documentation from a variety of sources

drawings and specifications

access and understand site-specific instructions in a variety of media

use a range of mobile technology, such as two-way radio.

### Required knowledge

Required knowledge for this unit is:

accessing information and the processes for calculating material requirements

characteristics and application of different pipes and fittings, including fixing and joining

techniques and methods  
drinking water supplies and protection measures  
implications of cross connections and air gaps  
job safety analysis (JSA) and safe work method statements  
process of connecting irrigation systems from a drinking water supply  
properties of water, including pressure and flow rates  
relevant statutory and authority requirements related to connecting irrigation systems from a drinking water supply  
SI system of measurement  
standards applicable to the connection  
use of test equipment and procedures  
various types of irrigation systems and types of materials used  
workplace and equipment safety requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

- locating, interpreting and applying relevant information, standards and specifications to connect an irrigation system from a drinking water supply
- applying safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- as a minimum the ability to, given the plans



and specifications, connect an irrigation system to a drinking water supply, ensuring:

- correct identification of location, design and details of proposed installations
- correct selection and use of appropriate processes, tools and equipment
- completing all work to specification
- compliance with regulations, standards and organisational quality procedures and processes
- communicating and working effectively and safely with others.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe working practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include

access to modified equipment and other physical resources, and the provision of appropriate assessment support.

## Method of assessment

Assessment methods must:

satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Integrated Framework Training Package

include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application

reinforce the integration of employability skills with workplace tasks and job roles

confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace

where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may

be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Safety (OHS)** is to be in accordance with state and territory legislation and regulations and may include:

handling of materials  
hazard control  
personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices  
safe operating procedures, including recognising and preventing hazards associated with:  
use of firefighting equipment  
use of first aid equipment  
workplace environment and safety.  
hazardous materials and substances  
other machines  
surrounding structure and facilities  
trees  
trip hazards  
underground services  
uneven and unstable terrain  
use of tools and equipment  
work site visitors and the public  
working at heights  
working in confined spaces

	working in proximity to others
<b>Environmental requirements</b> cover water quality management and may include:	clean-up protection waste management.
<b>Quality assurance</b> requirements include:	Environment Protection Authority (EPA) internal company quality assurance policy and risk management strategy International Standards Organisation site safety plan workplace operations and procedures.
<b>Statutory and regulatory authorities</b> shall include:	state or territory statutory authority statutory plumbing authority.
<b>Tools and equipment</b> can include:	chain blocks electrical bonding and bridging strap elevated work platforms forklifts hand and power tools hand excavation equipment hand trolleys hoists and jacks lifting and load shifting equipment measuring equipment mechanical excavation equipment rollers scaffolding silver solder and brazing equipment trench shoring equipment.
<b>Information</b> includes:	charts and hand drawings diagrams or sketches instructions issued by authorised organisational or external personnel job drawings manufacturer specifications and instructions material safety data sheets (MSDS)

memos

organisation work specifications and requirements

regulatory and legislative requirements, particularly those pertaining to:

relevant Australian standards

safe work procedures relating to connecting irrigation systems from a drinking water supply

signage

verbal, written and graphical instructions

work bulletins

work schedules, plans and specifications.

building codes

OHS and environmental requirements

plumbing regulations

backflow prevention devices

copper tube

fittings and connections

joints

polymer pipes

valves.

**Materials** may include:

## **Unit Sector(s)**

Plumbing and services

Plumbing and services

## **Functional Area**

empty

empt

# CPPFES2005A Demonstrate first attack firefighting equipment

## Modification History

Revised unit

Unit updated and equivalent to PRMPFES05B Use portable fire fighting equipment

## Unit Descriptor

This unit of competency specifies the outcomes required to demonstrate the use of portable fire extinguishers, fire hose reels and fire blankets.

## Application of the Unit

This unit of competency supports fire protection equipment service technicians responsible for demonstrating to customers how to interpret and follow manufacturers' instructions on various first attack firefighting equipment in emergency situations.

## Licensing/Regulatory Information

Work in this area must be completed according to relevant legislative, industry, customer and organisational requirements, including occupational health and safety (OHS) policies and procedures.

Different states and territories may have regulatory mechanisms that apply to this unit. Candidates are advised to check for regulatory limitations.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1	Demonstrate correct use of portable fire extinguishers to extinguish simulated fires.	1.1	<i>Fire type and classification</i> are determined.
		1.2	<i>Fire extinguishers</i> are selected to attack different fires.
		1.3	Safe use of fire extinguishers is demonstrated according to manufacturers' instructions and relevant <i>OHS and workplace policies and procedures</i> .
2	Demonstrate correct use of fire hose reels.	2.1	Safe use of <i>hose reels</i> is demonstrated according to manufacturers' instructions and relevant OHS and workplace policies and procedures.
		2.2	Water is turned off in the approved sequence and hose reel is checked for leaks.
		2.3	Hose reel is rewound correctly after use.
3	Demonstrate correct use of fire blanket.	3.1	Safe use of fire blankets is demonstrated according to manufacturers' instructions and relevant OHS and workplace policies and procedures.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- decision-making skills to select correct first attack firefighting equipment for different types of fires
- effective customer service
- language, literacy and numeracy skills to:
  - communicate with others in a clear and concise manner
  - read and comply with work instructions and specifications

- interpersonal skills to relate to people from a range of social and cultural backgrounds
- skills to work safely when:
  - applying recommended manufacturers’ techniques for operating equipment and fire fighting
  - using firefighting equipment

**Required knowledge**

- basic methods of locating a fire
- correct use of fire extinguishers and hose reels on different classes of fire and implications of incorrect use
- how fire can be spread by conduction, convection, radiation and direct burning
- how water pressure influences the discharge distance for hose reels
- key actions in a fire emergency, commonly known by the acronym RACE:
  - rescue
  - activate alarm
  - confine fire
  - evacuate or extinguish
- meaning of secondary damage
- reasons for cooking oil and fat fires requiring special attention
- theory of fire, including the triangle of combustion
- types and operation of fire protection equipment classified as first attack equipment

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p><b>Overview of assessment</b></p>	<p>This unit of competency could be assessed by practical demonstration, using simulated fire situations. Due to safety and cost factors, methods of extinguishing class D, E and F fires are confined to oral explanations and role play or simulations only.</p> <p>All practical demonstrations involving the use of simulated fires must adhere to the safety and environmental regulations relevant to each state or territory.</p>
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified in this unit.</p> <p>In particular the person should demonstrate the ability to:</p> <ul style="list-style-type: none"> <li>• select correct portable firefighting equipment for a particular type of fire</li> </ul>



	<ul style="list-style-type: none"> <li>• demonstrate the use of portable firefighting equipment</li> <li>• use portable firefighting equipment safely and correctly.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> <li>• actual or simulated work environment</li> <li>• portable firefighting equipment.</li> </ul>
<b>Method of assessment</b>	<p>Assessment methods must:</p> <ul style="list-style-type: none"> <li>• satisfy the endorsed Assessment Guidelines of the Property Services Training Package</li> <li>• include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application</li> <li>• reinforce the integration of employability skills with workplace tasks and job roles</li> <li>• confirm that competency is verified and able to be transferred to other circumstances and environments.</li> </ul>
<b>Guidance information for assessment</b>	<p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p> <p>Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p> <p>This unit could be assessed on its own or in combination with other units relevant to the job function, for example:</p> <ul style="list-style-type: none"> <li>• CPPFES2004A Identify types of installed fire safety equipment and systems</li> <li>• CPPFES2006A Prepare for installation and servicing operations.</li> </ul>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>Fire types</b> may include:	<ul style="list-style-type: none"> <li>• combustible metals</li> <li>• cooking oils and fats</li> <li>• energised electrical equipment</li> <li>• flammable and combustible liquids</li> <li>• flammable gases</li> <li>• ordinary combustibles.</li> </ul>
<b>Classifications</b> of fires include:	<ul style="list-style-type: none"> <li>• classes A, B, C, D, E and F.</li> </ul>
<b>Fire extinguishers</b> may include:	<ul style="list-style-type: none"> <li>• carbon dioxide</li> <li>• foam</li> <li>• powder</li> <li>• vaporising liquid</li> <li>• water</li> <li>• wet chemical.</li> </ul>
<b>OHS and workplace policies and procedures</b> may be located in quality assurance and/or procedures manuals relating to:	<ul style="list-style-type: none"> <li>• appropriate techniques to use in relation to emergency management of fires</li> <li>• assessing work site for hazards and risks prior to preparing the work site for the work procedure</li> <li>• displaying signs and using barriers in the work area</li> <li>• OHS policies, procedures and programs, including: <ul style="list-style-type: none"> <li>• risk and hazard recognition</li> <li>• emergency procedures</li> <li>• awareness of electrical hazards</li> <li>• following confined spaces procedures</li> <li>• first aid</li> </ul> </li> <li>• personnel practices and guidelines outlining work roles, responsibilities and delegations</li> <li>• safety procedures, including those for working safely: <ul style="list-style-type: none"> <li>• around electrical wiring, cables and overhead powerlines</li> <li>• around tools and equipment</li> <li>• on ladders and raised platforms</li> </ul> </li> <li>• using personal protective equipment, including: <ul style="list-style-type: none"> <li>• safety glasses or goggles</li> <li>• safety boots or shoes</li> <li>• hard hats</li> <li>• earmuffs or plugs.</li> </ul> </li> </ul>
<b>Hose reel</b> types may be:	<ul style="list-style-type: none"> <li>• swing-hinged</li> <li>• vehicle-mounted</li> <li>• wall-mounted.</li> </ul>

## **Unit Sector(s)**

Fire protection equipment

## **Custom Content Section**

Not applicable.

## CPPSIS4005A Collect basic GPS data

### Modification History

Not Applicable

### Unit Descriptor

**Unit descriptor** This unit of competency specifies the outcomes required to collect data using basic global positioning system (GPS) equipment and to be able to use suitable software to communicate with a GPS receiver. It requires the ability to combine technical application in a team environment with sound communication skills. Functions would be carried out under limited supervision and within organisational guidelines.

### Application of the Unit

**Application of the unit** This unit of competency supports the application of basic planning, organising and communication skills, the use of technology, and technical understanding in interpreting specifications. The skills and knowledge acquired upon completion of this unit would apply to the needs of employees in supporting positions for surveying, town planning, cartography, mapping and geographic information systems.

While no licensing, legislative, regulatory or certification requirements apply holistically to this unit at the time of publication, relevant federal, and state or territory legislation, regulations and codes of practice impact upon this unit (see unit performance criteria and range statement).

### Licensing/Regulatory Information

Refer to Application of the Unit

## Pre-Requisites

Prerequisite units Nil

## Employability Skills Information

**Employability skills** The required outcomes described in this unit of competency contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged, will assist in identifying employability skills requirements.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Prepare for GPS data collection.</b>	<p>1.1 A data collection plan is developed, detailing key activities and timelines, which are scheduled with full consideration of the <i>specifications</i> and team activity.</p> <p>1.2 <i>Organisational GPS survey requirements</i> are complied with and recorded.</p> <p>1.3 <i>Equipment</i> is prepared for the survey with consideration of the specific <i>project parameters and requirements</i>.</p> <p>1.4 Designated responsibilities are communicated to and by <i>relevant personnel</i> to ensure clarity of understanding of the work and to provide a basis for ongoing data assessment.</p> <p>1.5 Skills and knowledge are updated to accommodate changes in GPS equipment.</p>

ELEMENT	PERFORMANCE CRITERIA
<b>2 Collect GPS data.</b>	<p>2.1 GPS equipment is operated according to <i>manufacturer specifications</i> and <i>organisational guidelines</i>.</p> <p>2.2 <i>Point positional data</i> is collected and related to a reference system based on specifications.</p> <p>2.3 GPS data is collected using methodologies detailed in the data collection plan.</p> <p>2.4 Conditions for obtaining optimum GPS positions are determined.</p> <p>2.5 Basic methods to improve the accuracy of GPS point positioning are recognised and used.</p> <p>2.6 GPS measurements are <i>validated</i> and recorded on the <i>reference system</i> according to the project specifications.</p> <p>2.7 Any discrepancies between specifications and actual activities are identified and addressed.</p> <p>2.8 <i>OHS</i> requirements are adhered to.</p> <p>2.9 GPS equipment is operated according to manufacturer specifications and organisational guidelines.</p>
<b>3 Finalise the collection process.</b>	<p>3.1 Basic <i>GPS software</i> is used to communicate with basic GPS receivers.</p> <p>3.2 GPS software is used to determine <i>required information</i>.</p> <p>3.3 Measured GPS data is compared against design.</p> <p>3.4 Checks are completed according to organisational requirements.</p> <p>3.5 All <i>required documentation</i> is completed according to organisational guidelines.</p> <p>3.6 Appropriate software is used to process the data in order to determine required information, according to organisational guidelines.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

#### Required skills:

## REQUIRED SKILLS AND KNOWLEDGE

- ability to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
- analytical skills (high level)
- communication skills to:
  - discuss vocational issues effectively with colleagues
  - impart knowledge and ideas through oral, written and visual means
- computer skills (technical user level) to complete business documentation
- literacy skills to:
  - assess and use workplace information
  - interpret and understand legal, financial and procedural requirements
  - process workplace documentation
  - read, record data and write technical reports
  - research and access routine sources of spatial data
- negotiation skills
- numeracy skills to:
  - analyse errors
  - record with accuracy and precision
  - undertake computations
- organisational skills to:
  - prepare and administer documentation
  - prioritise activities to meet contractual requirements
- project management skills
- spatial skills to:
  - perform GPS data archival and retrieval
  - perform GPS data management and manipulation
  - perform file management
  - solve basic problems relating to height, depth, breadth, dimension, direction and position in actual operational activity and virtual representation
  - understand implications of height, depth, breadth, dimension and position to actual operational activity and virtual representation
- team leadership.

### Required knowledge and understanding:

- abilities of work teams
- accuracy and precision requirements related to GPS data
- data formats
- data management
- errors, accuracy and precision in collection techniques
- GPS data processing and data manipulation
- GPS equipment

## REQUIRED SKILLS AND KNOWLEDGE

- industry standards
- limitations of equipment
- organisational policies and guidelines, such as OHS guidelines
- planning and control processes
- safe work practices
- relevant industry requirements and standards
- spatial reference systems (basic)
- surveying computation skills (basic).

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

#### Overview of assessment

This unit of competency could be assessed on its own or in combination with other units relevant to the job function, for example units CPPSIS4001A Maintain spatial systems, CPPSIS4002A Store and retrieve spatial data, and CPPSIS4004A Collect and set out basic spatial data.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

- matching objectives with resources to ensure collection proceeds in an organised and timely manner
- ensuring that achievement of required accuracy has been attempted by:
  - accessing and interpreting basic design information to identify the components to be measured and monitored
  - performing basic measurements
  - planning basic resources
  - applying solutions to a range of problems
  - basic documenting and reporting
  - reducing and manipulating GPS data
- ensuring that non-conformity aspects are recorded and reported
- taking responsibility for outputs in work and learning.



**Specific resources for assessment**

Resource implications for assessment include access to:

- assessment instruments, including personal planner and assessment record book
- assignment instructions, work plans and schedules, policy documents and duty statements
- registered training provider of assessment services
- relevant guidelines, regulations and codes of practice
- suitable venue and equipment.

Access must be provided to appropriate learning and assessment support when required.

Where applicable, physical resources should include equipment modified for people with disabilities.

**Context of assessment**

Holistic: based on the performance criteria, evidence guide, range statement, and required skills and knowledge.

**Method of assessment**

Demonstrated over a period of time and observed by the assessor (or assessment team working together to conduct the assessment).

Demonstrated competency in a range of situations, that may include customer/workplace interruptions and involvement in related activities normally experienced in the workplace.

Obtained by observing activities in the field and reviewing induction information. If this is not practicable, observation in realistic simulated environments may be substituted.

**Guidance information for assessment**

Assessment requires that the clients' objectives and industry expectations are met. If the clients' objectives are narrowly defined or not representative of industry needs, it may be necessary to refer to portfolio case studies of a variety of spatial information services requirements to assess competency.

Oral questioning or written assessment and hypothetical situations (scenarios) may be used to assess underpinning knowledge (in assessment situations where the candidate is offered a preference between oral questioning or written assessment, questions are to be identical).

Supplementary evidence may be obtained from relevant authenticated correspondence from existing supervisors, team leaders or specialist training staff.

All practical demonstration must adhere to the safety and environmental regulations relevant to each State or

Territory.

Where assessment is for the purpose of recognition (recognition of current competencies [RCC] or recognition of prior learning [RPL]), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time.

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge.

Assessment processes will be appropriate to the language and literacy levels of the candidate and any cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Specifications*** may include:

- detailed technical descriptions of survey data and its requirements
- preparation of cross-sections and plans with all information included.

***Organisational GPS survey requirements*** may include:

- administration (e.g. postcodes, suburbs, and federal and state electoral counties)
- analysis of environmental, land and geographic information
- asset management
- cartographic services
- civil engineering
- digital imagery
- electricity
- emergency services management
- environmental datasets
- geographic information systems

- integrated services - environmental, land and geographic related datasets
- land ownership tenure system
- local government
- location-based services
- global positioning
- mapping facilities
- programming GPS
- site analysis
- survey marks
- sewerage
- telecommunications
- town planning
- utility services, such as water.

***Equipment*** may include:

- any geodetic GPS receiver
- associated equipment capable of differential and real time modes of operations.

***Project parameters and requirements*** may include:

- coordinate systems
- datum
- display formats
- information displays
- outputs.

***Relevant personnel*** may include:

- colleagues
- registered surveyors
- site personnel
- staff or employee representatives
- supervisors or line managers
- suppliers
- users.

***Manufacturer specifications*** may include:

- equipment specifications
- operator manuals.

***Organisational guidelines*** may include:

- appropriate timelines
- code of ethics
- company policy
- final product formats
- formal design parameters
- legislation relevant to the work or service function, including equal employment opportunity (EEO)
- manuals
- OHS policies and procedures
- personnel practices and guidelines outlining teamwork, work roles and responsibilities

- Point positional data*** may include:
- requirements for data processing.
  - basic GPS positions, not including differential methods.
- Validated*** means reflecting the true state of a test result, including tests for systematic distortions such as:
- confounding bias
  - information/data bias
  - observational bias
  - recall bias
  - selection bias.
- Reference system*** refers to:
- projection and datum parameters required for GPS equipment and processing software.
- OHS*** may include:
- Australian standards
  - development of site safety plan
  - identification of potential hazards
  - inspection of work sites
  - training staff in OHS requirements
  - use of personal protective clothing
  - use of safety equipment and signage.
- GPS software*** refers to:
- GPS software package designed to process GPS data and output required information.
- Required information*** may include:
- calculated information
  - metadata
  - positional data
  - set out positional accuracy.
- Required documentation*** may include:
- electronic or paper-based correspondence with client
  - field records
  - final report
  - records of conversation
  - survey plots
  - organisational work activity sheets.

## Unit Sector(s)

Unit sector

Spatial information services

# CPPWMT5043A Develop and implement an environmental management strategy

## Modification History

Revised unit

Unit updated and equivalent to PRMWM43A Develop an environmental management strategy

## Unit Descriptor

This unit of competency specifies the outcomes required to develop and implement an environmental management strategy. It requires the ability to analyse practices and develop environmental management strategies by working effectively with stakeholders.

## Application of the Unit

This unit of competency supports individuals with supervisory responsibilities for developing waste management strategies. It includes contributing to the development of strategies, systems and plans, as well as recognising the need for expert advice.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1	Define scope of environmental management strategy.	1.1	Needs and expectations for development of <i>environmental management strategy</i> are identified.
		1.2	<i>Constraints</i> under which environmental strategy can be developed are identified.
		1.3	Clear and concise statement of environmental objectives is prepared and <i>feasibility of environmental management options</i> is evaluated.
2	Determine environmental management strategy development process.	2.1	<i>Process models</i> applicable to scope of environmental management strategy are identified.
		2.2	Process models are assessed and a suitable model for achieving the strategy's objectives is selected.
		2.3	Principal <i>stakeholders</i> are identified to maximise their participation in development process.
		2.4	Stakeholders are consulted regarding acceptance of proposed strategy development process.
3	Identify resources required for environmental management strategy.	3.1	Resource requirements of the strategy are determined in an accurate and comprehensive manner.
		3.2	Financial budget required for management strategy is prepared.
		3.3	<i>Human resource</i> and skill requirements for strategy are identified.
		3.4	Facility and equipment needs for strategy are identified to ensure all requirements can be met on time.
4	Identify and prioritise	4.1	Existing <i>data</i> is collated in a comprehensive manner relevant to the scope and strategy.

- environmental assets, problems and opportunities.
- 4.2 Existing data is evaluated to identify need for further data collection.
- 4.3 Additional data is obtained to ensure a comprehensive database for effective analysis.
- 4.4 Available data is assessed against scientifically established criteria and community expectations within ***applicable legislation and codes***.
- 4.5 Common problems and opportunities are grouped to formulate environmental issues that can be actioned by stakeholders.
- 4.6 ***Criteria to prioritise*** environmental issues are established.
- 5 Prepare environmental management strategy.
- 5.1 Practical actions that enable a resolution of environmental issues in line with strategy objectives are determined.
- 5.2 Clear and concise draft documentation is prepared for the strategy to obtain feedback from stakeholders.
- 5.3 Feedback is evaluated and a response is formed.
- 5.4 Local approval of the environmental management strategy is obtained.
- 6 Prepare implementation plan for environmental management strategy.
- 6.1 Actions are prioritised to provide the most effective resolution of issues within available resources.
- 6.2 Resources are allocated to match action priorities.
- 6.3 Processes are monitored and modified as required to ensure the strategy is achieving objectives.
- 6.4 Responsible parties with the capacity to carry out strategy actions are identified.
- 6.5 Achievable timelines, schedules and targets that enable strategy objectives to be met within required timeframes are established.
- 6.6 ***Supervisory processes*** and checks and measures are implemented to ensure work is completed within ***time***

*available.*

- |   |  |     |  |
|---|--|-----|--|
| 7 | Monitor and review effectiveness of environmental management strategy. | 7.1 | Regular data to provide accurate measures of performance are collected and analysed.   |
|   |  | 7.2 | Outcomes of strategy objectives are compared to assess respective effectiveness.   |
|   |  | 7.3 | Changes are made to strategy as required in a timely manner to ensure outcomes are achieved.                                       |
|   |  | 7.4 | Information obtained during monitoring and review is used to develop new strategies based on accumulated knowledge and experience. |

## Required Skills and Knowledge

- This section describes the skills and knowledge required for this unit.

### Required skills

- analytical skills to:
  - determine appropriate waste management service
  - review operations
  - conduct feasibility tests
- interpersonal skills to:
  - manage consultation processes
  - present strategy
- management skills to:
  - apply change management techniques
  - conduct budgeting
  - organise work practices safely and efficiently
  - conduct strategic problem solving
  - plan work practices
  - identify and minimise hazards and risks
  - organise work methodically
  - monitor performance
  - apply quality assurance practices
  - use information technology to complete tasks
- oral communication skills to:



- ask questions
- listen actively
- consult
- give instructions
- provide strategic information
- reading skills to interpret:
  - plans
  - complex documentation
- written communication skills to:
  - write reports
  - prepare complex strategic documentation

### **Required knowledge**

- environmental issues relating to:
  - life cycle of products: re-new, re-use and recycle
  - environmental regulations
  - renewable energy
- features required for an environmental management strategy, including:
  - site contract requirements
  - reclamation
  - training outline
  - waste minimisation
  - waste prevention
  - work procedures
  - environmental education
  - past and future reviews and audits relating to environmental management
  - recycling requirements
  - internal and external audits
  - monitoring personnel performance following training
  - quality control checks relating to environmental management
  - review of effectiveness of new procedures and processes
  - targets, such as:
    - carbon emissions reduction
    - cleaner production
    - lean management
    - recycling rates
    - waste minimisation
- identification and strategic knowledge of:
  - waste types, streams and characteristics
  - waste non-conformances

- unanticipated waste
- waste non-conformance procedures
- waste containment
- waste disposal and recovery routes
- occupational health and safety (OHS) requirements relating to:
  - dangerous goods and hazardous substances
  - OHS hierarchy of control
- resource recovery options relating to:
  - valuable resources within materials
  - potential resources to be recovered
- waste assessment to identify:
  - resource needs
  - hazards and risks
- waste audit, including:
  - analysing waste practices
  - analysing previous audit plans and audit processes
  - outlining possible benefits and outcomes from conducting a waste assessment
  - types of client waste management surveys and their uses
  - sampling techniques
- waste management provision, including:
  - organisational requirements and structure, including workplace communication channels and procedures
  - legislation, regulations and codes of practice applicable to specific waste management functions
  - waste management options
  - nature and significance of waste minimisation hierarchy life cycle assessment
  - organisational pricing schedules
  - duty of care

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	This unit of competency could be assessed by observation of practical demonstration of the development and implementation of an environmental management strategy.
Critical aspects for	A person who demonstrates competency in this unit must be able to

<p>assessment and evidence required to demonstrate competency in this unit</p>	<p>provide evidence of the required skills and knowledge specified in this unit.</p> <p>In particular the person should demonstrate the ability to:</p> <ul style="list-style-type: none"> <li>• identify environmental management objectives</li> <li>• consult stakeholders consulted in development strategy</li> <li>• prioritise environmental issues by level of importance and impact</li> <li>• amalgamate issues in order to develop environmental management strategy.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> <li>• work plans and approved specifications</li> <li>• forms and procedures manuals.</li> </ul>
<p>Method of assessment</p>	<p>The process of developing an environmental management strategy must comply with the objectives of the client as well as with industry expectations in the particular client environment. If the environment is narrowly defined or is not representative of industry needs, it may be necessary to refer to portfolio case studies to assess competency in the development of environmental management strategy.</p> <p>Assessment methods must:</p> <ul style="list-style-type: none"> <li>• satisfy the endorsed Assessment Guidelines of the Property Services Training Package</li> <li>• include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application</li> <li>• reinforce the integration of employability skills with workplace tasks and job roles</li> <li>• confirm that competency is verified and able to be transferred to other circumstances and environments.</li> </ul>
<p>Guidance information for assessment</p>	<p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p> <p>Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p> <p>This unit could be assessed on its own or in combination with other</p>

	<p>units of competency relevant to the job function, for example:</p> <ul style="list-style-type: none"> <li>• CPPCMN4001B Develop workplace policies and procedures for sustainability</li> <li>• CPPWMT5004A Develop waste management strategies.</li> </ul>
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## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Environmental management strategy</i></b> may include:	<ul style="list-style-type: none"> <li>• <b>air and water</b> pollution</li> <li>• biodiversity protection and protection of natural resources</li> <li>• carbon emission</li> <li>• ecosystem management</li> <li>• wildlife and endangered species.</li> </ul>
<b><i>Constraints</i></b> may include:	<ul style="list-style-type: none"> <li>• budgets</li> <li>• knowledge</li> <li>• resources</li> <li>• time.</li> </ul>
<b><i>Feasibility of environmental management options</i></b> must include:	<ul style="list-style-type: none"> <li>• commitment to environmental management strategies</li> <li>• compliance with legislation</li> <li>• cost-benefit analysis</li> <li>• costs</li> <li>• lead time</li> <li>• process constraints</li> <li>• resource requirements, including equipment and personnel</li> <li>• resources available.</li> </ul>
<b><i>Process models</i></b> may include:	<ul style="list-style-type: none"> <li>• implementation strategies, including: <ul style="list-style-type: none"> <li>• material safety data sheets (MSDS)</li> <li>• measurement and recording</li> <li>• OHS procedures</li> <li>• personal protective equipment (PPE)</li> <li>• legislation and codes</li> <li>• site contract requirements</li> <li>• work procedures</li> </ul> </li> <li>• objectives pertaining to: <ul style="list-style-type: none"> <li>• changes to processes and procedures</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• environmental issues</li> <li>• education and training</li> <li>• past and future reviews and audits</li> <li>• recycling requirements</li> <li>• reduction of waste</li> <li>• review strategies, including:             <ul style="list-style-type: none"> <li>• internal and external audits</li> <li>• monitoring statistics</li> <li>• monitoring personnel performance following training</li> <li>• undertaking quality control checks</li> <li>• reviewing effectiveness of new procedures and processes</li> <li>• formalising review strategies via re-planning</li> <li>• sampling</li> <li>• counting waste</li> </ul> </li> <li>• targets, such as:             <ul style="list-style-type: none"> <li>• carbon emissions reduction</li> <li>• lean management</li> <li>• recycling rates</li> <li>• waste minimisation.</li> </ul> </li> </ul>
<p><i>Stakeholders</i> may include:</p>	<ul style="list-style-type: none"> <li>• business</li> <li>• community</li> <li>• council</li> <li>• funding bodies</li> <li>• government</li> <li>• industry</li> <li>• interest groups</li> <li>• land management agencies</li> <li>• local authorities</li> <li>• statutory authorities.</li> </ul>
<p><i>Human resource</i> may include:</p>	<ul style="list-style-type: none"> <li>• community experts</li> <li>• consultants</li> <li>• government agencies</li> <li>• internal staff</li> <li>• project officers</li> <li>• volunteers.</li> </ul>
<p><i>Data</i> may include:</p>	<ul style="list-style-type: none"> <li>• existing reports or programs</li> <li>• questionnaires</li> <li>• references</li> <li>• stakeholder input</li> <li>• surveys.</li> </ul>

<p><b><i>Applicable legislation and codes</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• codes, including:             <ul style="list-style-type: none"> <li>• Australian Code for the Transport of Dangerous Goods by Road and Rail</li> <li>• industry</li> </ul> </li> <li>• commonwealth, state and territory legislation, including:             <ul style="list-style-type: none"> <li>• anti-discrimination</li> <li>• environmental protection</li> <li>• equal employment opportunity</li> <li>• freedom of information</li> <li>• industrial</li> <li>• OHS</li> <li>• trade practices</li> </ul> </li> <li>• road laws.</li> </ul>
<p><b><i>Criteria to prioritise</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• benefit</li> <li>• budget constraints</li> <li>• business objectives</li> <li>• community preferences</li> <li>• environmental issues:             <ul style="list-style-type: none"> <li>• impact</li> <li>• legislative provisions</li> </ul> </li> <li>• resources</li> <li>• timeframes.</li> </ul>
<p><b><i>Supervisory processes</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• delegating</li> <li>• implementing</li> <li>• monitoring</li> <li>• overseeing</li> <li>• planning</li> <li>• reviewing</li> <li>• targeting practices to meet deadlines.</li> </ul>
<p><b><i>Time available</i></b> may include considering:</p>	<ul style="list-style-type: none"> <li>• client instructions</li> <li>• contingencies</li> <li>• past experiences</li> <li>• skills and experience of operatives</li> <li>• location of project</li> <li>• methods to be employed</li> <li>• resources and equipment to be used.</li> </ul>

## **Unit Sector(s)**

Waste management

## **Custom Content Section**

Not applicable.

# CPPWMT5045A Develop site safety plans

## Modification History

Revised unit

Unit updated and equivalent to PRMWM45B Develop site safety plan

## Unit Descriptor

This unit of competency specifies the outcomes required to develop an on-site safety plan for a waste management environment. It requires the ability to plan activity for safe work practices.

## Application of the Unit

This unit of competency supports individuals responsible for developing on-site safety plans. It includes contributing to the development of operational procedures, in addition to safety principles.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

- |   |   |     |   |
|---|---|-----|---|
| 1 | Review site safety requirements.              | 1.1 | <i>Details of site and site requirements</i> are obtained and reviewed to determine specific safety requirements.   |
|   |   | 1.2 | <i>Organisational requirements</i> , occupational health and safety (OHS) regulations and <i>legislation and codes</i> are identified.                                      |
|   |   | 1.3 | <i>Site safety requirements</i> are identified according to organisational requirements.  |
| 2 | Determine site safety requirements.           | 2.1 | Safety information necessary to ensure safety of personnel and general public is included in the on-site safety plan.   |
|   |   | 2.2 | <i>Site areas</i> are identified and classified in safety plan.   |
|   |   | 2.3 | Exact locations of <i>first aid and emergency facilities</i> are identified in on-site safety plan.   |
|   |   | 2.4 | <i>Wastes on site</i> are clearly identified in on-site safety plan by location and type.   |
|   |   | 2.5 | <i>Emergency and personal protective equipment (PPE)</i> requirements and <i>potential hazards and risks</i> are identified for specific site areas in on-site safety plan. |
|   |   | 2.6 | <i>Emergency response action or procedures</i> are identified according to on-site safety plan.   |
|   |   | 2.7 | On-site safety plan is reviewed following feedback from stakeholders.   |
| 3 | Communicate on-site safety plan to personnel. | 3.1 | On-site safety plan is communicated promptly and clearly to relevant personnel according to organisational requirements, OHS regulations and legislation and codes.         |
|   |   | 3.2 | Personnel's understanding of all aspects of on-site safety plan is confirmed through questioning and observation.   |
|   |   | 3.3 | Feedback from personnel is obtained and integrated into on-site safety plan.  |

- 3.4 On-site safety plan is kept in an accessible place, according to organisational requirements, OHS regulations and legislation and codes.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- analytical skills to:
  - determine site safety options
  - review operations
- basic illustration skills for drawing simple site maps
- interpersonal skills to:
  - manage consultation processes
  - present safety plan
- management skills to:
  - apply change management techniques
  - conduct strategic problem solving
  - plan work practices
  - identify and minimise hazards and risks
  - organise work methodically
  - apply quality assurance practices
  - use information technology to complete tasks
  - use emergency and personal protective equipment
- reading skills to interpret:
  - work or material requirements
  - materials safety data sheets (MSDS)
- written communication skills to:
  - write reports
  - prepare complex strategic documentation
- critical thinking skills to develop on-site safety plan, identifying:
  - resource needs
  - hazards and risks
- oral communication skills to:
  - ask and answer questions
  - explain on-site safety plan to personnel

- give instructions
- seek feedback
- listen actively

### Required knowledge

- environmental issues relating to:
  - life cycle of products: re-new, re-use and recycle
  - environmental regulations
- features required for on-site safety plan pertaining to:
  - site contract requirements
  - waste disposal methods
  - waste minimisation
  - waste prevention
  - waste segregation
  - work procedures
  - environmental issues
  - education and training outline
  - recycling and recovery requirements
  - monitoring personnel performance following safety training
  - quality control checks
  - review of effectiveness of new procedures and processes
- identification of safety issues pertaining to:
  - waste types, streams and characteristics and level of associated danger
  - waste non-conformances
  - unanticipated waste
  - waste non-conformance procedures
  - waste contaminants
  - hazardous waste
  - waste containment
  - waste disposal and recovery routes
- OHS requirements relating to:
  - dangerous goods and hazardous substances
  - OHS hierarchy of control
- waste audit, including:
  - analysing waste safety practices
  - analysing previous audit plans and audit processes pertaining to safety
- waste management provision, including:
  - organisational requirements in relation to safety
  - organisational structure and reporting requirements
  - legislation, regulations and codes of practice applicable to specific waste management

functions

- waste management safety options

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	This unit of competency could be assessed by demonstration of site safety plans developed.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified in this unit.</p> <p>In particular the person should demonstrate the ability to:</p> <ul style="list-style-type: none"> <li>• identify site safety requirements</li> <li>• specify all necessary PPE required to undertake work safely in each site area</li> <li>• gather necessary information to develop on-site safety plan following consultation with stakeholders</li> <li>• apply OHS requirements and duty of care to provide safe environment for personnel and general public.</li> </ul>
Context of and specific resources for assessment	<p>Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> <li>• work plans and approved specifications</li> <li>• forms and procedures manuals.</li> </ul>
Method of assessment	<p>An on-site safety plan must be developed in line with industry expectations in the particular client environment. If the environment is narrowly defined or is not representative of industry needs, it may be necessary to refer to portfolio case studies to assess competency in the development of the plan.</p> <p>Assessment methods must:</p> <ul style="list-style-type: none"> <li>• satisfy the endorsed Assessment Guidelines of the Property Services Training Package</li> <li>• include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application</li> </ul>

	<ul style="list-style-type: none"> <li>reinforce the integration of employability skills with workplace tasks and job roles</li> <li>confirm that competency is verified and able to be transferred to other circumstances and environments.</li> </ul>
Guidance information for assessment	<p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p> <p>Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p> <p>This unit could be assessed on its own or in combination with other units of competency relevant to the job function, for example:</p> <ul style="list-style-type: none"> <li>CPPCMN3001B Participate in environmentally sustainable work practices</li> <li>CPPCMN4007A Manage workplace safety arrangements.</li> </ul>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Details of site and site requirements</i></b> may include:	<ul style="list-style-type: none"> <li>areas allowing access to general public</li> <li>organisational and site OHS requirements</li> <li>number of personnel on site</li> <li>potential hazards and risks, including level of risk</li> <li>waste incoming</li> <li>waste present at site.</li> </ul>
<b><i>Organisational requirements</i></b> may include information found in:	<ul style="list-style-type: none"> <li>briefing papers</li> <li>job sheets</li> <li>letters</li> <li>memos</li> <li>operations manuals</li> <li>quality assurance documents</li> <li>tender and contract documents</li> <li>verbal or written instructions</li> <li>work procedures.</li> </ul>
<b><i>Legislation and codes</i></b>	<ul style="list-style-type: none"> <li>codes, including:</li> </ul>

<p>may include:</p>	<ul style="list-style-type: none"> <li>• Australian Code for the Transport of Dangerous Goods by Road and Rail</li> <li>• industry</li> <li>• commonwealth, state and territory legislation, including:             <ul style="list-style-type: none"> <li>• anti-discrimination</li> <li>• environmental protection</li> <li>• equal employment opportunity</li> <li>• freedom of information</li> <li>• industrial</li> <li>• OHS</li> <li>• trade practices</li> </ul> </li> <li>• road laws.</li> </ul>
<p><i>Site safety requirements</i> must include:</p>	<ul style="list-style-type: none"> <li>• all necessary requirements to ensure the safety of:             <ul style="list-style-type: none"> <li>• environment</li> <li>• equipment</li> <li>• general public</li> <li>• personnel</li> <li>• structures.</li> </ul> </li> </ul>
<p><i>Site safety requirements</i> may also include:</p>	<ul style="list-style-type: none"> <li>• awareness of potential hazards and risks</li> <li>• communication requirements</li> <li>• confined space awareness</li> <li>• emergency procedure guides</li> <li>• emergency response equipment</li> <li>• emergency shut-down and lock-out procedures</li> <li>• evacuation area</li> <li>• first aid</li> <li>• induction</li> <li>• PPE requirements</li> <li>• site security</li> <li>• training</li> <li>• warning signs and barriers.</li> </ul>
<p><i>Site areas</i> may include:</p>	<ul style="list-style-type: none"> <li>• evacuation areas</li> <li>• first aid bays</li> <li>• general public access areas</li> <li>• restricted areas.</li> </ul>
<p><i>First aid and emergency facilities</i> may include:</p>	<ul style="list-style-type: none"> <li>• breathing apparatus</li> <li>• eye baths</li> <li>• fire extinguishers</li> <li>• first aid kits.</li> </ul>
<p><i>Wastes on site</i> may</p>	<ul style="list-style-type: none"> <li>• solid (non-hazardous), e.g. construction and demolition</li> </ul>

<p>include:</p>	<ul style="list-style-type: none"> <li>• liquid (non-hazardous), e.g. chemical and aqueous</li> <li>• hazardous – regulated, prescribed, quarantined, medical and clinical</li> <li>• recoverable resources, e.g. recyclable and green waste.</li> </ul>
<p><b><i>Emergency and personal protective equipment</i></b> must include:</p>	<ul style="list-style-type: none"> <li>• communications equipment</li> <li>• eye protection, such as goggles and protective glasses</li> <li>• eyewash kit</li> <li>• fire extinguishers</li> <li>• first aid kit</li> <li>• footwear</li> <li>• gloves</li> <li>• overalls and protective clothing.</li> </ul>
<p><b><i>Emergency and personal protective equipment</i></b> could also include:</p>	<ul style="list-style-type: none"> <li>• breathing apparatus</li> <li>• emergency procedure guides</li> <li>• face shields or masks</li> <li>• hard hats</li> <li>• hearing protection</li> <li>• MSDS</li> <li>• spill kit.</li> </ul>
<p><b><i>Personal protective equipment</i></b> must be:</p>	<ul style="list-style-type: none"> <li>• cleaned and fitted according to organisational requirements, manufacturer specifications and OHS requirements</li> <li>• worn when required according to organisational requirements</li> <li>• stored according to organisational requirements.</li> </ul>
<p><b><i>Potential hazards and risks</i></b> are those identified by the organisation that may lead to:</p>	<ul style="list-style-type: none"> <li>• damage to plant, vehicle or property</li> <li>• harm to the environment</li> <li>• illness or injury to employees, contractors or the public</li> <li>• injuries resulting from manual handling and repetitive work.</li> </ul>
<p><b><i>Potential hazards and risks</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• broken glass</li> <li>• broken metal</li> <li>• compaction equipment</li> <li>• contamination</li> <li>• dust</li> <li>• fire</li> <li>• gases and fumes</li> <li>• hazardous waste (e.g. sharps)</li> <li>• narrow driveways</li> <li>• other vehicles and equipment</li> <li>• overhanging signs</li> <li>• projectiles</li> <li>• spark-producing equipment</li> <li>• unguarded conveyor belts</li> </ul>

	<ul style="list-style-type: none"><li>• weather.</li></ul>
<i>Emergency response action or procedures</i> may include:	<ul style="list-style-type: none"><li>• cleaning up</li><li>• containing emergency</li><li>• isolating or shutting down equipment or plant</li><li>• evacuation</li><li>• first aid</li><li>• making site safe</li><li>• notifying authorities</li><li>• using PPE.</li></ul>

## Unit Sector(s)

Waste management

## Custom Content Section

Not applicable.



# CULATS501A Work with Aboriginal and Torres Strait Islander cultural material

## Modification History

Release	Comments
Release 1	This unit of competency first released with <i>CUL11 Library, Information and Cultural Services Training Package version 1.0</i>

## Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to work with Aboriginal and Torres Strait Islander cultural material in a culturally appropriate manner.

## Application of the Unit

This unit applies particularly to Aboriginal and Torres Strait Islander people and focuses on the specific cultural and consultative requirements for sourcing, handling, interpreting and exhibiting Aboriginal or Torres Strait Islander cultural material.

The cultural knowledge necessary to achieve competency in this unit may only be accessible to Aboriginal or Torres Strait Islander people. This unit also reflects that there is no single Aboriginal or Torres Strait Islander culture.

The unit deals with complex and interrelated elements of Aboriginal and Torres Strait Islander cultures, which are the cultural and intellectual properties of specific communities across the continent and islands of Australia. These may only be interpreted by appropriate persons, for example those recognised by the local Aboriginal or Torres Strait Islander community as an Elder or custodian of local cultural knowledge.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

### Elements and Performance Criteria

1. Source Aboriginal or Torres Strait Islander cultural material	<p>1.1 Identify and locate <b><i>cultural material</i></b> that may be appropriate for exhibition or display in <b><i>museum collections</i></b></p> <p>1.2 Confirm traditional ownership of cultural material and consult with appropriate communities</p> <p>1.3 Consult with traditional custodians to determine suitable keeping place for materials not authorised for general exhibition</p> <p>1.4 Negotiate permission and advice for the use of cultural material according to <b><i>cultural protocols</i></b></p> <p>1.5 Complete records according to cultural protocols</p> <p>1.6 Research <b><i>issues and protocols</i></b> in relation to the return of cultural material to local Aboriginal or Torres Strait Islander communities</p>
2. Handle Aboriginal or Torres Strait Islander cultural material	<p>2.1 Describe, move, store, maintain and return cultural material according to <b><i>cultural requirements</i></b></p> <p>2.2 Note aspects of objects that need repair or attention and take action within scope of own job role or refer to relevant personnel as required</p> <p>2.3 Communicate specific cultural requirements to colleagues</p>
3. Prepare Aboriginal or Torres Strait Islander cultural material for exhibition	<p>3.1 Consult with custodians to determine culturally appropriate approaches to promote, exhibit and display material, and <b><i>limitations</i></b> to mode of exhibit</p> <p>3.2 Develop culturally appropriate <b><i>interpretive approaches</i></b></p> <p>3.3 Develop <b><i>exhibition support materials</i></b> that take account of</p>

	cultural protocols in consultation with custodians 3.4 Communicate <i>requirements for exhibition</i> of cultural material to colleagues
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## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- communication and teamwork skills to:
  - liaise and consult with community members and custodians in a culturally sensitive manner
  - share information with colleagues
- cultural sensitivity skills to be:
  - sensitive to cultural issues
  - respectful of different cultural practices
- initiative and enterprise skills to develop:
  - culturally appropriate ways of displaying materials
  - interpretive approaches that showcase objects in a culturally respectful way
- literacy skills to:
  - describe cultural material
  - develop agreements
  - complete organisational records
- planning and organising skills to undertake activities in preparation for exhibitions in a logical and efficient manner
- problem-solving skills to determine traditional ownership
- research skills to source material for the collection
- technical skills to move, store and maintain cultural material.

### Required knowledge

- scope of Aboriginal or Torres Strait Islander cultural material appropriate for exhibition or display
- appropriate keeping places for cultural material not suitable/forbidden for exhibition or display
- issues and protocols relating to the return of cultural material to Aboriginal or Torres Strait Islander communities
- copyright, moral rights and intellectual property issues and legislation with particular reference to Aboriginal or Torres Strait Islander cultural material

- sources of support for the development of Aboriginal and Torres Strait Islander collections
- current conventions of collection management, including appropriate consultations and respect for traditional custodianship when working with Aboriginal or Torres Strait Islander cultural material, including non-western concepts of collecting
- cultural protocols and appropriate consultations for the identification, movement, storage, maintenance and exhibition of cultural material in the relevant community context
- current industry policy on the acquisition and management of Aboriginal and Torres Strait Islander cultural material.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• apply knowledge of cultural protocols and practices when working with Aboriginal or Torres Strait Islander cultural material</li> <li>• consult with Aboriginal or Torres Strait Islander people about the display of cultural material</li> <li>• observe cultural protocols when moving, storing, displaying, maintaining and returning cultural material.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• involvement in the assessment process of persons approved of by Elders, appropriate persons or custodians of the relevant Aboriginal or Torres Strait Islander community</li> <li>• access to: <ul style="list-style-type: none"> <li>• Aboriginal or Torres Strait Islander cultural material or information on material when access is not available</li> <li>• information about cultural protocols.</li> </ul> </li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance</li> <li>• evaluation of a project undertaken by the candidate to develop and exhibit a collection within an Aboriginal or Torres Strait</li> </ul>

	<p>Islander community</p> <ul style="list-style-type: none"> <li>• evaluation of a project undertaken by the candidate to research and document the cultural significance of particular cultural materials</li> <li>• verbal or written questioning to assess knowledge of appropriate protocols and consultation processes.</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<b>Guidance information for assessment</b>	<p>Any organisation or individual planning to train or assess this unit would be expected to work in a culturally appropriate manner with the appropriate Aboriginal or Torres Strait Islander community, for example through the establishment of a local Aboriginal or Torres Strait Islander reference group. In particular, it is vital to ensure respectful integration of local cultural knowledge or protocols that will inform the implementation of the unit.</p> <p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• CULEVP402A Design and develop interpretive displays.</li> </ul>

## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<p><b><i>Cultural material</i></b> is defined as objects, collections, artworks, specimens, structures or sites, and includes:</p>	<ul style="list-style-type: none"> <li>• archaeological material</li> <li>• books and manuscripts</li> <li>• cultural sites and buildings</li> <li>• ethnographic material</li> <li>• film and audiovisual material</li> <li>• flora and fauna</li> <li>• furniture</li> <li>• photographs</li> <li>• technological and industry items</li> </ul>
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	<ul style="list-style-type: none"> <li>• textiles</li> <li>• works on paper and canvas.</li> </ul>
<b><i>Museum collections</i></b> may relate to:	<ul style="list-style-type: none"> <li>• art</li> <li>• aspects of the natural environment</li> <li>• ceremony, such as: <ul style="list-style-type: none"> <li>• dance</li> <li>• music</li> </ul> </li> <li>• cultural heritage</li> <li>• heritage resources</li> <li>• history</li> <li>• living styles</li> <li>• materials with a cultural or spiritual significance</li> <li>• plants and animals</li> <li>• science.</li> </ul>
<b><i>Cultural protocols</i></b> may relate to:	<ul style="list-style-type: none"> <li>• acknowledging participation and ownership</li> <li>• awareness of occasions when consultation is required</li> <li>• communicating about cultural material</li> <li>• displaying cultural material</li> <li>• handling cultural material</li> <li>• identifying appropriate people to be consulted</li> <li>• storing cultural material</li> <li>• ways in which consultations should be conducted.</li> </ul>
<b><i>Issues and protocols</i></b> may relate to:	<ul style="list-style-type: none"> <li>• how and where to return cultural material</li> <li>• identification and representation of recipients and custodians</li> <li>• local consultations and agreements on return of material</li> <li>• negotiation with current holders of material</li> <li>• return of human skeletal remains where a specific set of cultural consultations and requirements must be observed.</li> </ul>
<b><i>Cultural requirements</i></b> may relate to:	<ul style="list-style-type: none"> <li>• access to material and associated research</li> <li>• storage of material</li> <li>• process for transporting the material</li> <li>• use of equipment or tools</li> <li>• who can describe or handle material</li> <li>• who can view material.</li> </ul>
<b><i>Limitations</i></b> may relate to:	<ul style="list-style-type: none"> <li>• access issues, such as: <ul style="list-style-type: none"> <li>• men's business</li> <li>• sacred material</li> <li>• secret material</li> <li>• women's business</li> </ul> </li> <li>• consultation with and involvement of appropriate Aboriginal and Torres Strait Islander community members</li> </ul>

	<ul style="list-style-type: none"> <li>• descriptive or explanatory writing</li> <li>• fragility of material</li> <li>• identification process</li> <li>• interpretation method.</li> </ul>
<i>Interpretive approaches</i> may relate to:	<ul style="list-style-type: none"> <li>• Aboriginal or Torres Strait Islander community wishes for the way material should be interpreted</li> <li>• consultation with and involvement of appropriate Aboriginal or Torres Strait Islander community members</li> <li>• knowledge of existing collections.</li> </ul>
<i>Exhibition support materials</i> may include:	<ul style="list-style-type: none"> <li>• advertising materials</li> <li>• approvals and permissions</li> <li>• interpretive documents</li> <li>• merchandising</li> <li>• online information</li> <li>• photographs</li> <li>• publications.</li> </ul>
<i>Requirements for exhibition</i> may relate to:	<ul style="list-style-type: none"> <li>• access restrictions</li> <li>• environmental requirements</li> <li>• placement of items within collections</li> <li>• restrictions on those able to interpret material for visitors</li> <li>• special handling requirements and restrictions.</li> </ul>

## Unit Sector(s)

Cultural services - Aboriginal and Torres Strait Islander cultural heritage

## CULCNM303A Move and store collection material

### Modification History

Release	Comments
Release 1	This unit of competency first released with <i>CUL11 Library, Information and Cultural Services Training Package version 1.0</i>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to handle, pack and unpack collection material for movement and storage.

### Application of the Unit

This unit applies to individuals who require knowledge of techniques and materials that may be used to handle, move and store different types of collection material.

Work would generally be undertaken under supervision, within established guidelines.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills</i>



Element	Performance Criteria
<i>unit of competency.</i>	<i>and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Determine movement and storage requirements	<p>1.1 Assess <b>documentation</b> to determine scope of work required for <b>movement and storage of collection material</b></p> <p>1.2 Identify and confirm <b>organisational procedures and guidelines</b> and <b>specific requirements</b> with <b>relevant personnel</b></p> <p>1.3 Assess collections to estimate projected current and future storage requirements with relevant personnel</p> <p>1.4 Seek specialist advice or assistance where required</p>
2. Pack and unpack collection material	<p>2.1 Select appropriate <b>packing materials, tools and equipment</b> and use safely</p> <p>2.2 Handle collection material safely and in a manner that maintains integrity of collection material</p> <p>2.3 Observe conservation and sustainability principles in use of packaging materials</p> <p>2.4 Label packaging to facilitate easy identification by others during <b>transportation</b> and within storage facilities</p> <p>2.5 Recycle and dispose of waste responsibly</p>
3. Move collection material	<p>3.1 Select appropriate handling and moving equipment, and use safely</p> <p>3.2 Handle collection material in a manner that protects individual items and assists efficient loading and unloading processes</p> <p>3.3 Identify hazardous items and load them in a manner that minimises health and safety risk</p> <p>3.4 Inspect load prior to transportation to ensure that items are loaded and secured appropriately, and make adjustments as required</p> <p>3.5 Prepare <b>transportation documentation</b></p>
4. Arrange collection material and update records	<p>4.1 Install, position or store collection material as required</p> <p>4.2 Clear and clean work areas according to organisational procedures</p> <p>4.3 Refer problems to relevant personnel as required</p>

	4.4 Update existing movement and storage <i>records</i> and prepare new records as required 4.5 Store records according to organisational policies and procedures
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## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- communication skills to:
  - make arrangements with stakeholders, transport personnel and customs agents
  - refer problems to relevant personnel
- learning skills to seek expert advice
- literacy skills to:
  - read and complete documentation
  - read and interpret procedures and specific requirements for movement and storage
- numeracy skills to:
  - count items
  - estimate storage requirements
  - calculate and check costs
  - take basic measurements
- planning and organising skills to:
  - pack and unpack collection material in a logical order
  - select appropriate transportation and packing methods and storage techniques to maintain the integrity of collection material
- safety awareness skills to:
  - handle collection material safely
  - use transport equipment and packaging materials safely
  - minimise hazards
- self-management skills to:
  - prioritise work tasks and meet deadlines
  - follow workplace procedures.

### Required knowledge

- basic conservation issues to be considered when moving or storing collection material
- cultural protocols to be observed for different types of material, including those for Aboriginal or Torres Strait Islander material

- differences in approach for short and long-term movement and storage
- organisational procedures and guidelines relating to:
  - storage and transport documentation and records
  - use of materials, tools and equipment, including labelling
  - material handling and work health and safety (WHS) procedures and requirements
- packing and storage techniques for different types of collection material
- record-keeping procedures for collection movement and storage
- safe work and manual-handling procedures
- security issues to be considered when moving or storing collection material
- sources of specialist advice for moving or storing collection material.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• handle, move and store collection items using appropriate tools, equipment, techniques and organisational procedures</li> <li>• use safe work practices.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> <li>• a collection</li> <li>• materials, tools and equipment for packing, moving and storing collection items</li> <li>• organisational procedures</li> <li>• specialist advisers.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• portfolios of evidence and third-party workplace reports of on-the-job performance</li> <li>• direct observation of the candidate handling, packing and unpacking collection material</li> <li>• inspection of items packed, unpacked or stored by the candidate</li> <li>• inspection of documentation and records completed by the candidate</li> </ul>

	<ul style="list-style-type: none"> <li>verbal or written questioning to assess knowledge of handling and packing techniques for different types of collection material and safety requirements.</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>CULCNM201A Monitor collections for changes in condition.</li> </ul>

## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<b><i>Documentation</i></b> may include:	<ul style="list-style-type: none"> <li>collection records</li> <li>facilities reports</li> <li>lending or borrowing documentation</li> <li>storage details</li> <li>transportation documentation</li> <li>work instructions.</li> </ul>
<b><i>Movement and storage</i></b> may be:	<ul style="list-style-type: none"> <li>externally</li> <li>internally (within organisation or same building)</li> <li>short and long distance</li> <li>short and long-term storage.</li> </ul>
<b><i>Collection material</i></b> is defined as objects, collections, artworks, specimens, structures or sites, and includes:	<ul style="list-style-type: none"> <li>archaeological material</li> <li>books and manuscripts</li> <li>digital media</li> <li>ethnographic material</li> <li>film and audiovisual material</li> <li>flora and fauna</li> <li>furniture</li> <li>photographs</li> <li>technological or industry items</li> </ul>

	<ul style="list-style-type: none"> <li>• textiles</li> <li>• works on paper and canvas.</li> </ul>
<b>Organisational procedures and guidelines</b> may relate to:	<ul style="list-style-type: none"> <li>• cleaning</li> <li>• conservation</li> <li>• environment</li> <li>• handling methods</li> <li>• national and international standards for moving and storing materials</li> <li>• purchasing</li> <li>• security</li> <li>• storage arrangements</li> <li>• storage of packaging materials</li> <li>• waste disposal.</li> </ul>
<b>Specific requirements</b> may relate to:	<ul style="list-style-type: none"> <li>• additional protection</li> <li>• cultural protocols, including Indigenous protocols</li> <li>• de-acclimatisation periods for sensitive items</li> <li>• environmentally controlled packaging</li> <li>• object moving equipment</li> <li>• object support systems for moving or transfer</li> <li>• preventive pest management processes</li> <li>• use or non-use of certain items.</li> </ul>
<b>Relevant personnel</b> may include:	<ul style="list-style-type: none"> <li>• couriers</li> <li>• destination personnel</li> <li>• owners of collection material</li> <li>• specialist advisers</li> <li>• store staff</li> <li>• transportation personnel.</li> </ul>
<b>Packaging materials, tools and equipment</b> may include:	<ul style="list-style-type: none"> <li>• acid-free interleaving or wrapping</li> <li>• CD and DVD cases</li> <li>• containers</li> <li>• coverings</li> <li>• cushioning material</li> <li>• enclosures</li> <li>• folders</li> <li>• gloves</li> <li>• negative sleeves</li> <li>• packing/cotton tape and dispenser</li> <li>• protective enclosures, such as: <ul style="list-style-type: none"> <li>• boxes</li> <li>• canisters</li> <li>• crates</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• tubing</li> <li>• protective wrapping, such as: <ul style="list-style-type: none"> <li>• bubble wrap</li> <li>• cardboard</li> <li>• foam packaging</li> </ul> </li> <li>• scissors</li> <li>• trolleys</li> <li>• trucks</li> <li>• tools, such as: <ul style="list-style-type: none"> <li>• hammers</li> <li>• screw drivers</li> <li>• utility knives.</li> </ul> </li> </ul>
<i>Transportation</i> may be by:	<ul style="list-style-type: none"> <li>• air</li> <li>• box</li> <li>• bus</li> <li>• hand</li> <li>• rail</li> <li>• road</li> <li>• sea</li> <li>• trolley.</li> </ul>
<i>Transportation documentation</i> may include:	<ul style="list-style-type: none"> <li>• cart notes</li> <li>• pro-forma.</li> </ul>
<i>Records</i> may be:	<ul style="list-style-type: none"> <li>• asset register</li> <li>• bar coding</li> <li>• digital documentation</li> <li>• reports.</li> </ul>

## Unit Sector(s)

Cultural services - Collection management

## CULCNM503A Manage the development of collections

### Modification History

Release	Comments
Release 1	This unit of competency first released with <i>CUL11 Library, Information and Cultural Services Training Package version 1.0</i>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to determine collection needs and to accession and deaccession collection material.

### Application of the Unit

This unit applies to individuals who apply judgement and specialised knowledge in relation to the assessment of collection needs for accessioning and deaccessioning collection material, galleries and collecting bodies.

In larger organisations, specialised curatorial staff may undertake this role. In smaller organisations, the role may be undertaken by individuals with broader management responsibilities, by committees and boards of management, or combinations of different personnel.

Work is undertaken autonomously but in consultation with stakeholders.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Determine collection needs	<p>1.1 Review <b><i>collection material</i></b> against <b><i>organisational objectives</i></b> and <b><i>collection requirements</i></b></p> <p>1.2 Determine priorities in consultation with <b><i>key stakeholders</i></b></p>
2. Assess collection material to be accessioned	<p>2.1 Use <b><i>options</i></b> to identify material that could be accessioned to meet collection needs</p> <p>2.2 Assess <b><i>key internal and external factors</i></b> that impact on options</p> <p>2.3 Obtain expert advice on material and its relevance to collections</p> <p>2.4 Assess potential material for significance and relevance to collections according to organisational <b><i>collection management policies</i></b></p> <p>2.5 Examine records to establish provenance and confirm significance</p> <p>2.6 Identify <b><i>resources</i></b> required for accessioning collection material</p> <p>2.7 Develop recommendations for accessioning collection material according to collection needs</p>
3. Coordinate accessioning of collection material	<p>3.1 Seek approval for accessioning collection material</p> <p>3.2 Establish clear conditions for accessioning collection material according to <b><i>organisational procedures and guidelines</i></b></p> <p>3.3 Organise appropriate resources to accession collection material according to approval and conditions</p> <p>3.4 Comply with legal, ethical and financial requirements and <b><i>cultural protocols</i></b> in the accession process</p> <p>3.5 Negotiate <b><i>terms</i></b> and organise transfer of rights according to</p>



	<p>organisational procedures</p> <p>3.6 Document agreements and terms according to organisational procedures and guidelines</p>
4. Coordinate deaccessioning of collection material	<p>4.1 Identify material to be deaccessioned from collections</p> <p>4.2 Consult with experts on the material to determine the impact of deaccessioning on the collection</p> <p>4.3 Select options to deaccession material</p> <p>4.4 Develop and implement recommendations for deaccessioning collection material according to organisational policies and strategies</p>

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- analytical skills to interpret and link strategies to collection needs and priorities
- communication skills to:
  - consult with a broad range of internal and external stakeholders
  - negotiate terms and conditions for accessioning and deaccessioning collection material
  - seek and interpret expert advice
- literacy skills to:
  - develop written agreements
  - interpret procedures
  - review and apply terms and conditions
- numeracy skills to:
  - assess and manage costs
  - interpret and apply budgets
- planning and organising skills to coordinate interrelated aspects of accessioning and deaccessioning collection material
- problem-solving skills to anticipate and mitigate problems and risks associated with developing collections
- self-management skills to:
  - prioritise work tasks and meet deadlines
  - follow workplace procedures and guidelines
- teamwork skills to work collaboratively with others in developing collections
- technical skills to:
  - use record-keeping systems

- undertake research related to the development of collections.

### Required knowledge

- organisational procedures and guidelines regarding managing specific items and whole collections
- subject matter expertise, including curatorial and conservation
- sources for accessioning and deaccessioning options
- information regarding comparable collections and their importance
- legal, ethical and financial requirements for accessioning and deaccessioning
- cultural protocols that impact on accessioning and deaccessioning of cultural material, including those for Aboriginal or Torres Strait Islander material
- protocols in relation to collection management
- security issues associated with collection material.

### Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• make and justify decisions regarding accessioning and deaccessioning collection material to meet collection needs</li> <li>• apply organisational procedures and guidelines in managing the development of collections</li> <li>• negotiate and document processes and agreements in relation to collection material.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• access to: <ul style="list-style-type: none"> <li>• an established or proposed collection as the basis of decision making</li> <li>• organisational objectives, procedures and guidelines</li> </ul> </li> <li>• engagement with others to reflect the communication and negotiation aspects of the unit.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of</li> </ul>

	<p>evidence and third-party workplace reports of on-the-job performance</p> <ul style="list-style-type: none"> <li>• evaluation of candidate’s ability to develop recommendations for the development of collections</li> <li>• evaluation of records and documentation</li> <li>• verbal or written questioning to assess knowledge of organisational procedures and policies for the development of collections</li> <li>• case study on addressing a collection need.</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a second language, clients with disabilities, remote library users, etc.).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• CULCNM502A Manage lending and borrowing processes for collections.</li> </ul>

## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<p><b><i>Collection material</i></b> is defined as objects, collections, artworks, specimens, structures or sites, and includes:</p>	<ul style="list-style-type: none"> <li>• archaeological material</li> <li>• books and manuscripts</li> <li>• cultural sites and buildings</li> <li>• ethnographic material</li> <li>• film and audiovisual material</li> <li>• flora and fauna</li> <li>• furniture</li> <li>• photographs</li> <li>• technological and industry items</li> <li>• textiles</li> <li>• works on paper and canvas.</li> </ul>
<p><b><i>Organisational</i></b></p>	<ul style="list-style-type: none"> <li>• comprehensiveness of collections</li> </ul>

<i>objectives</i> may relate to:	<ul style="list-style-type: none"> <li>• future direction of the organisation</li> <li>• marketing initiatives</li> <li>• relationship between collection and site</li> <li>• resource constraints</li> <li>• special exhibition needs</li> <li>• strategic plan</li> <li>• visitor needs and trends.</li> </ul>
<i>Collection requirements</i> may relate to:	<ul style="list-style-type: none"> <li>• addressing cultural or moral issues</li> <li>• complying with a will, statute or other legal requirement</li> <li>• improving or rationalising collections</li> <li>• meeting the request of an organisation or person</li> <li>• mounting an exhibition</li> <li>• rationalising loans.</li> </ul>
<i>Key stakeholders</i> may include:	<ul style="list-style-type: none"> <li>• boards and committees</li> <li>• commercial partners</li> <li>• cultural groups</li> <li>• local community members</li> <li>• other cultural service organisations</li> <li>• other management</li> <li>• subject matter experts</li> <li>• visitors.</li> </ul>
<i>Options</i> may take place between or by means of:	<ul style="list-style-type: none"> <li>• auction</li> <li>• bequest</li> <li>• different sections of the same institution</li> <li>• exchange</li> <li>• gift</li> <li>• institution and commercial enterprises</li> <li>• institution and individuals or groups</li> <li>• loan</li> <li>• purchase</li> <li>• tender</li> <li>• transfer</li> <li>• two institutions.</li> </ul>
<i>Key internal and external factors</i> may relate to:	<ul style="list-style-type: none"> <li>• availability of expertise</li> <li>• competitive environment</li> <li>• economic considerations</li> <li>• marketing considerations</li> <li>• organisational priorities</li> <li>• resource constraints</li> <li>• social or political issues.</li> </ul>
<i>Collection management</i>	<ul style="list-style-type: none"> <li>• accession policy</li> </ul>

<i>policies</i> may include:	<ul style="list-style-type: none"> <li>• collection policy</li> <li>• deaccession policy</li> <li>• guidelines for review of policies, including who is authorised to review them and the scope and frequency of reviews</li> <li>• limit of responsibility.</li> </ul>
<i>Resources</i> may include:	<ul style="list-style-type: none"> <li>• conservation experts</li> <li>• construction of new displays or other infrastructure</li> <li>• finance</li> <li>• financial advice</li> <li>• funding and grants</li> <li>• legal expertise</li> <li>• replacement objects</li> <li>• space</li> <li>• special equipment and machinery</li> <li>• storage materials and facilities</li> <li>• subject matter experts</li> <li>• transport</li> <li>• valuation advice.</li> </ul>
<i>Organisational procedures and guidelines</i> may relate to:	<ul style="list-style-type: none"> <li>• acquisitions</li> <li>• borrowings</li> <li>• disposal</li> <li>• handling collection materials</li> <li>• loans</li> <li>• recordkeeping</li> <li>• risk assessment.</li> </ul>
<i>Cultural protocols</i> may relate to:	<ul style="list-style-type: none"> <li>• access</li> <li>• display</li> <li>• financial transactions</li> <li>• obtaining permission</li> <li>• special handling of items</li> <li>• storage</li> <li>• timing of acquisition or disposal.</li> </ul>
<i>Terms</i> may relate to:	<ul style="list-style-type: none"> <li>• care</li> <li>• copyright</li> <li>• cost</li> <li>• cultural considerations</li> <li>• display</li> <li>• duration</li> <li>• environmental considerations</li> <li>• ethical considerations</li> <li>• insurance</li> </ul>

	<ul style="list-style-type: none"><li>• location</li><li>• recordkeeping</li><li>• security</li><li>• usage.</li></ul>
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## Unit Sector(s)

Cultural services - Collection management

## CULCNM602A Develop and monitor procedures for the movement and storage of collection material

### Modification History

Release	Comments
Release 1	This unit of competency first released with <i>CUL11 Library, Information and Cultural Services Training Package version 1.0</i>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop and monitor procedures for the movement and storage of collection material.

### Application of the Unit

This unit applies to individuals responsible for the movement and storage of collection material. Depending on the size of the organisation, this role may be undertaken by collection management personnel, or by individuals with broader management responsibilities.

Work is undertaken autonomously within organisational guidelines, often as the leader of a team.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Element	Performance Criteria
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Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Establish procedures for handling, moving and storing collection material	1.1 Assess <b>key information</b> about <b>collection material</b> 1.2 Assess <b>internal and external factors</b> that impact on <b>moving and storing</b> collection material 1.3 Integrate current industry best practice into the development of procedures 1.4 Locate and consult with stakeholders on complex matters of movement and storage 1.5 Identify and address legal, insurance and other administrative requirements impacting on handling, moving and storing collection material 1.6 Identify and assess work health and safety issues and legislative requirements 1.7 Document <b>procedures</b> for moving and storing collection material
2. Manage operations	2.1 Organise and monitor movement and storage arrangements according to agreed procedures and work requirements 2.2 Check movement and storage of collection material against schedules and allocated budgets and take action to address problems 2.3 Evaluate <b>information records</b> to ensure completeness, currency, accuracy and compliance with legal, ethical and cultural constraints 2.4 Make adjustments and enhancements to <b>record-keeping formats</b> and systems based on ongoing review of records and feedback from users
3. Maintain procedures for moving and storing collection material	3.1 Consult with colleagues to obtain feedback on movement and storage procedures 3.2 Update procedures based on feedback and industry practice



## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- communication and teamwork skills to:
  - articulate concerns to colleagues
  - consult with work colleagues and other stakeholders on requirements and constraints for moving and storing collection material
- initiative and enterprise skills to anticipate and address problems that might arise in the context of managing the movement and storage of collection material
- learning skills to improve procedures based on continuous review of their effectiveness
- literacy skills to:
  - develop procedures
  - interpret a wide range of information
  - present detailed procedures and systems clearly and concisely
- numeracy skills to:
  - interpret and use budgets
  - work with numerical record-keeping systems
- planning and organising skills to:
  - develop logical procedures
  - establish and implement a range of interrelated processes
- research skills to:
  - identify legal, insurance and safety requirements
  - locate industry best practice
- self-management skills to:
  - follow workplace procedures and systems
  - meet deadlines
  - prioritise tasks for self and others.

### Required knowledge

- copyright, moral rights and intellectual property legislation and issues that impact on moving and storing collection material
- cultural protocols that affect the movement and storage of material, including those for Aboriginal or Torres Strait Islander material
- legal and administrative requirements for moving and storing collection material
- procedures and practices for the protection, transportation, storage and security of collection material

- safety legislation and requirements that impact on moving and storing collection material
- technical and conservation issues associated with moving and storing collection material.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• develop procedures for moving and storing collection material</li> <li>• implement and monitor procedures for moving and storing collection material</li> <li>• integrate into procedures internal, external and technical issues that impact on the movement and storage of collection material.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• involvement of and interaction with others to reflect consultation and team leadership</li> <li>• assessment over a period of time to reflect the ongoing implementation and monitoring aspects of the unit</li> <li>• access to: <ul style="list-style-type: none"> <li>• relevant policies and procedures manuals</li> <li>• a collection for which procedures can be planned.</li> </ul> </li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance</li> <li>• evaluation of procedures developed by the candidate and the processes used</li> <li>• evaluation of records</li> <li>• verbal or written questioning to assess knowledge of technical and other considerations in the movement and storage of cultural material.</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular client groups (consider the requirements of different age groups, clients with English as a</p>

	second language, clients with disabilities, remote library users, etc.).
<b>Guidance information for assessment</b>	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: <ul style="list-style-type: none"> <li>• CULCNM503A Manage the development of collections.</li> </ul>

## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<b>Key information</b> may include:	<ul style="list-style-type: none"> <li>• climate</li> <li>• condition of material</li> <li>• cultural considerations</li> <li>• dimensions</li> <li>• intended use</li> <li>• length and mode of journey</li> <li>• nature of material</li> <li>• ownership details</li> <li>• planned duration of storage</li> <li>• propensity for pest infestation</li> <li>• type of storage facility</li> <li>• weight.</li> </ul>
<b>Collection material</b> is defined as objects, collections, artworks, specimens, structures or sites, and includes:	<ul style="list-style-type: none"> <li>• archaeological material</li> <li>• books and manuscripts</li> <li>• ethnographic material</li> <li>• film and audiovisual material</li> <li>• flora and fauna</li> <li>• furniture</li> <li>• photographs</li> <li>• technological and industry items</li> <li>• textiles</li> <li>• works on paper and canvas.</li> </ul>
<b>Internal and external factors</b> may include:	<ul style="list-style-type: none"> <li>• availability of specialist expertise</li> <li>• cultural considerations</li> <li>• future programs and events</li> </ul>

	<ul style="list-style-type: none"> <li>• intentions and programs of other museums</li> <li>• legal requirements</li> <li>• organisational priorities</li> <li>• resource constraints</li> <li>• space constraints</li> <li>• visitor trends.</li> </ul>
<b><i>Moving and storing</i></b> may:	<ul style="list-style-type: none"> <li>• involve: <ul style="list-style-type: none"> <li>• short or long-term storage</li> <li>• transferring material into an institution from an outside location</li> <li>• transferring objects from within an institution to an outside location</li> <li>• various forms of transport</li> </ul> </li> <li>• take place within a museum.</li> </ul>
<b><i>Procedures</i></b> may relate to:	<ul style="list-style-type: none"> <li>• contingencies for potential hazards</li> <li>• cultural protocols</li> <li>• legal and financial requirements</li> <li>• location and placement of cultural material at destination</li> <li>• physical, environmental and security constraints of destination</li> <li>• preferred suppliers</li> <li>• protection and security of items</li> <li>• protective materials and equipment</li> <li>• record-keeping requirements</li> <li>• safe health and manual-handling procedures</li> <li>• suitable transfer methods</li> <li>• transportation methods</li> <li>• transportation routes.</li> </ul>
<b><i>Information records</i></b> may include:	<ul style="list-style-type: none"> <li>• accession number</li> <li>• accessories</li> <li>• associated collection items</li> <li>• condition</li> <li>• dimensions</li> <li>• exhibition and storage history</li> <li>• history and provenance</li> <li>• insurance details</li> <li>• loan information</li> <li>• location</li> <li>• photographs</li> <li>• images</li> <li>• physical description</li> <li>• previous conservation reports</li> </ul>

	<ul style="list-style-type: none"><li>• significance, such as:<ul style="list-style-type: none"><li>• cultural</li><li>• historical</li><li>• scientific</li><li>• social</li><li>• technical</li></ul></li><li>• source, such as:<ul style="list-style-type: none"><li>• collector</li><li>• dealer</li><li>• donor</li><li>• maker</li><li>• original location</li></ul></li><li>• special handling requirements</li><li>• weight.</li></ul>
<p><b><i>Record-keeping formats</i></b> may include:</p>	<ul style="list-style-type: none"><li>• computer-based</li><li>• film and video</li><li>• paper documents</li><li>• photographic</li><li>• sound recordings.</li></ul>

## **Unit Sector(s)**

Cultural services - Collection management

## CULMS002B Research and evaluate Aboriginal or Torres Strait Islander cultural material

### Modification History

Not applicable.

### Unit Descriptor

#### Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to research the context and interpretation of Aboriginal or Torres Strait cultural material. As such, the unit focuses on the skills to analyse cultural material, including current collections and the impact of post-colonial history. These skills then form the basis for appropriate treatment and interpretation of cultural material. The unit includes a focus on appropriate consultation with the traditional custodians of cultural material.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Application of the Unit

#### Application of the unit

This unit has particular application to Aboriginal or Torres Strait Islander peoples.

The cultural knowledge necessary to achieve competency in this unit may only be accessible to Aboriginal or Torres Strait Islander peoples. This unit also recognises that there is no single Aboriginal or Torres Strait Islander culture.

The unit deals with complex and interrelated elements of Aboriginal or Torres Strait Islander cultures, which are the cultural and intellectual properties of specific communities across the continent and islands of Australia. These may only be interpreted by appropriate persons, for example those recognised by the local Aboriginal or Torres Strait Islander community as an Elder or custodian of local cultural knowledge.

Any organisation or individual planning to train or assess this unit would be expected to work in a culturally appropriate manner with the appropriate Aboriginal or

Torres Strait Islander community, for example through the establishment of a local Aboriginal or Torres Strait Islander reference group. In particular, it is vital to ensure respectful integration of any local cultural knowledge or protocols that will inform the implementation of the unit.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Prerequisite units Nil

## Employability Skills Information

**Employability Skills** The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary for the qualification in which this unit of competency is packaged, will assist in identifying Employability Skills requirements.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

**1 Research the context** 1.1 Identify *relevant sources of information* on *cultural*

ELEMENT	PERFORMANCE CRITERIA
of Aboriginal or Torres Strait Islander cultural material	<p><i>material</i> and the <i>context</i> for its interpretation</p> <p>1.2 Use <i>formal and informal research techniques</i> in a culturally appropriate manner to access <i>information</i></p> <p>1.3 Critically evaluate the validity of the range of interpretations of cultural material and the cultural relevance to its traditional custodians</p>
2 Assess post-colonial interpretation of Aboriginal or Torres Strait Islander cultural material	<p>2.1 Critically evaluate the ways in which different aspects of post-colonisation history have affected the interpretation of Aboriginal or Torres Strait Islander cultural material</p> <p>2.2 Critically evaluate collections in relation to the <i>context</i> in which materials were collected and interpreted and the respect shown for <i>cultural protocols</i> in sourcing, handling and exhibiting cultural material</p> <p>2.3 Assess ways in which interpretations by those other than traditional custodians may have impacted on communities and/or individuals</p>
3 Develop approaches to the interpretation of Aboriginal or Torres Strait Islander cultural material	<p>3.1 Identify and explore potential <i>new and appropriate approaches to the interpretation</i> of <i>cultural material</i> based on knowledge and understanding of consultation with traditional custodians and respect for their wishes</p> <p>3.2 Integrate the concept and practice of community consultation within interpretive approaches</p> <p>3.3 Develop substantiated positions for interpretive approaches</p> <p>3.4 Enhance interpretative approaches <i>by challenging and adapting</i> own ideas</p>
4 Communicate new approaches to stakeholders	<p>4.1 Identify <i>key stakeholders</i> in the interpretation and exhibition of cultural material, including traditional custodians</p>



## ELEMENT

## PERFORMANCE CRITERIA

- 4.2 Consult and negotiate ways with stakeholders in culturally appropriate ways to interpret Aboriginal or Torres Strait *Islander cultural material* in accordance with wishes of traditional custodians

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- research and critical-thinking skills to analyse, interpret and present complex and varied references for application to cultural material
- literacy skills to critically evaluate and communicate ideas and concepts surrounding cultural material.

#### Required knowledge

- broad range of sources of information about post-colonial history, theory and cultural practice relating to Aboriginal or Torres Strait Islander cultural material
- key aspects of post-colonial history and its impact on the collection and interpretation of Aboriginal or Torres Strait Islander cultural material
- copyright, moral rights and intellectual property issues and legislation with particular reference to Aboriginal or Torres Strait Islander cultural material
- cultural protocols and appropriate consultations for the movement, storage and maintenance of cultural material in the relevant context/type of display
- cultural protocols for the exhibition of cultural material in the relevant community context.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction

## EVIDENCE GUIDE

with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- sound knowledge of information sources for Aboriginal or Torres Strait Islander cultural material
- knowledge of cultural protocols and practices as well as appropriate consultative processes in seeking information
- application of research and analytical skills to evaluate Aboriginal or Torres Strait Islander cultural material and its context.

### **Context of and specific resources for assessment**

Assessment must ensure:

- involvement in the assessment process of persons approved of by Elders, appropriate persons or custodians of the relevant community
- access to sources of information on Aboriginal or Torres Strait Islander cultural material.

### **Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- project to research a specific collection of Aboriginal or Torres Strait Islander cultural material
- project to research and document the cultural significance of particular objects
- case studies to assess ability to research and use different types of information in the analysis of cultural material
- oral or written questioning to assess knowledge of cultural material.

Holistic assessment with other units relevant to the industry sector, workplace and job role is

## EVIDENCE GUIDE

recommended, for example:

- CULMS001B Work with Aboriginal or Torres Strait Islander cultural material
- other collection and exhibition management units.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Relevant sources of information*** may include:

- community members (family groups, cultural educators, Elders)
- libraries
- museums
- archives
- cultural centres
- community organisations
- Indigenous units within local, state or national bodies

***Cultural material*** may be:

- part of an existing collection (public or private)
- not yet part of a collection
- held by the local Aboriginal or Torres Strait Islander community or broader community
- held by an organisation external to the community
- held by individuals
- in the care of traditional custodians

The ***context*** of cultural material may relate to:

- pre-colonisation cultural practices
- post-colonisation collection and interpretive practices
- cultural/spiritual significance of cultural material to community
- the way material was acquired and historical view

## RANGE STATEMENT

- of Indigenous collections
  - treatment of collection materials
  - dispersal of skeletal remains and cultural materials within and outside of Australia
  - men's or women's business
  - secret or non-secret business
  - rarity
  - locality
- Formal and informal research techniques* may include:
- discussion
  - note taking, listing
  - interviews
  - questionnaires
  - critical discourse
  - analysis
  - reflection
  - comparing information
  - summation
  - judgement
  - observation
- Information* may relate to:
- philosophy
  - Indigenous world views
  - effects of colonisation on Indigenous lives and cultures
  - dreaming stories
  - world histories
  - cultural issues
  - spiritual beliefs
  - aesthetics
  - politics
  - gender and identity issues
  - land and place - traditional custodians of Country
  - signs and symbols in cultural practice
  - evaluative criticism in relation to interpretations made by post-colonial interpreters
  - oral histories

## RANGE STATEMENT

*Cultural protocols* may relate to:

- acquisition of material
- transportation
- storage
- written documentation on cultural materials
- exhibition
- geographic location
- degree of consultation with traditional custodians
- respect for the wishes of traditional custodians

*New and appropriate approaches to interpretation* may relate to:

- local Aboriginal or Torres Strait Islander community involvement
- different perceptions of both pre and post-colonial history
- interpretation in the context of post-colonial effects and behaviours
- local history
- oral histories
- appropriate consultation with traditional custodians
- respect for the wishes of traditional custodians
- industry/sector debate

*Challenging and adapting* ideas may include:

- comparing
- contrasting
- reflecting
- critiquing
- judging
- considering merit
- discussing and debating

*Key stakeholders* may include:

- Indigenous communities, including traditional custodians
- current holders of collections (private and public)
- cultural centres
- Indigenous units within local, state and national bodies
- museum/heritage organisations

## **Unit Sector(s)**

Not applicable.

## **Competency field**

**Competency field**            Aboriginal or Torres Strait Islander Museum Practice

## CULMS010B Contribute to the preservation of cultural material

### Modification History

Not applicable.

### Unit Descriptor

#### Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to contribute to the preservation of cultural material through a sound knowledge of conservation principles, practices and ethics and the application of basic preservation activities.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Application of the Unit

#### Application of the unit

This unit applies to individuals who have significant knowledge of preservation issues and may be involved in the application of basic preservation techniques with the involvement of a professional conservator.

The content of this unit relates to work that has a significant impact on Australia's cultural heritage and care must be taken to ensure appropriate implementation of the unit.

Any individual or organisation planning to undertake training and/or assessment of this unit must therefore consult with an appropriately qualified conservator or conservation organisation. The Australian Institute for the Conservation of Cultural Material is the recognised professional body in this area.

### Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Prerequisite units Nil

## Employability Skills Information

**Employability Skills** The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary for the qualification in which this unit of competency is packaged, will assist in identifying Employability Skills requirements.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Develop preservation skills and knowledge</b>	1.1 Seek and access <i>opportunities to develop, update and maintain knowledge of preservation</i> issues and concepts
	1.2 Integrate knowledge into work activities within scope of individual responsibility
<b>2 Undertake basic preservation activities</b>	2.1 Undertake <i>basic preservation activities</i> within scope of responsibility as agreed with a conservator and in accordance with <i>organisational plans and policies</i>
	2.2 Correctly apply techniques in a manner which maintains the integrity of the <i>cultural material</i>



<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	2.3 Record data generated in the course of activities clearly and accurately in the appropriate format
	2.4 Follow <i>health, safety and environmental requirements</i> at all times
	2.5 Ensure that ethical and <i>cultural protocols</i> are adhered to at all times

## Required Skills and Knowledge

### Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

#### Required skills

- learning skills to undertake ongoing professional development and acquisition of knowledge around preservation issues and concepts
- literacy skills to interpret conservation plans, to research conservation information, document and to report on condition of cultural material.

#### Required knowledge

- distinction between preservation, conservation and restoration
- basic preservation principles and methods
- principles and methods for handling cultural material
- available sources of appropriate expert advice
- AICCM Code of Ethics and Code of Practice
- copyright, moral rights and intellectual property legislation and issues that impact on conservation
- cultural protocols that impact on conservation of cultural material, including those for Aboriginal or Torres Strait Islander material
- role of a conservator and of a person working under the guidance of a conservator, including the scope of work undertaken by each and rationale for this
- requirements for safe work and manual handling
- formats and features of conservation plans, object condition reports.

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- sound general knowledge of preservation techniques relevant to the collection/industry sector
- understanding of conservation ethics and cultural protocols, including limitations on the scope of work to be undertaken
- practical demonstration of competent and safe techniques working on one or more items under the guidance of a conservator.

#### **Context of and specific resources for assessment**

Assessment must ensure:

- access to cultural material
- access to equipment, materials and tools used in basic preservation activities.

#### **Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- assessment of cultural material on which the candidate has worked
- direct observation of the candidate using techniques
- evaluation of candidate's responses to different collection scenarios to assess ability to develop approaches for different preservation needs and articulate different challenges and issues to be considered
- oral or written questioning to assess knowledge of different techniques and procedures.

Holistic assessment with other units relevant to the industry sector, workplace and job role is

## EVIDENCE GUIDE

recommended, for example:

- CULMS009B Implement preventive conservation activities.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Opportunities to develop, update and maintain knowledge of preservation***

issues and concepts may include:

- research
- attendance at seminars, workshops
- membership of professional organisations
- using conservator as a mentor
- reading current journals, newsletters and electronic discussion lists

***Basic preservation activities***

will vary depending on the type of cultural material, but may include:

- surface cleaning
- designing/making storage enclosures and display supports
- attaching backboards to paintings
- creating hanging systems for paintings
- mounting and framing

**Activities must be undertaken in accordance with advice from a specialist conservator to avoid potential damage to cultural material.**

***Organisational plans and policies*** vary in structure and name but may include:

- preservation plans
- conservation plans
- collection management policies
- disaster preparedness policies

## RANGE STATEMENT

*Cultural material* is defined as 'objects, collections, artworks, specimens, structures or sites' and includes:

- archaeological material
- books and manuscripts
- cultural sites/buildings
- ethnographic material
- flora and fauna
- film/audiovisual material
- furniture
- photographs
- technological/industry items
- textiles
- works on paper/canvas

*Health, safety and environmental requirements* may relate to:

- use of chemicals or other toxic substances
- storage of chemicals
- provision and use of safety equipment
- safe manual handling
- safe use of tools and equipment
- reporting of occupational health and safety issues, including events and near misses
- impact on other parts of the collection
- toxic and hazardous materials in a collection
- condition/stability of item (dirt, mould, dust and pesticides)

*Cultural protocols* may relate to:

- who can handle the cultural material
- where an item may be handled
- when an item may be handled
- consultation on potential treatments
- storage requirements
- appearance of the item
- relationship between item and other material in the collection
- methods and approaches to display

## Unit Sector(s)

Not applicable.

## Competency field

Competency field      Preventive Conservation

## CUVACD302A Produce computer-aided drawings

### Modification History

Version	Comments
CUVACD302A	This version first released with <i>CUV11 Visual Arts, Craft and Design Training Package version 1.0</i>

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to use a range of computer-aided design and drafting (CADD) program functions to produce drawings.

The focus of this unit is on the technical skills required to operate CADD, not on design skills which are covered in other units in CUV11 Visual Arts, Craft and Design Training Package.

### Application of the Unit

People working in many industries apply the skills and knowledge outlined in this unit.

In the cultural industries, computer-aided drawing skills are required in many design disciplines, and in contexts such as stage and set design. In the visual arts, computer-aided drawings could be used to develop concepts for artworks or for mounting installations and exhibitions.

At this level, work is undertaken independently but within established parameters. Supervision or guidance is available as required.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Prepare for computer-aided drawing work	1.1 Clarify drawing requirements with reference to concept or project <b>information</b> 1.2 Identify hardware, software, tools and equipment required for <b>computer-aided design</b> and drafting projects 1.3 Set up hardware and software according to operating instructions and organisational procedures 1.4 Identify and retrieve digitised information relevant to projects
2. Gather object parameters and/or measurements	2.1 Establish and record critical dimensions and data for required designs 2.2 Identify requirements in relation to accuracy, tolerances and other critical information
3. Prepare plots or drawings	3.1 Access and use <b>CADD functions and features</b> according to operating instructions 3.2 Access and use <b>peripheral equipment</b> required for projects 3.3 Prepare and review preliminary drawings in consultation with relevant colleagues as required
4. Finalise drawings	4.1 Check designs against project objectives and specifications according to organisational procedures 4.2 Identify and make required adjustments to designs based on review and consultation with relevant colleagues as required 4.3 Store data files according to operating instructions and organisational procedures 4.4 Submit final drawings within agreed time parameters

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- learning skills to improve own skills through feedback and review
- literacy skills to interpret and use digital information, including instructions required for the production of computer-aided drawings
- numeracy skills to interpret and correctly apply calculations and measurements required for the production of computer-aided drawings
- planning and organising skills to plan work tasks in a logical sequence
- problem-solving skills to identify and respond to the need for adjustments in drawings
- self-management skills to complete work within agreed timeframes
- technology skills to use a range of features of CADD software.

### Required knowledge

- ways in which CADD is used within specific industry contexts
- basic principles of CADD
- typical features and functions of CADD programs, including drawing tools, view displays, edit functions, working with layers, plotting and printing
- intellectual property issues and legislation associated with the use of CADD
- OHS issues associated with the use of computers.

## Evidence Guide

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• use the standard features and functions of a CADD program to produce drawings for a specific workplace purpose</li> <li>• apply knowledge of CADD capabilities and uses in a specific industry context.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> <li>• CADD equipment and software.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are</p>



	<p>appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• evaluation of drawings produced by the candidate</li> <li>• oral or written questioning to assess knowledge of CADD features and functions</li> <li>• direct observation of the candidate undertaking CADD work</li> <li>• review of portfolios of evidence</li> <li>• review of third-party reports from experienced practitioners.</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties, such as speakers of languages other than English, remote communities and those with interrupted schooling).</p>
<p><b>Guidance information for assessment</b></p>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<p><b>Information</b> may relate to:</p>	<ul style="list-style-type: none"> <li>• creative objectives</li> <li>• measurements/dimensions of objects or space</li> <li>• scope for making adjustments</li> <li>• statutory requirements</li> <li>• technical objectives</li> <li>• timelines.</li> </ul>
<p><b>Computer-aided design</b> may be required for a wide range of work situations which may include:</p>	<ul style="list-style-type: none"> <li>• costume or fashion design</li> <li>• layouts:             <ul style="list-style-type: none"> <li>• rooms</li> <li>• sites</li> <li>• stage</li> </ul> </li> <li>• lighting plots</li> <li>• object or product design</li> <li>• set design</li> <li>• visual arts projects:</li> </ul>

	<ul style="list-style-type: none"> <li>• artworks in any form</li> <li>• community installations</li> <li>• public art.</li> </ul>
<b><i>CADD functions and features</i></b> must include:	<ul style="list-style-type: none"> <li>• drawing tools to support methods for drawing: <ul style="list-style-type: none"> <li>• lines</li> <li>• arcs</li> <li>• polylines</li> <li>• texts</li> <li>• dimensions</li> </ul> </li> <li>• edit functions</li> <li>• plotting and printing</li> <li>• view displays</li> <li>• working with layers.</li> </ul>
<b><i>CADD functions and features</i></b> may include:	<ul style="list-style-type: none"> <li>• three-dimensional (3-D) techniques: <ul style="list-style-type: none"> <li>• displaying 3-D views</li> <li>• entering coordinates</li> </ul> </li> <li>• how CADD works in an integrated environment</li> <li>• isometrics and perspectives</li> <li>• macros</li> <li>• use of attributes to make project reports.</li> </ul>
<b><i>Peripheral equipment</i></b> may include:	<ul style="list-style-type: none"> <li>• plotters</li> <li>• printers</li> <li>• scanners.</li> </ul>

## Unit Sector(s)

Visual communication – art, craft and design

# CUVACD303A Produce technical drawings

## Modification History

Version	Comments
CUVACD303A	This version first released with <i>CUV11 Visual Arts, Craft and Design Training Package version 1.0</i>

## Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to apply a range of techniques to produce technical drawings that meet required standards and conventions.

## Application of the Unit

People working in many industries apply the skills and knowledge outlined in this unit.

In the cultural industries, technical drawing skills to produce visual representations of objects, processes or spaces are required in sectors such as stage and set design for live theatre and events, as well as film and television productions. In the visual arts, technical drawings could be required in preparation for exhibitions, or as part of the process for designing artworks.

At this level, work is undertaken independently but within established parameters. Supervision or guidance is available as required.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

## Elements and Performance Criteria

1. Prepare for technical drawing work	1.1 Clarify <b><i>technical drawing requirements</i></b> with reference to relevant <b><i>documentation</i></b> and in consultation with <b><i>appropriate people</i></b> 1.2 Identify <b><i>factors</i></b> that may impact on technical drawing work 1.3 Review the <b><i>purpose</i></b> of drawings and select appropriate <b><i>techniques</i></b> 1.4 Prepare <b><i>equipment</i></b> and <b><i>materials</i></b> according to relevant <b><i>workplace procedures</i></b> and safety requirements
2. Create technical drawings	2.1 Apply appropriate conventions and standards to technical drawings 2.2 Prepare and review preliminary drawings in consultation with relevant people and confirm required amendments 2.3 Produce technical drawings that are consistent with concept and purpose of drawings 2.4 Finalise and submit technical drawings within agreed timeframes

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

- learning skills to improve own skills in technical drawing
- literacy skills to interpret material required to produce technical drawings
- numeracy skills to interpret and apply calculations and measurements in technical drawing
- planning and organising skills to plan work tasks in a logical sequence
- problem-solving skills to select technical drawing techniques that best suit the purpose and make adjustments as required

- self-management skills to complete work within agreed timeframes.

**Required knowledge**

- physical properties and capabilities of the range of materials, tools and equipment used for technical drawing work
- technical drawing techniques and their application to a range of contexts and subject matter
- technical drawing practices, history and theory, including current standards and conventions
- intellectual property issues and legislation associated with technical drawing work
- OHS procedures for technical drawing work.

**Evidence Guide**

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.*

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• produce a number of technical drawings which:             <ul style="list-style-type: none"> <li>• show a command of selected techniques</li> <li>• adhere to technical drawing standards and conventions</li> </ul> </li> <li>• apply knowledge of technical drawing practice, history and theory.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> <li>• equipment and materials required to produce technical drawings.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct observation of technical drawing in progress</li> <li>• evaluation of technical drawings produced by the candidate</li> <li>• questioning and discussion to determine candidate’s understanding of technical drawing techniques</li> <li>• review of portfolios of evidence</li> <li>• review of third-party reports from experienced practitioners.</li> </ul> <p>Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy</p>

	difficulties, such as speakers of languages other than English, remote communities and those with interrupted schooling).
<b>Guidance information for assessment</b>	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<b><i>Technical drawing requirements</i></b> may include:	<ul style="list-style-type: none"> <li>• circuits</li> <li>• diagrams</li> <li>• elevations</li> <li>• flow charts</li> <li>• illustrations</li> <li>• plans</li> <li>• sections</li> <li>• sketches.</li> </ul>
<b><i>Documentation</i></b> may include briefs or specifications with information, such as:	<ul style="list-style-type: none"> <li>• background information about clients</li> <li>• budget</li> <li>• clients’ needs</li> <li>• considerations, such as:                             <ul style="list-style-type: none"> <li>• contractual</li> <li>• copyright</li> <li>• ethical</li> <li>• legal</li> </ul> </li> <li>• creative objectives</li> <li>• diagrams indicating, for example:                             <ul style="list-style-type: none"> <li>• colours</li> <li>• measurements</li> <li>• scale</li> <li>• style</li> </ul> </li> <li>• materials</li> <li>• personnel involved in the project</li> <li>• purpose</li> </ul>

	<ul style="list-style-type: none"> <li>• relevant statutory requirements, e.g. health and safety considerations</li> <li>• sponsorship</li> <li>• technical objectives</li> <li>• technology</li> <li>• timeframe.</li> </ul>
<i>Appropriate people</i> may include:	<ul style="list-style-type: none"> <li>• clients</li> <li>• colleagues</li> <li>• industry practitioners</li> <li>• managers</li> <li>• mentors</li> <li>• supervisors.</li> </ul>
<i>Factors</i> may include:	<ul style="list-style-type: none"> <li>• aesthetic considerations</li> <li>• availability of personnel</li> <li>• availability of resources</li> <li>• available budget</li> <li>• complexity of project</li> <li>• expectations of target users of technical drawings</li> <li>• own level of skill</li> <li>• presentation context</li> <li>• timelines.</li> </ul>
<i>Purpose of technical drawings</i> may be to represent:	<ul style="list-style-type: none"> <li>• architectural structures</li> <li>• electronics</li> <li>• furniture</li> <li>• landscape scheme</li> <li>• lighting and sound set-ups</li> <li>• mechanics</li> <li>• objects and products</li> <li>• theatre and film props and sets.</li> </ul>
<i>Techniques</i> may include:	<ul style="list-style-type: none"> <li>• computer-aided drawing</li> <li>• drafting using drafting instruments</li> <li>• drawing orthogonal projection</li> <li>• drawing to represent:             <ul style="list-style-type: none"> <li>• scale</li> <li>• perspective</li> <li>• dimension</li> <li>• volume</li> </ul> </li> <li>• freehand drawing</li> <li>• geometric drawing</li> <li>• lettering</li> <li>• rendering.</li> </ul>

<b>Equipment</b> may include:	<ul style="list-style-type: none"> <li>• computer</li> <li>• cutting knives</li> <li>• drafting instruments</li> <li>• drafting table</li> <li>• light box</li> <li>• photocopier</li> <li>• plotter</li> <li>• printer</li> <li>• rulers</li> <li>• scanner</li> <li>• scissors</li> <li>• software applications</li> <li>• templates.</li> </ul>
<b>Materials</b> may include:	<ul style="list-style-type: none"> <li>• acetate sheets</li> <li>• chalks</li> <li>• drafting film</li> <li>• erasers</li> <li>• inks and wet mediums</li> <li>• markers</li> <li>• paper</li> <li>• pencils</li> <li>• pens</li> <li>• tape.</li> </ul>
<b>Workplace procedures</b> may relate to:	<ul style="list-style-type: none"> <li>• cost control</li> <li>• process-specific procedures</li> <li>• recycling</li> <li>• reporting</li> <li>• safety</li> <li>• use of materials.</li> </ul>

## Unit Sector(s)

Visual communication – art, craft and design



# FDFFS2001A Implement the food safety program and procedures

## Modification History

Not applicable.

## Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit of competency covers the skills and knowledge required to maintain personal hygiene and conduct food handling, housekeeping and waste disposal related to work tasks and responsibilities where work involves operation of production and/or packaging equipment and processes.</p>
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## Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit is based on and equivalent to the guideline food safety unit GFSMFSRA Apply and monitor food safety requirements.</p> <p>Note that this unit does not apply to the pharmaceutical industry. Refer to FDFPH2001A Apply Good Manufacturing Practice procedures.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<p><b>Prerequisite units</b></p>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Implement the food safety program	<p>1.1. Food handling requirements are identified</p> <p>1.2. Food handling is carried out according to the food safety program</p> <p>1.3. Food safety hazards are controlled as required by the food safety program</p> <p>1.4. Where food safety control requirements are not met, the incident is promptly reported and corrective action is taken</p> <p>1.5. Food safety information is recorded to meet requirements of the food safety program</p> <p>1.6. The workplace is maintained in a clean and tidy order to meet workplace standards</p> <p>1.7. Work is conducted in accordance with workplace environmental guidelines</p>
2. Participate in maintaining and improving food safety	<p>2.1. Work area, materials, equipment and product are routinely monitored to ensure compliance with food safety requirements</p> <p>2.2. Processes, practices or conditions which could result in a food safety breach are identified and reported according to workplace reporting requirements</p> <p>2.3. Corrective action is taken in accordance with the food safety program</p> <p>2.4. Food safety issues are raised with designated</p>

ELEMENT	PERFORMANCE CRITERIA
	personnel
3. Comply with personal hygiene standards	3.1. Personal hygiene meets the requirements of the food safety program 3.2. Health conditions and/or illness are reported as required by the food safety program 3.3. Clothing and footwear worn is appropriate for the food handling task and meets the requirements of the food safety program 3.4. Movement around the workplace complies with the food safety program

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- locate and follow workplace information relating to food safety responsibilities
- follow workplace procedures to maintain food safety as required by the food safety program relating to own work
- monitor food safety hazards as required by the food safety program, including methods such as visual inspection, sampling and testing
- record results of monitoring, and maintain records as required by the food safety program
- identify and report situations that do not meet the requirements of the food safety program and/or could result in unsafe food
- take corrective action as required by food safety program within level of responsibility
- handle, clean and store equipment, utensils, packaging materials and similar items according to the requirements of the food safety program as required by work role
- maintain personal hygiene consistent with the food safety program
- take necessary precautions when moving around the workplace and/or from one task to another to maintain food safety
- wear and maintain appropriate clothing/footwear as required by work tasks and consistent with the requirements of the food safety program
- report health conditions and illness as appropriate according to the food safety program
- handle and dispose of out-of-specification or contaminated food, waste and

recyclable material according to food safety program as this requirement relates to own work responsibility

- maintain the work area in a clean and tidy state
- identify and report signs of pest infestation
- record food safety information in appropriate format
- clean and sanitise equipment according to enterprise procedures
- collect samples and conduct tests according to the food safety program according to enterprise procedures
- participate in investigating food safety breaches according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

### **Required knowledge**

#### ***Knowledge of:***

- sources of information and expertise on procedures and responsibilities for food safety relating to own work
- basic concepts of HACCP-based food safety, including identification of hazards that are likely to occur, establishing appropriate methods of control and confirming that controls are met
- food safety management arrangements in the workplace, including awareness of food safety legislation, workplace policies and procedures to implement responsibilities, understanding the relationship between the quality system and food safety program, personnel responsible for developing and implementing the food safety program, the role of internal and external auditors as appropriate, procedures followed to investigate contamination events, and performance improvement processes
- awareness of common microbiological, physical and chemical hazards related to the foods handled in the work area, including the types of hazards likely to occur, the conditions under which they occur, possible consequences and control methods to prevent occurrence
- basic understanding of the properties, handling and storage requirements of ingredients, materials and products handled and used
- suitable standard for materials, measuring devices, equipment and utensils used in the work area
- food safety requirements related to work responsibilities, including personal hygiene, requirements and procedures to report illness and safe food handling practices for own work
- methods used to monitor that food safety is under control, including the purpose of sampling and taking measurements, such as temperature and pH, and conducting inspections and tests
- action required in the event of non-compliance (corrective action is typically described in the food safety program and/or related workplace information)
- purpose of keeping records and the recording requirements of the food safety

- program
- methods used in the workplace to isolate or quarantine food which may be unsafe
  - product and ingredient traceability procedures, such as product recall where required by work responsibilities
  - clothing and footwear requirements for working in and/or moving between food handling areas
  - personal clothing maintenance, laundering and storage requirements
  - appropriate bandages and dressings to be used when undertaking food handling
  - housekeeping requirements and responsibilities relating to own work, and use and storage of housekeeping/cleaning equipment where relevant
  - procedures to follow in the event of pest sighting or discovery of infestation
  - purpose and importance of cleaning and sanitation procedures
  - waste collection, recycling and handling procedures relevant to own work responsibilities
  - cleaning and sanitation procedures where relevant
  - impact of rework handling/addition on food safety where relevant
  - sampling and test methods where relevant
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## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• identify own responsibilities with regard to food safety</li> <li>• identify food safety risks in the workplace and the control measures used to manage them</li> <li>• apply control measures in own work</li> <li>• monitor compliance with food safety standards</li> <li>• identify and act on non-compliances and participate in improving safety</li> <li>• maintain required standards of personal hygiene</li> <li>• complete workplace records as required</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• apply safe work practices and identify OHS hazards and controls</li> <li>• apply food safety procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• food safety information relating to the workplace, including a food safety program outlining food safety hazards and control methods. It may also include company policies, procedures and codes of practice, such as: <ul style="list-style-type: none"> <li>• Good Manufacturing Practice (GMP)</li> <li>• related work instructions and procedures</li> <li>• work tasks and responsibilities</li> <li>• appropriate clothing and related apparatus</li> <li>• reporting and monitoring systems</li> <li>• cleaning and sanitation policies and procedures as required</li> <li>• sampling and test procedures and related equipment as required.</li> </ul> </li> </ul>
<b>Method of assessment</b>	<p>This unit should be assessed together with other units of competence relevant to the function or work role. Examples could be:</p> <ul style="list-style-type: none"> <li>• FDFOP2004A Clean and sanitise equipment</li> <li>• FDFOP2013A Apply sampling procedures</li> <li>• FDFOP2063A Apply quality systems and procedures</li> <li>• MSL973001A Perform basic tests.</li> </ul>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised

<b>RANGE STATEMENT</b>	
wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>A food safety program</b>	A food safety program is a written document that specifies how a business will control all food safety hazards that may be reasonably expected to occur in all food handling operations of the food business. The food safety program and related procedures must comply with legal requirements of the food safety standards and must be communicated to all food handlers. Where no food safety program is in place, food safety requirements may be specified in general operating procedures
<b>Workplace information</b>	Workplace information may be provided in: <ul style="list-style-type: none"> <li>• food safety program</li> <li>• standard operating procedures (SOPs)</li> <li>• specifications</li> <li>• log sheets</li> <li>• written or verbal instruction</li> </ul>
<b>Food handling</b>	Food handling refers to: <ul style="list-style-type: none"> <li>• food receipt and storage</li> <li>• food preparation</li> <li>• cooking, holding, cooling, chilling and reheating</li> <li>• packaging, disposal</li> </ul>
<b>Products/materials handled and stored</b>	Products/materials handled and stored can include: <ul style="list-style-type: none"> <li>• raw materials</li> <li>• ingredients</li> <li>• consumables</li> <li>• part-processed product</li> <li>• finished product</li> <li>• cleaning materials</li> </ul>
<b>Examples of a breach of food safety procedures</b>	Examples of a breach of food safety procedures could include: <ul style="list-style-type: none"> <li>• failure to check delivery temperatures of potentially hazardous chilled food</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• failure to place temperature-sensitive food in temperature controlled storage conditions promptly</li> <li>• failure to wash hands when required</li> <li>• use of cloths for unsuitable purposes</li> </ul>
<b>Responsibility for monitoring food safety</b>	Responsibility for monitoring food safety, identifying breaches in food safety procedures and taking corrective action relates to own tasks and responsibilities and occurs in the context of the food safety program in the workplace
<b>Monitoring</b>	<p>Monitoring describes the methods used to confirm that a food safety hazard is in control, such as:</p> <ul style="list-style-type: none"> <li>• taking temperatures</li> <li>• collecting samples</li> <li>• conducting visual inspections</li> <li>• conducting other tests as required</li> </ul>
<b>Food safety hazard</b>	A food safety hazard is a biological, chemical or physical agent in, or condition of, food that has the potential to cause an adverse health effect
<b>Hygiene requirements</b>	Minimum personal hygiene requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in the Food Safety Standard 3.2.2, Division 4:14 and/or state or territory legislation/regulations
<b>Reporting of health conditions and illnesses requirements</b>	Reporting of health conditions and illnesses requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in Food Safety Standard 3.2.2, Division 4:13 and/or state or territory legislation/regulations
<b>Appropriate clothing and footwear</b>	<p>Appropriate clothing and footwear depends on work requirements. It should be designed to ensure that the body and clothing itself does not contaminate food or surfaces likely to come into contact with food. Examples of clothing designed to prevent contamination by the body include:</p> <ul style="list-style-type: none"> <li>• purpose designed overalls or uniforms</li> <li>• hair-nets</li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• beard snoods</li> <li>• gloves</li> <li>• overshoes</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Food safety
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**Competency field**

<b>Competency field</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

# FDFFS3001A Monitor the implementation of quality and food safety programs

## Modification History

November 2011: minor typographical error corrected.

## Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to provide a leadership role in supporting day-to-day implementation of the food safety/quality programs in a work area. It also involves supporting others to implement the requirements of the food safety/quality procedures.
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## Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to those with formal responsibility for others, and to those required to model workplace policies and procedures but who have no formal management role.</p> <p>This unit is based on and equivalent to the guideline food safety unit GFSOFSA Oversee the day-to-day implementation of food safety in the workplace.</p> <p>Note that this unit does not apply to the pharmaceutical industry. Refer to FDFPH3001A Monitor and maintain Good Manufacturing Practice procedures.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>		
	FDFFS2001A	Implement the food safety program and procedures

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Ensure others in the work area are able to meet quality and food safety requirements	<p>1.1. Hazard control and clothing and equipment appropriate to work requirements are available, functional and correctly fitted</p> <p>1.2. Information on food safety/quality responsibilities and procedures is current, accessible and communicated to others in the work area</p> <p>1.3. Information about identified hazards and the outcomes of risk assessment and risk control procedures is accessible and communicated to others in the work area</p> <p>1.4. Food safety/quality hazards and control measures used in the work area can be identified by those in the work area</p> <p>1.5. Mentoring and coaching support is available to support individuals/groups to implement quality and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>safe food handling procedures</p> <p>1.6.Training needs are identified and addressed within level of responsibility</p>
<p>2. Monitor observance of quality standards and food safety programs in the work area</p>	<p>2.1.Work procedures in the work area are clearly defined, documented and followed</p> <p>2.2.Deviation from identified procedures is identified, reported and addressed within level of responsibility</p> <p>2.3.Personal behaviour is consistent with workplace policies and procedures that support food safety and quality</p> <p>2.4.Food safety and/or quality hazards are identified and reported according to workplace procedures</p> <p>2.5.Food safety and quality information is recorded to meet workplace reporting requirements</p> <p>2.6.The work area is maintained according to housekeeping standards</p> <p>2.7.Work is conducted in accordance with workplace environmental guidelines</p>
<p>3. Take corrective action in response to quality and food safety non-compliance</p>	<p>3.1.Workplace procedures for responding to quality and food safety non-compliance are promptly implemented</p> <p>3.2.Hazardous events are investigated to identify cause</p> <p>3.3.Control measures to prevent recurrence and minimise risks of hazardous events are implemented</p>
<p>4. Maintain and improve quality and food safety in the work area</p>	<p>4.1.Processes or conditions which could result in a breach of food safety procedures or quality specifications are identified, assessed, removed or and/reported within level of responsibility and according to workplace procedure</p> <p>4.2.Risk assessments are conducted and appropriate control measures are identified and implemented in the work area</p> <p>4.3.Recommendations arising from risk assessments are implemented within level of responsibility</p> <p>4.4.Inadequacies in control measures are identified and reported according to company reporting requirements</p> <p>4.5.Matters raised relating to quality/food safety are promptly resolved and/or referred to appropriate personnel</p> <p>4.6.The work group is consulted and advised of</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>quality/food safety matters relevant to work role</p> <p>4.7. Opportunities for improving food safety and quality are identified and raised with relevant personnel</p> <p>4.8. Procedures are developed or revised to support effective control of quality and food safety hazards</p> <p>4.9. Quality/food safety records are reviewed to ensure they are complete and meet the quality system, food safety program and legal requirements</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- access, interpret and communicate information about the food safety program, quality requirements and related procedures to others in the work area
- demonstrate two-way communication, including active listening and responding constructively to feedback
- provide access to and maintain current food safety/quality documentation
- model safe food handling and quality practices and procedures to achieve required outcomes, including demonstrating:
  - work procedures that meet the requirements of quality and food safety
  - cleaning and sanitising equipment
  - sampling and testing as appropriate according to quality and food safety requirements
  - maintaining personal hygiene
  - wearing appropriate clothing and footwear as required by the work task
  - following procedures when moving within and between work areas
  - reporting health conditions and illnesses according to workplace procedures
  - handling, cleaning and storing equipment, utensils and packaging materials as appropriate
- identify control points in the work area and demonstrate monitoring techniques used (control points include critical, quality and regulatory control points)
- support others to meet quality standards and follow food safety procedures by ensuring that all personnel in the work area receive the information required and have the necessary skills and equipment to carry out their responsibilities

## REQUIRED SKILLS AND KNOWLEDGE

- identify, report and/or address food safety/quality non-compliance in an appropriate and timely manner within level of responsibility
- determine when and how to make adjustments to maintain output within level of responsibility
- identify, report and/or address food safety/quality training and development needs of others in the work area
- ensure that appropriate and timely action is taken in response to non-compliance
- handle and dispose of out-of-specification or contaminated food, waste and recyclable material according to food safety program as this requirement relates to own work responsibility
- participate in investigations of non-compliance and risk assessment processes
- participate in consultation processes to improve quality and food safety outcomes in the workplace
- review practice and procedures to implement recommendations arising from risk assessments and/or improvement proposals within level of responsibility, such as collecting and analysing food safety/quality records, reviewing operating procedures and communicating changes to others in the work area
- ensure that housekeeping standards are maintained and that equipment is in operational order, such as participating in the management of equipment calibration
- monitor the recording of quality and food safety information to confirm that records accurately reflect performance and meet the requirements of the food safety and quality programs
- participate in food recall procedures as required, within level of responsibility
- facilitate consultation processes according to enterprise procedures
- lead investigations of quality and food safety incidents according to enterprise procedures
- work cooperatively within a culturally diverse workforce

### Required knowledge

#### *Knowledge of:*

- sources of information and expertise on procedures and responsibilities for food safety relevant to the workplace
- principles of a HACCP-based approach to managing food safety, including identifying hazards that are likely to occur, establishing appropriate methods of control and confirming that controls are met
- basic concepts of quality assurance including hazards, risk assessment and control methods
- company programs and systems in place to manage and support quality and food safety in the workplace, which may involve separate or integrated programs, including systems for maintaining and updating documents, such as operating procedures and specifications
- clothing and footwear requirements for working in and/or moving between food

## REQUIRED SKILLS AND KNOWLEDGE

handling areas, including personal clothing maintenance, laundering and storage requirements

- appropriate bandages and dressings to be used when undertaking food handling
- housekeeping requirements and responsibilities relating to own work, where relevant this includes use and storage of housekeeping/cleaning equipment
- procedures to follow in the event of pest sighting or discovery of infestation
- purpose and importance of cleaning and sanitation procedures
- legal obligations for food safety and quality, including an awareness of government legislation and customer requirements
- food safety and quality responsibilities and requirements relating to the work area
- awareness of common micro biological, physical and chemical hazards related to the foods handled in the work area, including the types of hazards likely to occur, the conditions under which they occur, possible consequences and control methods to prevent occurrence
- suitable standard for materials, measuring devices, equipment and utensils used in the work area
- properties of food and ingredients used that affect food safety, including an understanding of related storage, processing and handling requirements
- current technical and process knowledge required to participate in investigations of food safety/quality hazards, risks and incidents within level of responsibility, including an understanding of common micro biological, physical and chemical hazards, related control methods and the way changes in equipment and/or processing methods can affect food safety and quality outcomes
- procedures for identifying unsafe and/or non-conforming product, including control points and evidence of out-of-specification product or materials
- sampling procedures, test methods and inspections
- options for responding to non-compliance, including legal responsibility, risk management and cost/implications of different responses and level of responsibility for decision making
- methods used in the workplace to isolate or quarantine food which may be unsafe
- waste collection, recycling, handling and disposal, including handling/disposal requirements for different types of waste, such as hazardous waste where relevant
- traceability and recall procedures within level of responsibility
- documentation system and procedures, including record keeping to meet both company and legal requirements, procedures for developing and/or reviewing workplace procedures, and document control systems used in the workplace
- auditing arrangements, roles and responsibilities as they relate to own work responsibilities, such as internal and external audit processes
- appropriate communication skills and techniques to convey information on quality and food safety requirements to others in the workplace
- cleaning and sanitation procedures where relevant
- impact of rework handling/addition on food safety where relevant
- sampling and test methods where relevant

**REQUIRED SKILLS AND KNOWLEDGE**

- facilitation and consultation techniques where relevant

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of ability to:

- describe quality and food safety program, risks and control measures of the work area
- confirm that control measures are in place and that personnel in the work area are equipped and informed to implement programs
- identify, address and follow up on non-compliances
- identify causes of non compliances
- conduct risk assessments and recommend responsive action
- provide support to others to implement the programs
- complete and maintain documentation.

**Context of and specific resources for assessment**

Assessment must occur in a real or simulated workplace where the assessee has access to:

- food safety program for the work area which identifies critical control points, control measures and corrective action
- quality policy, system and procedures
- work area or system in which quality and food safety practices and procedures are to be monitored
- personal protective clothing and equipment as required
- review/audit arrangements
- reporting and monitoring systems.



<b>EVIDENCE GUIDE</b>	
<b>Method of assessment</b>	<p>This unit should be assessed together with other units of competence relevant to the function or work role.</p> <p>Examples could be:</p> <ul style="list-style-type: none"> <li>• FDFPPL3001A Participate in improvement processes</li> <li>• FDFPPL3004A Lead work teams and groups</li> <li>• BSBRES401A Analyse and present research information.</li> </ul>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Work responsibilities</b>	<p>Work responsibilities may include formal or informal responsibility for modelling appropriate quality/food safety policies and procedures and providing a support role to others in the work area</p>
<b>Food safety program</b>	<p>A food safety program is a written document that specifies how a business will control all food safety hazards that may be reasonably expected to occur in all food handling operations of the food business. The food safety program and related procedures must comply with legal requirements of the food safety standards and must be communicated to all food handlers. Where no food safety program is in place, food safety requirements may be specified in general operating procedures</p>

<b>RANGE STATEMENT</b>	
<b>Quality systems</b>	Quality systems may be externally accredited, such as an ISO system, or internally designed and managed
<b>Workplace information</b>	Workplace information may be provided in: <ul style="list-style-type: none"> <li>• food safety and quality policies and programs</li> <li>• standard operating procedures (SOPs)</li> <li>• specifications</li> <li>• log sheets</li> <li>• written or verbal instruction incorporating food safety and quality requirements</li> </ul>
<b>Incidents</b>	A food safety incident is: <ul style="list-style-type: none"> <li>• a situation where the safe limits or parameters identified by the food safety program are not met</li> </ul> A quality incident is: <ul style="list-style-type: none"> <li>• a situation where the quality limits or parameters identified in specifications or processing instructions are not met</li> </ul>
<b>Monitoring</b>	Monitoring describes the methods used to confirm that a food safety or quality hazard is in control, such as: <ul style="list-style-type: none"> <li>• taking temperatures</li> <li>• collecting samples</li> <li>• conducting visual inspections</li> <li>• additional testing as required</li> </ul>
<b>Responsibility for identifying breaches of food safety procedures</b>	Responsibility for identifying breaches of food safety procedures and taking corrective action occurs in the context of the food safety program and within scope of responsibility
<b>Responsibility for identifying non-compliance against quality standards</b>	Responsibility for identifying non-compliance against quality standards occurs within the context of defined standards or specifications and relates to work area
<b>Personal hygiene requirements</b>	Minimum personal hygiene requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in the Food Safety Standard 3.2.2, Division 4:14 and/or state or territory

<b>RANGE STATEMENT</b>	
	legislation/regulations
<b>Reporting of health conditions and illnesses</b>	Reporting of health conditions and illnesses requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in Food Safety Standard 3.2.2, Division 4:13 and/or state or territory legislation/regulations
<b>Operator responsibilities</b>	<p>The operator at this level may not have direct responsibility for overseeing the training/development of team members. At a minimum they must be able to identify development needs of others in the work area and refer this information to the relevant personnel.</p> <p>The operator at this level may not have responsibility for independently assessing risks and determining the effectiveness of control measures. However, they would be expected to observe day-to-day effectiveness and participate in assessment and review processes. Responsibilities at this level may include facilitating consultation processes within level of responsibility</p>
<b>Record keeping</b>	Record keeping complies with customer, legal and food safety program requirements

## Unit Sector(s)

<b>Unit sector</b>	Food safety
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## Competency field

<b>Competency field</b>	
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## Co-requisite units

Co-requisite units		

## FDFGPS2011A Operate a creamed honey manufacture process

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to set up, monitor, and adjust a process to produce creamed honey.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit has application in a production environment within the honey processing industry. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of machines and equipment used to cream honey.</p> <p>When operators are required to perform batch or product changeover procedures as part of this work process, the procedures should be used to customise the application of this unit. Where more detailed changeovers are carried out, FDFOP2011A Conduct routine maintenance, should be selected.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare the equipment and process for operation	<p>1.1.Liquid and seed honey is confirmed and available to meet production requirements</p> <p>1.2.Cleaning and maintenance requirements and status are identified and confirmed</p> <p>1.3.Machine components and related attachments are fitted and adjusted to meet operating requirements</p> <p>1.4.Processing/operating parameters are set to meet safety and production requirements</p> <p>1.5.Equipment performance is checked and adjusted as required</p> <p>1.6.Pre-start checks are carried out as required by workplace requirements</p>
2. Operate and monitor the creamed honey manufacture process	<p>2.1.The process is started and operated according to workplace procedures</p> <p>2.2.Equipment is monitored to identify variation in operating conditions</p> <p>2.3.Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements</p> <p>2.4.The process is monitored to confirm that specifications are met</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification</p> <p>2.6. The work area is maintained according to housekeeping standards</p> <p>2.7. Work is conducted in accordance with workplace environmental guidelines</p> <p>2.8. Workplace records are maintained according to workplace recording requirements</p>
3. Shut down the creamed honey manufacture process	<p>3.1. The appropriate shutdown procedure is identified</p> <p>3.2. The process is shut down according to workplace procedures</p> <p>3.3. Maintenance requirements are identified and reported according to workplace reporting requirements</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- access workplace information to identify processing requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of necessary materials and services, including selecting appropriate seed honey (it may also require selection of more than one liquid honey to meet required product characteristics)
- conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters (temperature and agitation settings), cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational
- start, operate, monitor and adjust process equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification
- monitor supply and flow of materials to and from the process
- take corrective action in response to out-of-specification results
- respond to and/or report equipment failure within level of responsibility

## REQUIRED SKILLS AND KNOWLEDGE

- locate emergency stop functions on equipment
- follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- complete workplace records as required
- maintain work area to meet housekeeping standards
- use process control systems according to enterprise procedures
- demonstrate batch/product changeovers according to enterprise procedures
- collect samples and conduct tests according to enterprise procedures
- conduct routine maintenance according to enterprise procedures
- clean and sanitise equipment according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

### Required knowledge

#### *Knowledge of:*

- basic principles of crystallisation, including an understanding of crystal structure and where appropriate, methods used to reduce crystal size, the effects of temperature and agitation on crystal formation, appropriate ratio of seed to liquid honey and factors that influence the crystallisation process including moisture content and crystal size
- basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications and the purpose and location of sensors and related feedback instrumentation
- services required and action to take if services are not available
- quality and organoleptic characteristics of different types of honey processed
- quality characteristics to be achieved by the final product and related test methods used to confirm quality
- quality requirements of seed and liquid honey used and the effect of variation on the final product
- operating requirements, parameters and corrective action required where the process is outside specified operating parameters (typical operating parameters include ambient and processing temperatures, agitation speeds and holding times and temperatures)
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
- methods used to monitor each stage of the production process, such as inspecting, measuring and testing as required
- inspection or test points (control points) in the process and the related procedures and recording requirements



## REQUIRED SKILLS AND KNOWLEDGE

- contamination/food safety risks associated with the process and related control measures (this relates specifically to air inclusion and moisture content and related methods of control)
- common causes of variation and corrective action required
- factors that affect the stability and shelf-life of the finished product and options to extend shelf-life, including storage conditions for packed product
- occupational health and safety (OHS) hazards and controls, including the limitations of protective clothing and equipment relevant to the work process
- requirements of different shutdowns as appropriate to the process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage
- isolation, lock out and tag out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process
- basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment
- product/process changeover procedures and responsibilities where relevant
- sampling and testing associated with process monitoring and control where relevant
- routine maintenance procedures where relevant
- cleaning and sanitation procedures where relevant

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of ability to:

- conduct pre-start checks on machinery used for creaming honey
- start, operate, monitor and adjust process equipment

<b>EVIDENCE GUIDE</b>	
	<p>to achieve required quality outcomes</p> <ul style="list-style-type: none"> <li>• take corrective action in response to typical faults and inconsistencies</li> <li>• complete workplace records as required</li> <li>• apply safe work practices and identify OHS hazards and controls</li> <li>• safely shut down equipment</li> <li>• apply food safety procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment</li> <li>• work procedures, including advice on safe work practices, food safety, quality and environmental requirements</li> <li>• information on equipment capacity and operating parameters</li> <li>• production schedule/batch instructions</li> <li>• specifications, control points and processing parameters</li> <li>• process and related equipment and services</li> <li>• seed and liquid honey</li> <li>• sampling schedules and test procedures and equipment as required</li> <li>• documentation and recording requirements and procedures</li> <li>• cleaning procedures, materials and equipment as required.</li> </ul>
<b>Method of assessment</b>	<p>This unit should be assessed together with core units and other units of competency relevant to the function or work role. Examples could be:</p> <ul style="list-style-type: none"> <li>• FDFOP2003A Clean equipment in place</li> <li>• FDFOP2004A Clean and sanitise equipment</li> <li>• FDFOP2011A Conduct routine maintenance</li> <li>• FDFOP2013A Apply sampling procedures</li> <li>• FDFOP2030A Operate a process control interface</li> <li>• MSL973001A Perform basic tests.</li> </ul>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where</p>

**EVIDENCE GUIDE**

	possible, over a number of assessment activities.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Policies and procedures**

Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements

**Legislative requirements**

Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes:

- the Food Standards Code, including labelling, weights and measures legislation
- legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity

**Workplace information**

Workplace information may include:

- standard operating procedures (SOPs)
- specifications/recipes
- production schedules and instructions
- manufacturers' advice
- standard forms and reports

**Production processes**

Production processes may be partly or fully automated. While processes vary, typical stages include:

- addition of seed honey
- holding
- mixing/working
- temperature control

<b>RANGE STATEMENT</b>	
<b>Operation of equipment and processes</b>	Operation of equipment and processes may require: <ul style="list-style-type: none"> <li>the use of process control panels and systems</li> </ul>
<b>Equipment</b>	Equipment may include: <ul style="list-style-type: none"> <li>jacketed tanks/vats</li> <li>buffer tanks</li> <li>mixers/homogenisers</li> <li>scraped surface heat exchangers</li> <li>agitators and pumps</li> </ul>
<b>Services</b>	Services may need to be confirmed. These depend on the nature of the process. Typical examples include: <ul style="list-style-type: none"> <li>power</li> <li>water</li> <li>compressed and instrumentation air</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Grocery products and supplies
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### Competency field

<b>Competency field</b>	
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### Co-requisite units

<b>Co-requisite units</b>	



## FDFGR3002A Demonstrate knowledge of animal nutrition principles

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the animal nutrition knowledge required by stockfeed milling operators who are required to liaise with nutritionists, other technical and professional staff and customers.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to stockfeed operators who are required to have knowledge of animal nutrition principles and the effect of stockfeed on animal performance. This knowledge would be applied in liaison with professional and technical staff on customer requirements and in liaison directly with customers.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify nutrition purpose of stockfeed product	<p>1.1. Target species, animal type and phase of animal growth supported by stockfeed product are identified</p> <p>1.2. Production purpose of animal raising and range of desired products are identified</p> <p>1.3. Particle size, pellet quality and other factors affecting palatability for target animals are identified</p> <p>1.4. Impact of stockfeed on animal performance is identified</p>
2. Identify key quality factors affecting stockfeed performance	<p>2.1. Feed safety requirements for target species and phase of animal production are identified</p> <p>2.2. Type and proportion of raw materials in stockfeed and their effect on animal performance are identified</p> <p>2.3. The purpose of additives on animal performance and stockfeed quality are identified</p> <p>2.4. Effects of processing on stockfeed nutrition quality and animal performance are identified</p> <p>2.5. Substitution guidelines, including the effect of substitution on stockfeed performance, are understood</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- access and interpret workplace information, including standard operating procedures (SOPs), labels, recipes, customer supplied information and material data safety sheets (MSDS)
- use and application of workplace terminology
- sequence information against production processes
- assess quality standards
- identify resources in the enterprise for further information, including nutritionists, other technical and professional specialist and reference materials

#### Required knowledge

##### *Knowledge of:*

- typical nutrition requirements of animals supported by stockfeed, including horses, beef cattle, dairy cattle, pigs, sheep, poultry (both meat and egg production) and marine animals (aquaculture). Knowledge would be restricted to standard daily requirements of main food groups (proteins, carbohydrates etc), typical daily volume of feed required and type of feed (e.g. solid, liquid, plant or animal based)
- how nutritional needs of target animal may vary according to species, gender, health, pregnancy, lactation, age, season, geography, production purpose and form of production and feeding, e.g. feedlot, free range, use of stock feed for supplementary or full feeding
- factors affecting animal acceptance of stockfeed, including palatability and presentation
- range of raw materials typically used in stockfeed, including grains, molasses/liquids, proteins (vegetables and animal), additives (vitamins, minerals and medications) and fibre
- impact of operator controlled factors on stockfeed quality, including temperatures, moisture, sizing, sieving and liquid additions
- impacts of stockfeed on animal performance, including positive effects on animal performance and effects of incorrect feed on animal safety, animal performance and export contamination

## Evidence Guide

### EVIDENCE GUIDE



<b>EVIDENCE GUIDE</b>	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	Evidence is required of animal nutrition and performance requirements that are affected by stockfeed related factors, such as ingredients, recipe, processing and presentation.  Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	Evidence of ability to: <ul style="list-style-type: none"> <li>• identify and interpret customer requirements from stockfeed</li> <li>• relate stockfeed type to animal nutrition and production requirements</li> <li>• liaise with nutritionist and other professional and technical staff on animal nutrition requirements of stockfeed.</li> </ul>
<b>Context of and specific resources for assessment</b>	The candidate is to be assessed on animal nutrition and production knowledge relevant to the stockfeed products and processes in the workplace.
<b>Method of assessment</b>	Evidence may include third party report, portfolio, work documentation, response to questions, and so on, that address the performance criteria and critical aspects for assessment.
<b>Guidance information for assessment</b>	Performance against this standard must be assessed in an industry context. For valid and reliable assessment the activity should closely replicate the work environment, circumstances and equipment likely to be encountered in a workplace.

## Range Statement

<b>RANGE STATEMENT</b>
The range statement relates to the unit of competency as a whole. It allows for different

<b>RANGE STATEMENT</b>	
work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Stockfeed production</b>	<p>Stockfeeds commercially produced by enterprises as well as customer provided formulations.</p> <p>The range of stockfeed can include:</p> <ul style="list-style-type: none"> <li>• pellets</li> <li>• liquids</li> <li>• mashes</li> <li>• blocks</li> </ul>
<b>Target species</b>	<p>Target species may include:</p> <ul style="list-style-type: none"> <li>• land and marine animals raised commercially for meat, skin products and milk</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Grain processing
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### Competency field

<b>Competency field</b>	
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### Co-requisite units

<b>Co-requisite units</b>		

## FDOP2003A Clean equipment in place

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to prepare process equipment for cleaning in place (CIP) or in-line.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to food processing equipment that is fixed in place and cannot be moved to a cleaning station. It requires the operator to initiate, monitor and control variables during cleaning. Where this is not a requirement of a CIP system, this unit may not be relevant.</p> <p>Where the operator is primarily responsible for cleaning and/or where they require a more detailed knowledge of cleaning and sanitation processes to carry out cleaning responsibilities, FDOP2004A Clean and sanitise equipment, should be considered.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for cleaning	1.1. Chemical stocks are available to meet cleaning and sanitation requirements 1.2. Services are confirmed as available and ready for operation 1.3. Equipment shutdown is planned and equipment is taken off-line for cleaning 1.4. Equipment and related valves and pipework are configured to confirm readiness for cleaning 1.5. The plant is set for the cleaning cycle
2. Operate and monitor the cleaning process	2.1. The cleaning cycle is undertaken according to company policies and procedures 2.2. The cleaning process is monitored to confirm cleaning meets company requirements 2.3. Cleaning data is recorded according to workplace reporting requirements 2.4. Out-of-specification process and equipment performance is identified, rectified and/or reported
3. Dispose of waste and return plant to operating condition	3.1. Cleaning chemicals are flushed from plant and disposed of according to company policies and procedures

ELEMENT	PERFORMANCE CRITERIA
	3.2. Work is conducted according to environmental requirements 3.3. Plant is set up to meet operational requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- access workplace information, such as the cleaning schedule to identify cleaning requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of necessary materials and services
- handle and prepare cleaning and sanitation agents safely, including following correct handling and preparation procedures and use of appropriate protective clothing and equipment as required
- schedule cleaning and/or liaise with related work areas to take equipment and area off-line with minimal disruption to production
- prepare equipment and area for cleaning, such as rendering equipment safe to clean, removing obstacles and unnecessary equipment, correctly positioning equipment (e.g. valves, pipes, vents and taps), selecting appropriate cleaning cycle, removing waste and/or dismantling equipment
- clean equipment according to cleaning process cycle and procedures, such as starting up and operating the CIP process in both automatic and manual modes
- monitor the process and equipment operation to maintain the cleaning process within the required parameters
- locate emergency stop functions on equipment
- return plant to operating order
- return area to working order
- take corrective action in response to out-of-specification results
- advise affected work areas of cleaning schedule and progress
- maintain and store chemicals and related equipment as required
- carry out relevant checks and inspections to confirm effectiveness of cleaning
- sort, collect, treat, recycle or dispose of waste
- record cleaning information
- maintain work area to meet housekeeping standards

## REQUIRED SKILLS AND KNOWLEDGE

- conduct routine maintenance according to enterprise procedures
- take samples and conduct tests according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

### Required knowledge

#### *Knowledge of:*

- purpose and basic principles of CIP, including the use and functions of caustic and acid solutions, and cleaning sequence and stages as required in the workplace
- purpose and use of cleaning equipment and chemicals used
- terminology relating to the chemical solutions used
- safe work procedures, including appropriate signage of cleaning activities and safe handling and storage of cleaners and sanitisers used
- purpose and limitations of protective clothing and equipment
- cleaning and sanitation requirements, including different levels of cleaning requirements depending on the reason for cleaning
- characteristics of cleaning and sanitising chemicals used, including basic composition as well as compatibility of chemicals with types of equipment
- methods used to render equipment safe to clean, including the status and purpose of equipment guards, relevant lock out/tagout and isolation procedures
- equipment settings required for cleaning and for operating respectively
- basic operating principles of process control where relevant, including the relationship between control panels and systems and the physical equipment
- inspection points for cleaning and sanitation
- consequences of contamination of process flows by cleaning solutions and related safeguards
- types of waste generated by both the production and the cleaning process and related collection, treatment and disposal requirements
- environmental consequences of incorrect cleaning waste disposal procedures
- requirements to liaise/advise related work areas
- reporting and recording systems
- routine maintenance procedures where relevant
- sampling methods and test procedures where relevant

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	Evidence of ability to: <ul style="list-style-type: none"> <li>• shut down equipment and prepare for cleaning</li> <li>• prepare and use chemicals according to safe work requirements</li> <li>• clean equipment to meet work standards</li> <li>• monitor cleaning and report or address any non-compliances</li> <li>• flush equipment and dispose of waste according to environmental guidelines</li> <li>• complete required documentation</li> <li>• apply safe work practices and identify OHS hazards and controls</li> <li>• apply food safety procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	Assessment must occur in a real or simulated workplace where the assessee has access to: <ul style="list-style-type: none"> <li>• cleaning procedures and related advice on equipment operation, including advice on safe work practices and environmental requirements</li> <li>• personal protective clothing and equipment</li> <li>• equipment to be cleaned, and related CIP system</li> <li>• chemicals and/or automated chemical addition system</li> <li>• services as required</li> <li>• MSDS where appropriate</li> <li>• cleaning schedule or advice and related standard operating procedures</li> <li>• housekeeping standards and procedures</li> <li>• advice on environmental management issues relevant to work responsibilities</li> <li>• workplace information recording systems, requirements and procedures</li> <li>• sampling and testing schedules and procedures as</li> </ul>

<b>EVIDENCE GUIDE</b>	
	relevant to cleaning requirements in the workplace.
<b>Method of assessment</b>	<p>This unit should be assessed together with core units and other units of competency relevant to the function or work role. Examples could be:</p> <ul style="list-style-type: none"> <li>• FDFOP2011A Conduct routine maintenance</li> <li>• FDFOP2013A Apply sampling procedures</li> <li>• MSL973001A Perform basic tests.</li> </ul>
<b>Guidance information for assessment</b>	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	<p>Work is carried out in accordance with company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements. When applied to the pharmaceutical industry, relevant Good Manufacturing Practice (GMP) codes apply and reference to food safety is replaced by GMP</p>
<b>Workplace information</b>	<p>Workplace information may include:</p> <ul style="list-style-type: none"> <li>• standard operating procedures (SOPs)</li> <li>• specifications</li> <li>• production cleaning schedules and instructions</li> <li>• signs and symbols</li> <li>• materials safety data sheets (MSDS)</li> <li>• manufacturers' advice</li> <li>• standard forms and reports</li> </ul>



<b>RANGE STATEMENT</b>	
<b>Dosing of cleaning chemicals</b>	Dosing of cleaning chemicals may be: <ul style="list-style-type: none"> <li>• automatically controlled or manually dosed</li> </ul>
<b>Services</b>	Services may include: <ul style="list-style-type: none"> <li>• power</li> <li>• water</li> <li>• Steam</li> <li>• compressed and instrumentation air</li> </ul>
<b>Testing</b>	Where tests are conducted as part of operation, a typical requirement is measurement of pH
<b>Monitoring the process</b>	Monitoring the process is dependent on the nature of equipment. Examples of monitoring include: <ul style="list-style-type: none"> <li>• chemical strength</li> <li>• cycle time</li> <li>• temperatures</li> <li>• time</li> <li>• storage tank levels</li> <li>• condensate quality</li> </ul>
<b>Operation and monitoring of equipment and processes</b>	Operation and monitoring of equipment and processes typically requires the use of control panels and systems

### Unit Sector(s)

<b>Unit sector</b>	Operational
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### Competency field

<b>Competency field</b>	
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## Co-requisite units

Co-requisite units		

# FDFOP2004A Clean and sanitise equipment

## Modification History

Not applicable.

## Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers cleaning, sanitation and related procedures for food processing production equipment.
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## Application of the Unit

<b>Application of the unit</b>	<p>This unit does not cover cleaning in place (CIP) processes. Where this is a required competency, select <i>FDFOP2003A Clean equipment in place</i>.</p> <p>Basic cleaning and sanitation procedures are covered in operational units. This unit should be selected where the operator is primarily responsible for cleaning and/or where they require a more detailed knowledge of cleaning and sanitation processes to carry out cleaning responsibilities. This unit applies to both wet and dry cleaning methods.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cleaning	1.1.Cleaning/sanitising agents and services are available and ready for use 1.2.Equipment is cleared of product and/or packaging consumables in preparation for cleaning 1.3.Equipment is rendered safe to clean
2. Clean and sanitise equipment to meet workplace requirements	2.1.Equipment is cleaned and sanitised according to workplace procedure and requirements 2.2.Equipment is inspected to confirm operating condition and cleanliness 2.3.Unacceptable equipment condition is identified and reported according to workplace procedures 2.4.Cleaning equipment and chemicals are stored according to workplace procedure 2.5.Waste from cleaning process is disposed of according to workplace procedures 2.6.Work is conducted in accordance with workplace environmental guidelines 2.7.Equipment is restored to operating order

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- access workplace information, such as the cleaning schedule to identify cleaning requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of necessary cleaning and sanitising equipment and services
- select and prepare cleaners and sanitisers as required according to workplace procedures
- prepare equipment for cleaning, such as rendering equipment safe to clean, clearing product and waste materials, covering motors and instrumentation where steam or water hoses are used, and simple dismantling of equipment parts
- advise any affected work areas/operators of cleaning progress to coordinate timely completion with minimal disruption to production
- clean and sanitise equipment as required according to workplace procedures and cleaning schedule
- return equipment to operating order (this may involve basic assembly of equipment parts)
- inspect equipment to identify equipment condition and cleanliness
- locate emergency stop functions on equipment
- report and/or correct unacceptable equipment condition
- maintain housekeeping standards
- prepare cleaners and sanitisers as required
- store cleaners, sanitisers and related equipment as required
- carry out relevant checks and inspections
- maintain work area to meet housekeeping standards
- conduct routine maintenance according to enterprise procedures
- take samples and conduct tests according to enterprise procedures
- record cleaning and sanitation information according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

#### Required knowledge

##### *Knowledge of:*

- the purpose of cleaning and sanitation and importance in maintaining food safety
- functions of cleaners, sanitisers and related equipment

## REQUIRED SKILLS AND KNOWLEDGE

- safe work procedures, including appropriate signage of cleaning activities, safe handling and storage of cleaners and sanitisers used, safety when using cleaning methods, such as hot water and steam hoses, and status and purpose of safety guards
- purpose and limitations of protective clothing and equipment
- cleaning and sanitation requirements relating to work responsibilities, including the need for different levels of cleaning where relevant
- procedures for preparing cleaners and sanitizers as required
- cleaning method/s to be followed relating to work responsibilities
- other work areas/operators who need to be consulted/advised on timing of cleaning
- methods used to render equipment safe to clean, including understanding the status and purpose of equipment guards, relevant lock out/tagout and isolation procedures and related equipment settings for both cleaning and operating as required
- procedures for conducting cleaning and sanitising
- types of waste generated by the cleaning process and related collection, treatment and disposal requirements
- potential environmental impact of incorrect waste handling
- inspection, cleaning and storage requirements of cleaning equipment used
- inspection points and methods for confirming the effectiveness of cleaning and sanitation, including visual inspection, and where required, recording of cleaning conducted
- inspection requirements to confirm equipment condition, including acceptable equipment condition, ability to identify faulty or unacceptable equipment and take required corrective action
- recording requirements and responsibilities
- routine maintenance procedures where relevant
- sampling methods and test procedures where relevant

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• prepare equipment for cleaning</li> <li>• prepare and use chemicals according to safe work requirements</li> <li>• clean and sanitise equipment to meet work standards</li> <li>• monitor cleaning and report or address any non-compliances</li> <li>• dispose of waste according to environmental guidelines</li> <li>• complete required documentation</li> <li>• apply safe work practices and identify OHS hazards and controls</li> <li>• apply food safety procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• cleaning procedures and related advice on equipment operation, including advice on safe work practices and environmental requirements</li> <li>• personal protective clothing and equipment</li> <li>• cleaning schedule and related procedures, including OHS advice</li> <li>• equipment/items to be cleaned</li> <li>• chemicals, cleaning equipment and services as required</li> <li>• MSDS where appropriate</li> <li>• housekeeping standards and procedures</li> <li>• cleaning/sanitising information recording system and procedures</li> <li>• advice on environmental management issues relevant to work responsibilities.</li> </ul>
<b>Method of assessment</b>	<p>This unit should be assessed together with core units and other units of competency relevant to the function or work role. Examples could be:</p> <ul style="list-style-type: none"> <li>• FDFOP2011A Conduct routine maintenance</li> <li>• FDFOP2013A Apply sampling procedures</li> <li>• MSL973001A Perform basic tests.</li> </ul>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where</p>

**EVIDENCE GUIDE**

	possible, over a number of assessment activities.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Policies and procedures**

Work is carried out in accordance with company procedures, licensing requirements, legislative requirements, and industrial awards and agreements. When applied to the pharmaceutical industry, relevant Good Manufacturing Practice (GMP) codes apply and reference to food safety is replaced by GMP

**Workplace information**

Workplace information may include:

- standard operating procedures (SOPs)
- specifications
- production and cleaning schedules
- labels and codes
- safety signs and symbols
- materials safety data sheets (MSDS)
- standard forms
- written or verbal instruction

**Cleaning and sanitising chemicals**

Cleaning and sanitising chemicals may be:

- pre-mixed or manually mixed

**Preparing/restoring equipment to operating order**

Preparing/restoring equipment to operating order may involve:

- simple dismantling and reassembling of equipment parts
- basic isolation
- covering of motors and instrumentation

**Services**

Services may include:



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• power</li> <li>• water</li> <li>• steam</li> <li>• compressed and instrumentation air</li> </ul>
<b>Inspecting cleaning effectiveness</b>	Inspecting cleaning effectiveness typically involves: <ul style="list-style-type: none"> <li>• carrying out a visual inspection</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Operational
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### Competency field

<b>Competency field</b>	
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### Co-requisite units

<b>Co-requisite units</b>		

# FDPOP2012A Maintain food safety when loading, unloading and transporting food

## Modification History

Not applicable.

## Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to load and transport temperature-sensitive ingredients and products.
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## Application of the Unit

<b>Application of the unit</b>	<p>This unit describes the food safety aspects of loading and transporting food where the transport operator does not have direct physical contact with food. Where food is directly handled by the transport operator, the relevant food handling unit also applies.</p> <p>This unit does not address competencies related to vehicle inspection and operation.</p> <p>This unit is based on and equivalent to the guideline food safety unit GFSTFA Transport food.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to transport food	1.1. Food storage vehicles and containers/receptacles are appropriate for use 1.2. Food storage vehicles and containers/receptacles are prepared for use 1.3. Food is loaded and secured as required to meet transportation and temperature control requirements 1.4. Hand washing and disinfecting procedures are followed to meet workplace requirements 1.5. Work is conducted in accordance with workplace environmental guidelines
2. Load, unload and transport food safely	2.1. Food safety control measures are monitored to ensure that food safety is maintained during transport 2.2. Where food safety control requirements are not met, the incident is promptly reported and corrective action is taken 2.3. Food is unloaded as required according to transportation and temperature control requirements 2.4. Food safety information is recorded to meet workplace requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- access workplace information to determine food handling and transport requirements
- select, fit and use personal protective clothing and/or equipment
- confirm that the vehicle and associated equipment are appropriate and ready for use, including confirming that vehicle type is capable of maintaining the required temperature range for product
- prepare transport containers (this will vary depending on the type of food and transport method), such as checking cleaning records, and where required, confirming product compatibility to ascertain that appropriate level of cleaning has occurred
- prepare the storage/holding environment as required, including confirming that temperature parameters for the loading and unloading areas are met
- follow procedures to load/unload food to ensure that materials/product is loaded/unloaded in correct sequence and configuration and that food cannot become contaminated by being located in proximity to other food or non-food items that can cause contamination (osmosis)
- monitor temperature parameters and related food safety control points before, during and after transporting food and record information in the required format
- take appropriate corrective action in response to failure to meet temperature parameters or other food safety requirements as required by workplace procedures
- clean and sanitise food containers according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

#### Required knowledge

##### *Knowledge of:*

- food safety control points in the loading/unloading and transportation of food materials and product and related methods of control
- characteristics of food transported and related transport environment requirements
- micro-biological, physical and chemical hazards that can occur when loading, transporting and unloading food, appropriate to nature and method of food transported, including the types of hazards likely to occur, the conditions under which they occur, and possible consequences
- methods and procedures used to control food safety hazards (this depends on the

**REQUIRED SKILLS AND KNOWLEDGE**

type of controls and equipment used), including the purpose and operation of equipment, procedures in place to maintain food safety and workplace records, such as temperature control charts and cleaning and sanitation records

- procedures used to confirm that transportation and related food safety equipment is appropriate for use and operational, such as equipment capacity to maintain a given temperature environment appropriate to the food product
- cleaning and sanitation requirements for food containers where relevant
- where contamination by osmosis is a possibility, the potential for cross-contamination resulting from location in proximity to other food or non-food items that are transported

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of ability to:

- ensure readiness of transport in accordance with product requirements
- identify risks associated with transporting food products
- identify and apply control measures for ensuring safety of food
- load and unload goods according to requirements
- identify and act on non-compliances
- complete workplace records as required
- apply safe work practices and identify OHS hazards and controls
- apply food safety procedures.

**Context of and specific resources for assessment**

Assessment must occur in a real or simulated workplace where the assessee has access to:

- loading/unloading and transport advice/schedules

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• food safety information (this may be included in a food safety plan and/or integrated into work procedures)</li> <li>• work procedures relevant to loading/unloading and transportation, including advice on required temperature parameters to be maintained</li> <li>• workplace information, such as temperature charts and cleaning records as appropriate</li> <li>• food materials and product to be loaded/unloaded and transported</li> <li>• documentation and recording requirements and procedures .</li> </ul>
<b>Method of assessment</b>	This unit should be assessed together with core units and other units of competency relevant to the function or work role.
<b>Guidance information for assessment</b>	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out according to company policies and procedures, licensing requirements, legislative requirements and industrial awards and agreements. When applied to the pharmaceutical industry, relevant Good Manufacturing Practice (GMP) codes apply and reference to food safety is replaced by GMP
<b>Workplace information</b>	Workplace information may include:

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• standard operating procedures (SOPs)</li> <li>• food safety program</li> <li>• product handling specifications</li> <li>• transport schedules and instructions</li> <li>• transport vehicle manufacturers' advice</li> <li>• standard forms and reports</li> </ul>
<b>Transport vehicles</b>	Transport vehicles are appropriate for the transportation of food and capable of maintaining the required environment for the food type transported
<b>Food safety controls</b>	Food safety controls refer to the methods used to control food safety hazards. Control methods, requirements and record keeping are specified in workplace food safety procedures which typically form part of a workplace food safety program
<b>Safe food transport parameters</b>	Safe food transport parameters depend on the type of food transported. Industry guidelines and codes, such as Cold Chain guidelines should be used as a basis for setting these parameters where available
<b>Confirming readiness for use of food transport vehicle</b>	<p>Confirming readiness for use of food transport vehicle and containers/receptacles can include:</p> <ul style="list-style-type: none"> <li>• confirming that the vehicle is in good operating order and that containers/receptacles used to store food meet the relevant cleaning and sanitation requirements</li> </ul> <p>It may also include:</p> <ul style="list-style-type: none"> <li>• bringing the food handling area and storage container/receptacle to within the required temperature range before loading/unloading and confirming that equipment required to maintain temperature is operational</li> </ul>
<b>Food safety incidents</b>	A food safety incident is a situation where the safe limits or parameters identified by the food safety program are not met

**Unit Sector(s)**

<b>Unit sector</b>	Operational
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**Competency field**

<b>Competency field</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		



# FDFOP2013A Apply sampling procedures

## Modification History

Not applicable.

## Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to understand the requirements of sampling plans, and to collect and transfer samples to retain sample integrity.
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## Application of the Unit

<b>Application of the unit</b>	<p>This unit has application in a food production environment. Operators requiring this competency would typically be required to follow specific sampling procedures, such as aseptic sampling.</p> <p>When applied to the pharmaceutical industry, relevant Good Manufacturing Practice (GMP) codes apply and reference to food safety is replaced by GMP.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for sampling	<p>1.1.Sampling requirements are identified in accordance with the sampling plan</p> <p>1.2.Sampling equipment, containers and labels are prepared</p>
2. Collect samples	<p>2.1.Samples are collected according to sampling procedures and the requirements of the sampling plan</p> <p>2.2.Samples are handled and prepared to preserve sample and source integrity</p> <p>2.3.Defects or abnormalities in source material and/or sample are identified and reported</p> <p>2.4.Sample information is recorded according to workplace sample recording requirements</p> <p>2.5.The work area is maintained according to housekeeping standards</p> <p>2.6.Work is conducted in accordance with workplace environmental guidelines</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

#### *Ability to:*

- access and interpret sampling plan to identify sampling requirements
- select, fit and use personal protective clothing and/or equipment
- prepare for sampling to ensure required tools, containers and labels are available
- follow sampling procedures and the sampling plan to collect samples from the points, in the quantities and at the times specified
- identify atypical source materials and/or samples and take corrective action, such as reporting abnormalities, repeating sample collection and/or following intensive sampling schedules as required
- complete sample records according to workplace requirements, such as labelling samples as required
- transfer samples for testing
- maintain work area to meet housekeeping standards
- prepare samples according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

### Required knowledge

#### *Knowledge of:*

- basic sampling principles, including the importance of following the sampling plan to obtain representative sampling reflecting characteristics of source material, the sample characteristics and related preservation, handling and storage requirements, and the labelling system purpose and requirements
- tests to be conducted on samples and related handling and preparation requirements and responsibilities
- characteristics of materials sampled and common contaminants and related conditions under which contamination is likely to occur
- sampling techniques relevant to samples collected, such as sterilisation methods and procedures
- the relationship between sampling, testing and production processes, including different sampling regimes that may apply in response to non-standard conditions or after corrective action is taken to adjust production outputs
- procedures and responsibility for reporting and recording sampling information, such as legislative requirements
- procedures for preparing samples where relevant

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• conduct pre-start checks on equipment used for collecting and handling samples</li> <li>• collect, handle and store samples according to sampling requirements and standards</li> <li>• take corrective action in response to typical defects and inconsistencies</li> <li>• complete workplace records as required</li> <li>• apply safe work practices and identify OHS hazards and controls</li> <li>• apply food safety procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• sampling plan</li> <li>• documentation, including specifications, work instruction and other advice on sampling requirements</li> <li>• recording and reporting system</li> <li>• sampling instrumentation and containers as required</li> <li>• product/source material to be sampled.</li> </ul>
<b>Method of assessment</b>	<p>This unit should be assessed together with core units and other units of competency relevant to the function or work role. Example could be:</p> <ul style="list-style-type: none"> <li>• MSL973001A Perform basic tests</li> </ul>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where</p>

**EVIDENCE GUIDE**

	possible, over a number of assessment activities.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Policies and procedures**

Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements and industrial awards and agreements

**Workplace information**

Workplace information may include:

- standard operating procedures (SOPs)
- specifications
- production schedules and instructions
- manufacturers' advice
- sampling plans

**Sampling requirements**

Sampling requirements include:

- sampling under standard conditions
- sampling after processes are adjusted in response to variation or non-conformance

**Sampling**

Sampling typically occurs at a number of points and using a range of techniques

**Maintenance of sample integrity**

Maintenance of sample integrity may be achieved by:

- use of appropriate personal protective clothing
- use of clean sampling tools and containers (sterilised tools/containers for aseptic sampling)
- temperature control
- addition of preservatives as required

**RANGE STATEMENT**

<b>Sampling techniques</b>	Sampling techniques may include: <ul style="list-style-type: none"> <li>• sub-sampling</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Operational
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**Competency field**

<b>Competency field</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

# FDOP2016A Work in a food handling area for non-food handlers

## Modification History

Not applicable.

## Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to conduct work in a food handling area where the work does not involve direct food contact.
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## Application of the Unit

<b>Application of the unit</b>	<p>Typical applications for this unit include stores/warehousing, cleaning and maintenance workers. This unit is not appropriate for a person who has direct contact with food and/or raw materials or ingredients. Where this is a requirement, refer to relevant core food safety units.</p> <p>This unit is based on and equivalent to the guideline food safety unit GFSWFHAA Carry out work in a food handling area.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Maintain food safety while working in a food handling area	<p>1.1. Food safety requirements related to work tasks are identified and followed</p> <p>1.2. Work responsibilities are carried out so that the safety of food is maintained</p> <p>1.3. Procedures or practices which are not consistent with workplace food safety program are identified and reported</p>
2. Maintain food handling area in clean and orderly state	<p>2.1. Equipment and the food handling area meet the cleaning and sanitation requirements of workplace food safety program</p> <p>2.2. Work is conducted in accordance with workplace environmental guidelines</p> <p>2.3. Waste is collected and disposed of according to workplace procedures</p>

## Required Skills and Knowledge

**REQUIRED SKILLS AND KNOWLEDGE**



## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

### Required skills

#### *Ability to:*

- access and apply workplace information on food safety policies and procedures relating to own work
- fit and use appropriate personal protective clothing and equipment as required by work tasks to meet food business requirements
- maintain personal conduct consistent with workplace requirements
- check own work area to identify food safety hazards
- carry out work responsibilities to ensure that food safety is not compromised
- take necessary precautions when moving between or around the workplace and/or from one task to another to minimise the risk of contamination
- recognise and report situations or procedures that could compromise food safety according to workplace procedure, including following procedures in own work and related work area to report to the appropriate personnel, in required detail and in a timely manner
- take corrective or preventative action within level of responsibility
- report health conditions and illness as required by workplace food safety procedures
- sort and dispose of waste as required by work responsibility according to workplace procedure
- maintain housekeeping standards in work area
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

### Required knowledge

#### *Knowledge of:*

- food safety requirements related to own work as determined by the workplace
- sources of advice on food safety issues and responsibilities in the workplace
- personal hygiene practices and clothing and footwear requirements associated with working in and moving in and between food handling areas and moving between food handling and non food-handling areas
- suitable standard for materials and equipment used in the food handling area, including materials that are unsuitable for use, such as breakable or dirty equipment/materials
- methods and procedures to be followed when carrying out work responsibilities in a food handling area to ensure that food safety is not compromised (this will depend on the nature of work responsibilities and food safety requirements as

**REQUIRED SKILLS AND KNOWLEDGE**

specified by the workplace)

- the types of contamination that can occur as a result of work activities, and procedures used to prevent these types of contamination from occurring
- cleaning and sanitation requirements and responsibilities, including cleaning methods appropriate to a food handling environment and those used in the specific food handling area
- waste collection, recycling and handling procedures
- housekeeping standards to be maintained in the work area

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of ability to:

- identify food handling procedures and food safety issues for work
- apply food safety procedures when handling food products
- identify and act on non-conformances
- ensure cleaning standards are met
- follow environmental and waste management procedures.

**Context of and specific resources for assessment**

Assessment must occur in a real or simulated workplace where the assessee has access to:

- food safety policies and procedures relevant to work function
- work procedures, including procedures for entering and exiting food handling areas
- work process and related services/resources
- work area and related equipment to undertake work function

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>waste collection, treatment, recycling and/or disposal methods</li> <li>monitoring and reporting system.</li> </ul>
<b>Method of assessment</b>	This unit should be assessed together with core units and other units of competency relevant to the function or work role.
<b>Guidance information for assessment</b>	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with company policies and procedures, regulatory and licensing requirements, legislative requirements, site licences and industrial awards and agreements
<b>Workplace information</b>	<p>Workplace information may include:</p> <ul style="list-style-type: none"> <li>standard operating procedures (SOPs)</li> <li>advice on food safety requirements related to work function</li> <li>standard forms</li> <li>written or verbal instructions</li> </ul>
<b>Food handling area</b>	Food handling area can refer to any work area where receiving, handling and inspecting, preparing, processing, packaging, storing and/or despatching occur
<b>Examples of contamination that</b>	Examples of contamination that can result from

<b>RANGE STATEMENT</b>	
<b>can result from work activities</b>	work activities include: <ul style="list-style-type: none"> <li>chemical contamination which could be caused by lubricants, resins and cleaning and sanitation chemicals</li> <li>physical contamination which could be caused by metal, glass, plastic and cloths</li> </ul>
<b>Personal hygiene, clothing and footwear and requirements</b>	Personal hygiene, clothing and footwear and requirements to report health conditions or illness must meet workplace requirements and procedures. At a minimum such procedures must ensure that any person in a food premises does not contaminate food, does not have unnecessary contact with ready-to-eat food and does not spit, smoke or use tobacco or similar in a food handling area. Refer to Food Safety Standard 3.2.2, Clause 17:3 and relevant state and territory regulations/legislation

### Unit Sector(s)

<b>Unit sector</b>	Operational
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### Competency field

<b>Competency field</b>	
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### Co-requisite units

<b>Co-requisite units</b>	

## FDFOP2023A Operate a packaging process

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down a packaging process or sub-system.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit has application in a food processing packing environment. It typically targets the worker responsible for applying basic operating principles to the operation and monitoring of a packing process and associated equipment. This unit is generic and should be customised for a given process. It should only be selected where no specific packaging unit is available.</p> <p>A packaging process may relate to primary and/or secondary packaging activities. It typically requires the operation of a series of related items of equipment to achieve the required outcome.</p> <p>Where a single item of packaging equipment is operated, refer to FDFOP1005A Operate basic equipment.</p> <p>When batch or product changeover procedures are part of this work process, the procedures should be used to customise the application of this unit. Where more detailed changeovers are carried out, FDFOP2011A Conduct routine maintenance, should be considered.</p>
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### Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare the equipment and process for operation	<p>1.1.Packaging components/consumables, materials and items to be packaged are confirmed and available to meet operating requirements</p> <p>1.2.Cleaning and maintenance requirements and status are identified and confirmed</p> <p>1.3.Machine components and related attachments are fitted and adjusted to meet operating requirements</p> <p>1.4.Operating parameters are entered as required to meet safety and production requirements</p> <p>1.5.Materials, product and packaging components/consumables are loaded or positioned as required to meet packaging requirements</p> <p>1.6.Equipment performance is checked and adjusted as required</p>

ELEMENT	PERFORMANCE CRITERIA
	1.7.Pre-start checks are carried out as required by workplace requirements
2. Operate and monitor the process	2.1.The process is started and operated according to workplace procedures 2.2.Equipment is monitored to identify variation in operating conditions 2.3.Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements 2.4.The process is monitored to confirm that specifications are met 2.5.Out-of-specification process outcomes are identified, rectified and/or reported to maintain the process within specification 2.6.The work area is maintained according to housekeeping standards 2.7.Work is conducted in accordance with workplace environmental guidelines 2.8.Workplace records are maintained according to workplace recording requirements
3. Shut down the process	3.1.The appropriate shutdown procedure is identified 3.2.The process is shut down according to workplace procedures 3.3.Maintenance requirements are identified and reported according to workplace reporting requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- access workplace information to identify packaging requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of necessary packaging components/consumables, materials and services
- conduct pre-start checks, such as inspecting equipment condition to identify any

## REQUIRED SKILLS AND KNOWLEDGE

signs of wear, setting coders and printers, selecting appropriate equipment settings and/or related parameters, cancelling isolation or lockouts as required, confirming that equipment is clean and correctly configured for packaging requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been completed, and confirming that all safety guards are in place and operational

- start, operate, monitor and adjust packaging equipment to achieve required outcomes., such as packaging components/consumables and/or product, and monitoring control points (e.g. weights, codes, placement, glue temperatures, alignment and appearance, configuration and seal integrity) as required to confirm process remains within specification
- monitor supply and flow of materials to and from the process
- take corrective action in response to out-of-specification results
- respond to and/or report equipment failure within level of responsibility
- locate emergency stop functions on equipment
- follow isolation and lock out/tag out procedures as required to take packaging equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- demonstrate batch/process changeovers
- complete workplace records as required
- maintain work area to meet housekeeping standards
- use process control systems according to enterprise procedures
- integrity testing of packaging according to enterprise procedures
- carry out routine maintenance according to enterprise procedures
- clean and sanitise equipment according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

### Required knowledge

#### *Knowledge of:*

- purpose and basic principles of the packaging process, including the purpose and characteristics required of packaging materials used and the principles of the packaging process used (where methods involve vacuum or map packaging, it includes an understanding of the effect of modified atmosphere on product shelf-life)
- product and packaging coding requirements and related legal requirements, including product weight
- basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation
- services required and action to take if services are not available



## REQUIRED SKILLS AND KNOWLEDGE

- the flow of processes supplying the packaging process and the effect of outputs on downstream processes
- quality characteristics required of the packaging process, such as seal integrity requirements
- effect of variation in inputs, such as packaging components/consumables, materials and/or services, on process performance
- operating requirements and parameters and corrective action required where operation is outside specified operating parameters, including restart procedures following a crash or jam up
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
- methods used to monitor the packaging process, such as visual inspecting, and measuring and testing as required by the process
- inspection or test points (control points) in the process and the related procedures and recording requirements
- contamination/food safety risks related to stages in the packaging process and related control measures
- common causes of variation and corrective action required
- occupational health and safety (OHS) hazards and controls
- requirements of different shutdowns as appropriate to the packaging process, including emergency and routine shutdowns and procedures to follow in the event of a power outage, and conducting basic equipment referencing where required
- product/packaging changeover procedures and responsibilities
- isolation, lock out and tag out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process
- basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment
- routine maintenance procedures where relevant
- packaging integrity testing where relevant
- cleaning and sanitation procedures where relevant

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
<b>Overview of assessment</b>	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	Evidence of ability to: <ul style="list-style-type: none"> <li>• conduct pre-start checks on machinery used for packing</li> <li>• start, operate, monitor and adjust process equipment to achieve required quality outcomes</li> <li>• take corrective action in response to typical faults and inconsistencies</li> <li>• complete workplace records as required</li> <li>• apply safe work practices and identify OHS hazards and controls</li> <li>• safely shut down equipment</li> <li>• apply food safety procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	Assessment must occur in a real or simulated workplace where the assessee has access to: <ul style="list-style-type: none"> <li>• personal protective clothing and equipment</li> <li>• work procedures, including advice on safe work practices, food safety, quality and environmental requirements</li> <li>• information on equipment capacity and operating parameters</li> <li>• specifications, control points and operating parameters</li> <li>• packaging and related equipment and services</li> <li>• materials to be packaged and packaging components/consumables as required</li> <li>• sampling schedules and test procedures and equipment as required</li> <li>• documentation and recording requirements and procedures</li> <li>• cleaning procedures, materials and equipment as required.</li> </ul>
<b>Method of assessment</b>	This unit should be assessed together with core units and other units of competency relevant to the function or work role. Examples could be: <ul style="list-style-type: none"> <li>• FDFOP2004A Clean and sanitise equipment</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• FDFOP2011A Conduct routine maintenance</li> <li>• FDFOP2013A Apply sampling procedures</li> <li>• FDFOP2030A Operate a process control interface</li> <li>• MSL973001A Perform basic tests.</li> </ul>
<b>Guidance information for assessment</b>	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
<b>Legislative requirements</b>	<p>Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes:</p> <ul style="list-style-type: none"> <li>• the Food Standards Code, including labelling, weights and measures legislation</li> <li>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity</li> </ul> <p>When applied to the pharmaceutical industry, relevant Good Manufacturing Practice (GMP) codes apply in place of the Australian Food Standards Code and reference to food safety is replaced by GMP</p>
<b>Workplace information</b>	Workplace information may include:

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• standard operating procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules and instructions</li> <li>• manufacturers' advice</li> <li>• standard forms and reports</li> </ul>
<b>Typical equipment</b>	<p>Typical equipment that may form a packaging sub-system includes:</p> <ul style="list-style-type: none"> <li>• conveyor systems</li> <li>• filling</li> <li>• sealing</li> <li>• wrapping</li> <li>• thermo-form equipment</li> <li>• case packers</li> <li>• bundlers</li> <li>• ink jet coders</li> <li>• labellers</li> <li>• palletisers</li> <li>• shrink wrappers</li> <li>• strappers</li> </ul>
<b>Packaging</b>	<p>Packaging may include:</p> <ul style="list-style-type: none"> <li>• vacuum packing</li> <li>• modified atmosphere packaging (MAP)</li> <li>• blister packaging or over wrapping</li> </ul>
<b>Operation of equipment and processes</b>	<p>Operation of equipment and processes may require:</p> <ul style="list-style-type: none"> <li>• the use of process control panels and systems</li> </ul>
<b>Shutdown procedures</b>	<p>Shutdown procedures may include:</p> <ul style="list-style-type: none"> <li>• cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Operational
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## Competency field

Competency field	
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## Co-requisite units

Co-requisite units		

# FDFOP2038A Operate a grinding process

## Modification History

Not applicable.

## Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down processes, such as grinding, rolling and breaking to reduce the particle size of grains and pulses.
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## Application of the Unit

<b>Application of the unit</b>	<p>This unit has application in a food production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of grinding equipment and processes.</p> <p>When batch or product changeover procedures are part of this work process, the procedures should be used to customise the application of this unit. Where more detailed changeovers are carried out, FDFOP2011A Conduct routine maintenance, should be considered.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare the grinding equipment and process for operation	<p>1.1. Materials are confirmed and available to meet production requirements</p> <p>1.2. Cleaning and maintenance requirements and status are identified and confirmed</p> <p>1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements</p> <p>1.4. Processing/operating parameters are entered as required to meet safety and production requirements</p> <p>1.5. Equipment performance is checked and adjusted as required</p> <p>1.6. Pre-start checks are carried out as required by workplace requirements</p>
2. Operate and monitor the grinding process	<p>2.1. The process is started and operated according to workplace procedures</p> <p>2.2. Equipment is monitored to identify variation in operating conditions</p> <p>2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements</p> <p>2.4. The process is monitored to confirm that specifications are met</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification</p> <p>2.6. The work area is maintained according to housekeeping standards</p> <p>2.7. Work is conducted according to environmental standards</p> <p>2.8. Workplace records are maintained according to workplace recording requirements</p>
3. Shut down the grinding process	<p>3.1. The appropriate shutdown procedure is identified</p> <p>3.2. The process is shut down according to workplace procedures</p> <p>3.3. Maintenance requirements are identified and reported</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- access workplace information to identify processing requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of necessary materials and services to the grinding process
- conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational
- operate stockfeed control panel to transfer and grind product
- monitor and adjust the grinding process and equipment operation to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, and running adjustments to hammer mills and roller mills
- monitor supply and flow of materials to and from the grinding process
- take corrective action in response to out-of-specification results
- respond to and/or report equipment failure within level of responsibility



## REQUIRED SKILLS AND KNOWLEDGE

- locate emergency stop functions on equipment
- follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- complete workplace records as required
- demonstrate batch/product changeovers
- sort, collect, treat, recycle or dispose of waste
- maintain work area to meet housekeeping standards
- collect samples and conduct tests according to enterprise procedures
- conduct routine maintenance according to enterprise procedures
- clean and sanitise equipment according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

### Required knowledge

#### *Knowledge of:*

- purpose and basic principles of the grinding process, including the characteristics of materials, which can be reduced to a suitable form for product such as stockfeed
- basic operating principles of equipment, such as main equipment components, bulk materials transfer systems and equipment, dust collection equipment, grinding equipment operating capacities and applications, and the purpose and location of magnets, sensors and related feedback instrumentation
- services required and action to take if services are not available
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- the flow of the grinding process and the effect of product output on downstream processes
- quality characteristics and uses of grinding process outputs
- effect of the grinding process on the end product
- effect of raw material characteristics on grinding process performance
- operating requirements and parameters and corrective action required where operation is outside specified operating parameters
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
- techniques used to monitor the production process, such as inspecting, measuring and testing as required by the process
- inspection or test points (control points) in the process and the related procedures and recording requirements
- contamination/food safety risks associated with the grinding process and related control measures

## REQUIRED SKILLS AND KNOWLEDGE

- common causes of variation and corrective action required
- operational health and safety (OHS) hazards and controls, including the risk of dust explosion and an understanding of the limitations of protective clothing and equipment relevant to the work process
- requirements of different shutdowns as appropriate to the process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage
- product/process changeover procedures and responsibilities
- isolation, lock out and tag out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process
- sampling and testing associated with process monitoring and control where relevant
- routine maintenance procedures where relevant
- cleaning and sanitation procedures where relevant

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of ability to:

- conduct pre-start checks on machinery used for grinding
- start, operate, monitor and adjust process equipment to achieve required quality outcomes
- take corrective action in response to typical faults and inconsistencies
- complete workplace records as required
- apply safe work practices and identify OHS hazards

<b>EVIDENCE GUIDE</b>	
	<p>and controls</p> <ul style="list-style-type: none"> <li>• safely shut down equipment</li> <li>• apply food safety procedures to work practices.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment</li> <li>• work procedures including advice on safe work practices, food safety, quality and environmental requirements, stock flow systems, production schedules, batch/recipe instructions</li> <li>• specifications, control points and processing parameters</li> <li>• production schedule/batch instructions</li> <li>• information on equipment capacity and operating parameters</li> <li>• grinding and related equipment and services</li> <li>• stock required for the grinding process</li> <li>• sampling schedules and test procedures and equipment as required</li> <li>• documentation and recording requirements and procedures</li> <li>• cleaning procedures, materials and equipment as required.</li> </ul>
<b>Method of assessment</b>	<p>This unit should be assessed together with core units and other units of competency relevant to the function or work role. Examples could be:</p> <ul style="list-style-type: none"> <li>• FDFOP2004A Clean and sanitise equipment</li> <li>• FDFOP2011A Conduct routine maintenance</li> <li>• FDFOP2013A Apply sampling procedures</li> <li>• FDFOP2030A Operate a process control interface</li> <li>• MSL973001A Perform basic tests.</li> </ul>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
<b>Legislative requirements</b>	<p>Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes:</p> <ul style="list-style-type: none"> <li>• the Food Standard Code, including the labelling, weights and measures legislation</li> <li>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity</li> </ul>
<b>Workplace information</b>	<p>Workplace information may include:</p> <ul style="list-style-type: none"> <li>• standard operating procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules and instructions</li> <li>• manufacturers' advice</li> <li>• standard forms and reports</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• conveyors/elevators</li> <li>• augers</li> <li>• magnets</li> <li>• fans</li> <li>• sieves</li> <li>• hammer mills</li> <li>• roller mills</li> <li>• breaker bars</li> <li>• cyclones</li> </ul>
<b>Materials</b>	<p>Materials include:</p> <ul style="list-style-type: none"> <li>• grains</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• pulses</li> </ul> Pulses are legumes typically include: <ul style="list-style-type: none"> <li>• peas</li> <li>• beans</li> <li>• lentils</li> </ul>
<b>Shutdown procedures</b>	Shutdown procedures may include: <ul style="list-style-type: none"> <li>• cleaning( in some cases cleaning may be carried out by a dedicated cleaning crew)</li> </ul>
<b>Services</b>	Services may need to be confirmed. These depend on the nature of the process. Typical examples include: <ul style="list-style-type: none"> <li>• power</li> <li>• steam</li> <li>• water</li> <li>• vacuum</li> <li>• compressed and instrumentation air</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Operational
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### Competency field

<b>Competency field</b>	
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### Co-requisite units

<b>Co-requisite units</b>		



## FDFTEC3001A Participate in a HACCP team

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to participate in the development and/or review of a HACCP-based food safety program under direction.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit is appropriate where the operator requires a detailed understanding of the steps and techniques used to develop and review a HACCP-based food safety program.</p> <p>This unit can be aligned at either AQF 3 or 4. When aligned at AQF 3 the person would typically participate in the development of the food safety program as part of a group. The scope of contribution would typically be limited to their immediate work area. When this unit is applied at AQF 4 the person may take a lead role in facilitating the development of the food safety program and would apply an understanding of food safety across more diverse operations or work areas.</p> <p>This unit is based on and achieves part of the guideline food safety unit GFSDFSPA Develop food safety programs.</p>
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### Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		
	FDFFS2001A	Implement the food safety program and procedures

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to develop and/or review a food safety program	<p>1.1.Roles and responsibilities for participating in, developing or reviewing a food safety program are identified</p> <p>1.2.The scope of the food safety program is identified</p>
2. Identify and/or review food safety hazards	<p>2.1.Processes to be covered by the food safety program are identified and steps within each process are described</p> <p>2.2.Food safety hazards that are reasonably expected to occur are identified for each process</p> <p>2.3.Handling methods, processing techniques and existing support programs used in the workplace are identified</p>
3. Establish and/or	3.1.Acceptable methods of control are established for



ELEMENT	PERFORMANCE CRITERIA
review methods to monitor and control food safety hazards	<p>each food safety hazard that is reasonably expected to occur</p> <p>3.2. Control methods are validated</p> <p>3.3. Procedures for taking preventative action are established</p> <p>3.4. Appropriate methods for monitoring that processes remain within control are established</p> <p>3.5. Required corrective action to respond to situations where hazards are not effectively controlled is established</p> <p>3.6. Work is conducted in accordance with workplace environmental guidelines</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- identify personal roles and responsibilities for participating in the development or review of a food safety program
- identify processes and steps to be covered
- identify hazards that are reasonably expected to occur and establish appropriate methods of control, such as participating in validating existing control methods and where there is no adequate control method in place, establishing an appropriate method
- establish or review procedures for implementing preventative action, such as revision of materials, processes and/or food handling procedures, and where required, the revision of workplace practices and documentation, such as specifications, operating procedures and approved supplier programs
- describe the appropriate monitoring requirements for each food safety hazard, including the method or procedure to be followed, the frequency and timing, the person responsible, and the information to be recorded (procedures to be followed would typically be specified in the form of a standard operating procedure or work instruction)
- describe corrective action requirements in the event that acceptable limits or

## REQUIRED SKILLS AND KNOWLEDGE

requirements of support programs are not met

- develop or review documentation relating to the design and maintenance of the food safety program, such as flow diagrams, hazard analysis charts and tables, support program requirements, data analysis reports, corrective action reports and verification reports
- develop or review documentation to communicate food safety responsibilities, such as standard operating procedures (SOPs), processing parameters and recording devices (e.g. log sheets)
- communicate food safety responsibilities within level of responsibility using techniques and presentation styles appropriate to the audience
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

### Required knowledge

#### *Knowledge of:*

- the purpose and intent of food safety legislation
- purpose and responsibilities for maintaining records as required by legislation and workplace procedures
- roles and responsibilities for development and maintenance of the food safety program, including roles of internal and external auditors and of authorised officers
- techniques for applying HACCP-based principles, including techniques for identifying hazards, assessing the likelihood of occurrence, determining acceptable methods of control, monitoring and recording requirements for each control point, identifying corrective action if controls are not met, and developing system review procedures
- techniques used to map operations and analyse food safety requirements, such as preparation of flow charts, hazard analysis charts and tables, and data analysis reports
- raw materials, ingredient and finished product composition and characteristics, and related handling and storage requirements
- food processing methods used in the workplace or work area and their effect on food safety
- sources of technical expertise on food safety requirements
- the role of consultation in the development, implementation and ongoing maintenance of the food safety program
- documentation and recording requirements to support communication and monitoring of the food safety program, including procedures for maintaining and updating relevant documents, such as operating procedures
- main types of food safety hazards/contamination likely to occur given the type of

## REQUIRED SKILLS AND KNOWLEDGE

- product and processing methods used
- conditions required for bacterial food poisoning to occur, such as water activity, pH, composition, time and temperature as relevant to food handled
- acceptable control methods for the hazards identified and required corrective action when control requirements are not met
- typical support programs, such as cleaning schedules, pest control, stock rotation, product traceability and personal hygiene, and how they can be used as part of a food safety program
- acceptable control methods for the hazards identified and required corrective action when control requirements are not met
- validation and verification processes and techniques and responsibilities

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of ability to:

- identify components and parameters of a food safety program
- identify food safety hazards in production processes
- establish and validate control standards and methods for each hazard
- establish procedures for unpredicted hazards
- communicate and document hazards and control procedures
- complete workplace records
- apply safe work practices and identify occupational health and safety (OHS) hazards and controls
- apply food safety procedures.

#### Context of and specific resources for

Assessment must occur in a real or simulated workplace

<b>EVIDENCE GUIDE</b>	
<b>assessment</b>	<p>where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• workplace food safety program documentation</li> <li>• advice on quality and food safety legislation</li> <li>• procedures for developing or modifying specifications and other advice on food safety requirements</li> <li>• procedures for developing or modifying documentation, such as work instructions and procedures, log sheets and other recording requirements</li> <li>• review/audit arrangements</li> <li>• consultative mechanisms</li> <li>• communication systems</li> <li>• training system</li> <li>• reporting/recording system.</li> </ul>
<b>Method of assessment</b>	This unit should be assessed together with core units and other units of competency relevant to the function or work role.
<b>Guidance information for assessment</b>	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Food safety programs</b>	A food safety program is a written document that specifies how a business will control all food safety hazards that are reasonably expected to occur in the food business. The food safety program must provide for the systematic

<b>RANGE STATEMENT</b>	
	<p>monitoring of the controls as well as appropriate corrective action if a hazard is found not to be under control. Records must be kept to demonstrate action in relation to, or in compliance with, the food safety program. A food safety program may be developed as a stand-alone program or may be integrated with the quality program in a workplace</p>
<b>Methods used to control hazards</b>	<p>Methods used to control hazards include:</p> <ul style="list-style-type: none"> <li>• both support programs and specific hazard control limits or requirements</li> </ul> <p>Typical examples of support programs include:</p> <ul style="list-style-type: none"> <li>• product recall</li> <li>• cleaning schedules</li> <li>• pest control programs</li> <li>• personal hygiene practices</li> <li>• calibration procedures and related operating procedures</li> </ul>
<b>Food safety hazards</b>	<p>Food safety hazards include:</p> <ul style="list-style-type: none"> <li>• microbiological</li> <li>• chemical</li> <li>• physical hazards</li> </ul>
<b>Validation</b>	<p>Validation refers to:</p> <ul style="list-style-type: none"> <li>• the use of objective evidence in order to prove that materials, processes, procedures or equipment used are capable of delivering the intended result</li> </ul>
<b>Verification</b>	<p>Verification refers to:</p> <ul style="list-style-type: none"> <li>• reviewing all aspects of the food safety program and related records to determine compliance with and adequacy of the food safety program</li> </ul> <p>At a minimum, food safety programs must be verified annually</p>
<b>Scope of the HACCP based plans</b>	<p>The scope of the HACCP-based plan depends on workplace requirements and may extend outside the direct area of responsibility of the team participants</p>

### Unit Sector(s)

Unit sector	Technical
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### Competency field

Competency field	
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### Co-requisite units

Co-requisite units		

## FDFWGG2001A Bench graft vines

### Modification History

This unit supersedes and is equivalent to FDFWGGBGVB Bench graft vines.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to select appropriate vine material and bench graft vines.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to wine grape growing and covers the bench grafting of vines. The unit includes the selection of appropriate vine material, preparation of cuttings, grafting and post-grafting treatment and storage.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to bench graft vines	1.1 Materials are confirmed as available to meet grafting requirements 1.2 Cuttings are selected and prepared for grafting 1.3 Equipment is checked to confirm readiness for use 1.4 Equipment is set to meet grafting needs as required
2. Bench graft vines	2.1 Cuttings are disbudded according to workplace procedures 2.2 Cuttings are bench grafted according to workplace procedures 2.3 Graft is treated and/or taped according to workplace procedures 2.4 Grafting process and equipment are monitored to ensure results are maintained within specifications 2.5 Out-of-specification process and equipment performance are identified, rectified and/or reported
3. Complete bench grafting activities	3.1 Equipment is shut down, cleaned and maintained as required 3.2 Grafted vines are packed, labelled and stored according to instructions 3.3 Waste generated by both the process and cleaning procedures is collected, treated and disposed of according to workplace procedures 3.4 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.



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**Required skills include:**

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Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Ability to:**

- access workplace information to identify grafting requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- liaise with other work areas and customers
- confirm supply of necessary materials
- select appropriate vine material for grafting. This may include consideration of:
  - variety and clone
  - matching cambium
  - matching bevels and sizes
  - wood diameters
  - customer or workplace requirements
- prepare vine material for grafting. This may include:
  - removal from cold storage
  - soaking
  - heat treatment
  - disbudding
  - hydration
  - grading
- select, prepare and set equipment as required
- operate equipment
- disbud vines according to instructions
- bench graft vines to match specifications
- treat vines after grafting. This may include:
  - packing into callusing boxes
  - hormonal treatment
  - careful handling
  - following hygiene procedures
- monitor the process and equipment operation to identify out-of-specification results or non-compliance. This may include monitoring:
  - tightness of graft union
  - progress (e.g. number per day)
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record corrective action as required
- sort, collect, treat, recycle or dispose of waste as required
- maintain work area to meet housekeeping standards. This should include hygiene requirements to prevent cross-infection

- clean equipment as required
- pack, label and store grafted vines. This may include consideration of:
  - cold room layout
  - cold room temperature variations
  - customer requirements
  - storage time requirements
  - care of vine material (e.g. moisture and disease)
- identify, rectify and/or report environmental non-compliance
- conduct routine maintenance of equipment according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

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**Required knowledge includes:**

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- purpose of grafting and various methods of budding and grafting
- purpose and methods of disbudding
- criteria for successful grafting
- importance of selection and use of rootstock and Vinifera
- advantages of using clonal and registered vine improvement rootstock material
- criteria for selecting parent vines for scion material
- procedures and optimum conditions for the storage of material until required for grafting
- stages of the grafting procedure and their purpose
- common problems and corrective action required
- hygiene requirements and procedures
- purpose and components of grafting equipment
- operating procedures for grafting equipment
- methods of callusing vine cuttings and the criteria for best callus development
- procedures and responsibility for reporting problems
- environmental issues and controls
- cleaning requirements and procedures for work area and equipment
- reporting and recording requirements and procedures
- routine maintenance procedures for equipment where relevant.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• select and prepare appropriate vine material for grafting including disbudding</li> <li>• undertake bench grafting of vines to instructions</li> <li>• post-grafting treatment and packing of vines is to instructions</li> <li>• monitor grafted vines and out of specification grafted vines identified and rectified or reported</li> <li>• follow personal and work area hygiene procedures</li> <li>• dispose of waste correctly</li> <li>• record and report results of grafting according to procedures.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>

<b>EVIDENCE GUIDE</b>	
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Grafting methods</b>	<p>Grafting methods may include:</p> <ul style="list-style-type: none"> <li>• T buds</li> <li>• Chip</li> <li>• Wedge</li> <li>• side bark</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• V</li> <li>• omega</li> </ul>
<b>Equipment</b>	Equipment may include: <ul style="list-style-type: none"> <li>• secateurs</li> <li>• grafting knife</li> <li>• grafting machine</li> <li>• vermiculite boxes</li> <li>• gloves</li> <li>• budding tape</li> </ul>
<b>Grafting seals</b>	Grafting seals may include: <ul style="list-style-type: none"> <li>• tape</li> <li>• fungicides</li> <li>• paint</li> <li>• wax</li> </ul>
<b>Materials</b>	Vine material may include: <ul style="list-style-type: none"> <li>• rootstock</li> <li>• scion</li> <li>• rootlings and cuttings (at various sizes)</li> </ul>
<b>Information systems</b>	Information systems may be: <ul style="list-style-type: none"> <li>• print or screen based</li> </ul>
<b>Confirming equipment status</b>	Confirming equipment status will include: <ul style="list-style-type: none"> <li>• checking that safety standards and pre-start requirements are met and that equipment is operational</li> </ul>

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## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG2002A Carry out potting operations

### Modification History

This unit supersedes and is equivalent to FDFWGGCPOB Carry out potting operations.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialised unit has been developed for wine grape nurseries. It covers the skills and knowledge required to carry out potting operations under supervision.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to wine grape growing and covers the potting of calloused cuttings. The unit includes preparation of cuttings and potting media, sterilisation of pots and work areas, potting of cuttings and transfer to glasshouses.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for potting operations	1.1 Work instructions on potting operations are confirmed and understood 1.2 Materials are confirmed as available and ready to meet potting requirements 1.3 Potential and existing hazards are identified, rectified and/or reported according to workplace procedures 1.4 Potting media is blended to according to workplace procedures 1.5 Pots and work areas are cleaned and sterilised to minimise risk of contamination 1.6 Grafted cuttings are prepared according to instructions
2. Pot on propagated material	2.1 Callused cuttings requiring potting are identified and collected according to instructions 2.2 Soil is placed in pots according to workplace procedures 2.3 Cuttings are planted according to instructions 2.4 Trays are labelled according to instructions 2.5 Safe work practices are implemented to minimise risk of hazards
3. Carry out post-potting treatments	3.1 Potted cuttings are transferred to the glasshouse according to instructions 3.2 Potted cuttings are watered according to instructions 3.3 Waste is collected and disposed of according to workplace procedures 3.4 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

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Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify potting requirements
- confirm supply of necessary materials
- liaise with other work areas and customers
- select, fit and use appropriate personal protective clothing and/or equipment
- select, operate, maintain and store required equipment according to instructions
- maintain work area and equipment to meet workplace housekeeping standards
- maintain work area and equipment to meet workplace hygiene standards
- use appropriate cleaning techniques
- recognise problems and anomalies and correct and/or report them as instructed
- implement safe work practices to minimise risk of hazard
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- prepare chemical treatments to required concentration and ensure a homogenous mix
- prepare cuttings as instructed. This may include:
  - grading
  - waxing
  - dipping in hormones
  - hydrating
- plant cuttings as instructed. This may include:
  - putting correct amount of media into the pots
  - placing cuttings with nodes facing upwards
- label trays as instructed
- transfer potted cuttings as instructed
- water potted cuttings as instructed
- collect and dispose of waste as instructed
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

### Required knowledge includes:

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.



**Knowledge of:**

- Occupational health and safety (OHS) hazards and controls
- purpose and application of protective clothing and/or equipment
- correct operating procedures of equipment
- safe and effective handling of equipment
- safe preparation and handling of potting media
- cleaning requirements and procedures for work area and equipment
- eEnvironmental issues and controls
- reporting and recording requirements and procedures
- procedures and responsibilities for reporting problems and anomalies
- waste disposal requirements and procedures
- safe preparation and handling of chemicals
- commonly occurring problems with potted cuttings
- principles of nursery hygiene.

**Evidence Guide**

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective equipment, MSDS and follow other specified OHS procedures</li> <li>• correctly handle potting media and chemicals and disinfectants</li> <li>• select and mix chemical treatments to required concentrations</li> <li>• sterilise posts and work surfaces to instructions</li> <li>• select or blend potting media according to instructions and placed into pots</li> <li>• correctly carry out grading, waxing or other preparations of cuttings before potting</li> <li>• plant cuttings correctly and label trays</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• dispose of waste according to procedures</li> <li>• complete records correctly.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real <b>or simulated workplace where the assessee has</b> access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with and other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>

<b>RANGE STATEMENT</b>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	Workplace information can include: <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Equipment</b>	Equipment may include: <ul style="list-style-type: none"> <li>• potting machines</li> <li>• front-end loader</li> <li>• forklift</li> </ul>
<b>Materials</b>	Materials may include: <ul style="list-style-type: none"> <li>• potting mix</li> <li>• pots</li> <li>• cuttings</li> <li>• trays</li> <li>• pallets</li> </ul>
<b>Waste</b>	Waste may include: <ul style="list-style-type: none"> <li>• rejected cuttings</li> <li>• spilled potting media</li> <li>• damaged pots</li> <li>• boxes</li> </ul>
<b>Hazards</b>	Hazards may include: <ul style="list-style-type: none"> <li>• inhaling potting media</li> <li>• use of chemicals and disinfectants</li> <li>• moving machinery</li> <li>• transferring pots</li> <li>• exposure to sun</li> <li>• dust</li> <li>• using fungicide and hormone dips</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>operating potting equipment</li> </ul>
<b>Media components</b>	<p>Media components may include:</p> <ul style="list-style-type: none"> <li>sand</li> <li>potting mix</li> <li>gravel</li> <li>gro-wool</li> <li>sawdust</li> <li>pine bark</li> <li>perlite</li> <li>vermiculite</li> <li>foam</li> <li>peat</li> <li>amendments</li> <li>nutrients</li> <li>ameliorants</li> <li>ash</li> <li>rice hulls</li> <li>sphagnum moss</li> <li>commercial mixes</li> </ul>
<b>Contamination</b>	<p>Contamination may include:</p> <ul style="list-style-type: none"> <li>pests</li> <li>diseases</li> <li>viruses</li> </ul>
<b>Problems and anomalies</b>	<p>Problems and anomalies may include:</p> <ul style="list-style-type: none"> <li>evidence of nematodes</li> <li>crown gall</li> <li>dehydration</li> <li>infection</li> <li>physical damage</li> <li>graft union failure</li> </ul>
<b>Treatments</b>	<p>Common treatments may include:</p> <ul style="list-style-type: none"> <li>waxing</li> <li>fungicide dips or drench</li> <li>watering in</li> </ul>
<b>Labelling</b>	<p>Labelling may include:</p> <ul style="list-style-type: none"> <li>variety</li> <li>clone</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"><li>• batch number</li><li>• date potted</li><li>• number potted</li></ul>
<b>Records</b>	Records will include: <ul style="list-style-type: none"><li>• batch number</li><li>• clone variety</li><li>• date potted</li><li>• number potted</li><li>• treatments administered</li></ul>

### **Unit Sector(s)**

<b>Unit sector</b>	Wine operations
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## FDFWGG2003A Hand prune vines

### Modification History

This unit supersedes and is equivalent to FDFWGGHPVB Hand prune vines.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to hand prune vines under regular supervision.
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### Application of the Unit

<b>Application of the unit</b>	This unit covers the pruning of vines used in winemaking using a variety of hand operated or handheld equipment. Pruning methods may include spur pruning, cane pruning, rod and spur pruning. Pruning includes the ability to recognise problems and anomalies with vines and to select the best spurs, canes and buds according to instructions. The unit also covers the use of sharpening equipment and air compressors used for power pruning and sharpening equipment.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare equipment for hand pruning	1.1 Pruning equipment is checked to confirm readiness for use
2. Hand prune vines	2.1 Pruning equipment is started up and operated according to instructions as required 2.2 Equipment performance is monitored to confirm performance is maintained within specification as required 2.3 Vines are pruned in accordance with instructions 2.4 Anomalies and problems are recognised, rectified and/or reported 2.5 Equipment is maintained in good working order
3. Complete hand pruning operations	3.1 Equipment is shut down according to instructions as required 3.2 Equipment is cleaned and stored according to instructions 3.3 Vine cuttings are disposed of according to instructions 3.4 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Ability to:**

- access workplace information to identify pruning requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- handle pruning equipment safely. This includes following the correct handling and sharpening procedures
- start up and operate automatic pruning equipment as required
- monitor and recognise performance problems with pruning equipment and correct or report them as instructed. This includes oiling moving parts and sharpening blades
- identify different parts of the grape vine. This should include identifying:
  - vine trunk and permanent framework
  - canes and/or cordons
  - tendrils and buds
- prune vines according to instructions. This may include:
  - selecting the best possible spurs and canes
  - positioning spurs or canes
  - cleanly removing sucker shoots
  - leaving the correct quantity of spurs, rods and buds
  - making cuts correctly and cleanly
  - recognising and removing unwanted growth
  - rolling and securing extension canes onto trellis wire as required
- use appropriate cleaning techniques
- recognise and report problems and anomalies
- shut down equipment in response to an emergency situation
- shut down equipment in response to routine shutdown requirements
- clean and store equipment according to instructions
- identify, rectify and/or report environmental non-compliance
- maintain work area to meet housekeeping standards
- dispose of vine cuttings according to instructions
- carry out routine preventive maintenance of equipment according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- purpose of pruning vines
- basic components of the vine
- basic difference between cane and spur pruning



- pruning requirements
- safe handling of pruning equipment
- purpose and application of personal protective clothing and/or equipment
- correct operating procedures for pruning equipment
- shutdown sequence
- tag-out and lock-out sequence and methods
- cleaning and storage requirements of pruning equipment
- Occupational health and safety (OHS) hazards and controls
- environmental issues and controls
- basic problems and anomalies
- procedures and responsibility for reporting problems and anomalies
- disposal requirements of vine cuttings
- routine preventive maintenance procedures for equipment where relevant.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment where required</li> <li>• follow pruning equipment safety procedures</li> <li>• start and operate pruning equipment correctly</li> <li>• select best spurs and canes</li> <li>• prune correctly and according to instructions</li> <li>• perform routine and emergency shut downs</li> <li>• follow environmental instructions</li> <li>• dispose of cuttings according to instructions</li> <li>• maintain records as required.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	Workplace information can include:

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• electronic, hydraulic, pneumatic and hand secateurs</li> <li>• sharpening stone</li> <li>• file</li> <li>• scabbard or pouch</li> <li>• choppers (two-handed snips)</li> <li>• petrol air compressors</li> </ul>
<b>Methods of pruning</b>	<p>Methods of pruning may include:</p> <ul style="list-style-type: none"> <li>• spur pruning</li> <li>• cane pruning</li> <li>• rod and spur pruning</li> <li>• hand clean up after machine pruning</li> </ul>
<b>Problems and anomalies</b>	<p>Problems and anomalies may include:</p> <ul style="list-style-type: none"> <li>• signs of common pests and diseases, such as mildew, eutypa, phomopsis, boring insects, dying arm, crown gall, diseased wood, dead vines, damaged trellis or irrigation system, and faulty, stiff or blunt equipment</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG2005A Maintain callusing environment

### Modification History

This unit supersedes and is equivalent to FDFWGGMCEB Maintain callusing environment.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for wine grape nurseries. It covers the skills and knowledge required to maintain a callusing environment under supervision.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to wine grape nursery staff who work with vine cuttings that are to be callused in preparation for planting. The unit covers the maintenance of the callusing environment, preparation of callusing boxes, pre- and post-callusing treatments and monitoring of callusing process. All work is done to specifications and knowledge of occupational health and safety (OHS), environmental and hygiene requirements is required.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare callusing environment	1.1 Work instructions on callusing are confirmed and understood 1.2 Materials required for callusing are confirmed as available and ready to meet requirements 1.3 Equipment is selected and used according to workplace procedures 1.4 Work area, equipment and boxes are cleaned and sterilised to minimise risk of contamination 1.5 Potential and existing hazards are identified, rectified and/or reported according to workplace procedures 1.6 Pre-mixed callusing media is prepared as instructed 1.7 Callusing environment is prepared according to workplace procedures 1.8 Callusing boxes are prepared according to workplace procedures
2. Prepare cuttings for callusing	2.1 Cuttings are prepared for callusing according to instructions 2.2 Pre-callusing treatments are applied as instructed 2.3 Cuttings are counted, bundled and labelled according to instructions 2.4 Cuttings are placed into boxes according to instructions
3. Maintain cuttings in callusing room	3.1 Cuttings are placed into callusing environment according to workplace procedures 3.2 Callusing environment is maintained within specifications 3.3 Cuttings are monitored for potential health problems according to workplace procedures 3.4 Post-callusing treatments are applied to maintain plant health according to workplace procedures
4. Carry out post-callusing operations	4.1 Callused cuttings are removed from callusing room as instructed 4.2 Waste is collected and disposed of according to workplace procedures 4.3 Facilities are cleaned and sterilised according to workplace

ELEMENT	PERFORMANCE CRITERIA
	procedures 4.4 Work is conducted in accordance with workplace environmental guidelines
5. Record information	5.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify callusing requirements
- confirm supply of necessary materials
- liaise with other work areas
- select, fit and use appropriate personal protective clothing and/or equipment
- select, operate, maintain and store the required equipment according to instructions
- maintain work area and equipment to meet workplace housekeeping standards
- maintain work area and equipment to meet workplace hygiene standards
- use appropriate cleaning techniques
- recognise problems and anomalies and correct and/or report them as instructed
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- prepare callusing media to specified moisture levels
- prepare callusing environment. This may include:
  - turning on heaters and fans
  - setting and monitoring temperature and relative humidity
- prepare callusing boxes. This may include:
  - filling boxes with sand or vermiculite
  - lining boxes
  - storing excess media
- prepare chemical treatments to required concentration and ensure homogenous mix
- prepare cuttings for callusing. This may include:
  - taking cuttings out of storage
  - cutting just below basal bud
- apply pre-callusing treatment. This may include:

- hydrating cuttings
- applying fungicide treatments
- applying root promoter treatment
- prepare labels in a clear and legible manner with waterproof ink
- place cuttings into boxes. This may include:
  - feeling into media
  - watering in
  - placing correct number of cuttings per box
  - placing basal end at bottom
  - dipping into hormone mixes
  - arranging cuttings according to variety, clone and source
  - labelling and mapping of beds
- maintain callusing environment. This may include consideration of:
  - temperature
  - relative humidity
  - moisture levels of growing medium
- monitor cuttings for potential health problems. This may include identifying:
  - uneven callusing
  - dehydration
  - presence of pests and diseases
- apply post-callusing treatments. This may include:
  - hydrating cuttings
  - applying fungicides
- remove callused cuttings. This may include:
  - loading cuttings onto trucks or trailers
  - potting or planting cuttings
- dispose of waste as instructed. This may include:
  - pasteurising callusing media
  - spreading waste material through the vineyard
  - placing waste in bins for removal by disposal company
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge includes:**

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- OHS hazards and controls

- purpose of personal protective clothing and/or equipment
- correct operating procedures for equipment
- safe and effective handling of equipment
- cleaning requirements and procedures for work area and equipment
- environmental issues and controls
- reporting and recording requirements and procedures
- procedures and responsibilities for reporting problems and anomalies
- waste disposal requirements and procedures
- safe preparation and handling of chemicals
- purpose and benefit of pre- and post-callusing treatments
- pre-callusing treatment procedures
- post-callusing treatment procedures
- principles of nursery hygiene
- procedures for preparing pre-mixed callusing media
- factors in a controlled callusing environment that affect the vine cutting
- procedures for maintaining callusing environment
- common problems that occur during callusing and how they should be resolved (e.g. uneven callusing or evidence of dehydrated cuttings on arrival)
- quality control process in the callusing environment.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment where required</li> <li>• observe hygiene and housekeeping standards including correct cleaning and sterilisation of work area, equipment and boxes</li> <li>• prepare callusing media and boxes to specification</li> <li>• prepare cuttings and apply pre-callusing treatment</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<p>correctly</p> <ul style="list-style-type: none"> <li>• place cuttings into callusing boxes correctly</li> <li>• monitor and maintain callusing environment to specification</li> <li>• monitor cuttings for correct callusing and report problems according to procedures</li> <li>• apply post-callusing treatment correctly</li> <li>• remove callused cuttings correctly</li> <li>• record information appropriately.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation, recording requirements and procedures.</li> </ul>
Method of assessment	<p>This unit should be assessed together with other units of competency relevant to the function or work role.</p>
Guidance information for assessment	<p>To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

#### **Policies and procedures**

Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements

#### **Workplace information**

Workplace information can include:

- Standard Operating Procedures (SOPs)
- specifications
- production schedules
- instructions
- routine maintenance schedules
- work notes
- Material Safety Data Sheets (MSDSs)
- manufacturer instructions
- verbal direction from manager, supervisor or senior operator

#### **Equipment**

Equipment may include:

- thermometer
- hydrothermometer
- hydraulic bin
- trolley or trailer
- personal protective clothing and/or equipment
- forklift

#### **Materials**

Materials may include:

- cuttings
- callusing media
- rooting hormone
- boxes
- pallets

#### **Contamination**

Contamination may include:

- pests
- diseases
- viruses

<b>RANGE STATEMENT</b>	
<b>Waste</b>	Waste may include: <ul style="list-style-type: none"> <li>• callusing media</li> <li>• damaged cuttings</li> <li>• callusing containers</li> </ul>
<b>Hazards</b>	Hazards may include: <ul style="list-style-type: none"> <li>• obstacles</li> <li>• inhaling callusing media</li> <li>• operating equipment</li> <li>• using chemicals and disinfectants</li> </ul>
<b>Label information</b>	Label information may include: <ul style="list-style-type: none"> <li>• clone</li> <li>• variety</li> <li>• rootstock</li> <li>• date placed into callusing room</li> <li>• date to be removed</li> <li>• treatments applied</li> <li>• source of rootstock and scion</li> </ul>
<b>Problems and anomalies</b>	Problems and anomalies may include: <ul style="list-style-type: none"> <li>• evidence of crown gall</li> <li>• dehydration</li> <li>• fungal infection</li> <li>• physical damage</li> <li>• graft union failure</li> <li>• excessive galling</li> </ul>
<b>Records</b>	Records will include: <ul style="list-style-type: none"> <li>• treatments applied</li> <li>• clones</li> <li>• variety</li> <li>• source</li> <li>• batch numbers</li> <li>• numbers of vines in callus boxes</li> <li>• numbers of boxes packed</li> <li>• date of callusing</li> </ul>

## Unit Sector(s)

Unit sector	Wine operations
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## FDFWGG2006A Obtain and process rootlings

### Modification History

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the processing of vine rootlings in wine grape nurseries including, where required, digging of rootlings from field nurseries.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to wine grape growing and covers the processing of rootlings. Rootlings may include those developed from cuttings in a sand bed or callusing room, or those freshly dug from a field nursery.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to process rootlings	1.1 Work instructions for the processing of rootlings are confirmed and understood 1.2 Facilities are cleaned and sterilised to minimise risk of contamination 1.3 Materials are confirmed as available and ready to meet requirements 1.4 Equipment is collected and checked for serviceability and sterilised as required by workplace procedures 1.5 Potential and existing hazards are identified, rectified and/or reported according to workplace procedures
2. Obtain rootlings	2.1 Requirement for rootlings from field nurseries, sand beds or callusing are checked against instructions 2.2 Rootlings if required are dug from field nurseries using tractor mounted or trailed digging machines or hand-held tools 2.3 Rootlings are obtained from sand beds or callusing room according to requirements
3. Process rootlings	3.1 Rootlings are treated and bundled according to instructions 3.2 Bundles are labelled, packed and stored according to instructions 3.3 Waste is collected and disposed of according to workplace procedures 3.4 Work is conducted in accordance with workplace environmental guidelines 3.5 Problems and anomalies are identified, rectified and/or reported according to workplace procedures 3.6 Safe work practices are employed to minimise work hazards
4. Prepare rootlings for dispatch	4.1 Bundles of rootlings are assembled according to instructions 4.2 Rootlings are prepared and packed for dispatch according to instructions 4.3 Stock is loaded for dispatch according to instructions

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	4.4 Orders are checked against goods being dispatched according to workplace procedures
	4.5 Safe work practices are employed to minimise work hazards
5. Record information	5.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify rootling processing requirements
- confirm supply of necessary materials
- liaise with other work areas
- select, fit and use appropriate personal protective clothing and/or equipment
- select, operate, maintain and store required equipment according to instructions
- maintain work area and equipment to meet workplace housekeeping and hygiene standards
- use appropriate cleaning techniques
- recognise problems and anomalies and correct and/or report them as instructed
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- select and use materials as required
- prepare chemical treatments to required concentration and ensure a homogenous mix
- handle rootlings correctly
- treat rootlings as instructed. This may include:
  - complete hydration of all rootlings
  - complete chemical treatment of all rootlings
  - removal of unwanted plant material
- monitor the standard of rootlings and grade them as instructed. This may include sorting for:
  - diameter of stem
  - appearance
  - length and number of shoots
  - strength of graft union
- bundle and label rootlings as instructed. This may include:
  - ensure correct numbers per bundle

- lay rootlings all the same way in bundles
- tie bundles securely
- labell legibly and accurately
- pack and store rootlings as instructed. This may include meeting instructions for:
  - cold room layout
  - cold room temperature variations
  - customer requirements
  - storage time requirements
- collect and dispose of waste as required to minimise risk of environmental damage
- check stock against orders. This may include checking order requirements for:
  - quantity of stock
  - varieties and clones
  - quality of stock is within specifications
- dispatch stock as instructed. This may include:
  - correct manual handling
  - correct use of mechanical transfer equipment
- liaise with customers. This may include:
  - taking orders
  - notifying customers about availability of stock
  - notifying customers about dispatch dates
  - identifying specific treatments of stock
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge includes:**

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- occupational health and safety (OHS) hazards and controls
- purpose and application of personal protective clothing and/or equipment
- correct operating procedures for equipment
- safe and effective handling of equipment
- principles of nursery hygiene
- cleaning requirements and procedures for work area and equipment
- reporting and recording requirements and procedures
- procedures and responsibilities for reporting problems and anomalies
- waste disposal requirements and procedures
- environmental issues and controls



- equipment operation and maintenance requirements and procedures
- safe preparation and handling of chemicals
- common features of healthy vine rootlings
- common features of unhealthy vine rootlings
- factors that influence how a rootling should be graded and why
- package, storage requirements and procedures for rootlings ready for sale
- rootling preparation requirements and procedures for sales or transfers to customers.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective equipment, (MSDS and follow other specified OHS procedures)</li> <li>• handle chemicals and disinfectants correctly</li> <li>• select and mix chemical treatments to required concentrations</li> <li>• sterilise equipment and work surfaces to instructions</li> <li>• obtain rootlings correctly from required sources (e.g. field nursery, sand beds or callusing room)</li> <li>• treat, bundle, store and label rootlings correctly</li> <li>• identify and report problems and anomalies</li> <li>• treat and dispose of waste correctly</li> <li>• keep appropriate records.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality</li> </ul>

<b>EVIDENCE GUIDE</b>	
	and environmental requirements <ul style="list-style-type: none"> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	Workplace information can include: <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Wine grape nursery facilities</b>	<p>Wine grape nursery facilities may include:</p> <ul style="list-style-type: none"> <li>• cold storage</li> <li>• bins</li> <li>• water</li> <li>• fungicide treatment areas</li> <li>• storage bins or tanks</li> <li>• soakage tanks</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• secateurs</li> <li>• personal protective clothing and/or equipment</li> <li>• bins</li> <li>• boxes</li> <li>• counting machine</li> <li>• packing machine</li> <li>• forklift</li> </ul>
<b>Materials</b>	<p>Materials may include:</p> <ul style="list-style-type: none"> <li>• string</li> <li>• labels</li> <li>• chemicals</li> <li>• sand</li> <li>• wax</li> <li>• pallets</li> </ul>
<b>Waste</b>	<p>Waste may include:</p> <ul style="list-style-type: none"> <li>• off-cuts</li> <li>• dropped or rejected rootlings</li> <li>• packaging materials</li> </ul>
<b>Work hazards</b>	<p>Work hazards may include:</p> <ul style="list-style-type: none"> <li>• damaging fingers or eyes from use of tools and equipment</li> <li>• manual handling</li> <li>• lifting bundles</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• falling over in an untidy work area</li> <li>• using chemicals and disinfectants</li> </ul>
<b>Problems and anomalies</b>	<p>Problems and anomalies may include:</p> <ul style="list-style-type: none"> <li>• evidence of nematodes</li> <li>• crown gall</li> <li>• dehydration</li> <li>• infection</li> <li>• physical damage</li> <li>• damaged buds</li> <li>• immature wood</li> </ul>
<b>Rootlings</b>	<p>Rootlings may include:</p> <ul style="list-style-type: none"> <li>• those developed from cuttings in a sand bed or callusing room</li> <li>• those freshly dug from a field nursery</li> </ul>
<b>Grading rootlings</b>	<p>Grading rootlings may include sorting for:</p> <ul style="list-style-type: none"> <li>• diameter of stem</li> <li>• appearance</li> <li>• length of shoots</li> <li>• number of shoots</li> <li>• strength of graft union</li> </ul>
<b>Label information</b>	<p>Label information may include:</p> <ul style="list-style-type: none"> <li>• class of the material</li> <li>• variety and clone</li> <li>• grade of cutting</li> <li>• the source identification code</li> <li>• name of customer</li> <li>• date packed</li> </ul>
<b>Treatments</b>	<p>Treatments may include:</p> <ul style="list-style-type: none"> <li>• hydration</li> <li>• chemical treatment</li> <li>• trimming</li> <li>• grading</li> </ul>
<b>Customer requirements</b>	<p>Customer requirements may include:</p> <ul style="list-style-type: none"> <li>• quantity</li> <li>• level of root trimming</li> <li>• level of shoot trimming</li> </ul>

<b>RANGE STATEMENT</b>	
<b>Packing</b>	Packing may include: <ul style="list-style-type: none"> <li>• packing, venting and sealing cuttings into polythene film bags</li> <li>• wrapping cuttings in wet hessian</li> <li>• packing in woven polypropylene wool packs</li> </ul>
<b>Loading of rootlings</b>	Loading of rootlings may be: <ul style="list-style-type: none"> <li>• done manually or with the use of a forklift</li> </ul>
<b>Records</b>	Records will include: <ul style="list-style-type: none"> <li>• number of rootlings per bundle</li> <li>• number of bundles</li> <li>• treatments</li> <li>• date</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG2008A Train vines

### Modification History

This unit supersedes and is equivalent to FDFWGGTVB Train vines.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to train growing vines by hand.
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### Application of the Unit

<b>Application of the unit</b>	This unit covers the training of vines used in winemaking using a variety of handheld hand or operated equipment. The unit requires knowledge of the different parts of a grape vine, the ability to detect problems and anomalies, and to use techniques for selection and training of laterals.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for training	1.1 Equipment is confirmed as available and ready for use 1.2 Materials are confirmed as available to meet training requirements
2. Train vines	2.1 Vines are trained according to instructions 2.2 Anomalies and problems are recognised, rectified and/or reported 2.3 Equipment is maintained in good working order
3. Complete training activities	3.1 Equipment is cleaned and stored according to workplace procedures 3.2 Waste generated by both the process and cleaning procedures is collected, treated, disposed of or recycled according to workplace procedures 3.3 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

### Ability to:

- access workplace information to identify training requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- set up and operate equipment as required according to instructions

- identify different parts of the grapevine. This should include identifying:
  - vine trunk and permanent framework
  - canes and/or cordons
  - tendrils and buds
  - fruit
- recognise and rectify or report problems and anomalies
- identify, rectify and/or report environmental non-compliance
- train vines according to instructions. This may include:
  - heading height
  - selection of appropriate laterals
  - positioning of laterals
  - securing of laterals
  - removing unwanted laterals from trunk and crown
- maintain work area to meet housekeeping standards
- clean and store equipment according to instructions
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

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**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- safe and effective handling of equipment
- correct operating procedures for equipment
- basic maintenance requirements and procedures for equipment
- purpose and application of personal protective clothing and/or equipment
- Occupational health and safety (OHS) hazards and controls
- procedures and responsibility for reporting problems and anomalies
- range of vine training techniques, features and benefits
- basic components of the vine
- training requirements and procedures
- common vineyard pests and diseases and other common vine problems
- environmental issues and controls
- cleaning and storage requirements and procedures for equipment
- reporting responsibilities and procedures.



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective equipment, MSDS and follow other specified OHS procedures</li> <li>• identify parts of vines, including laterals, canes, cordons and buds</li> <li>• train vines to instructions</li> <li>• recognise faults and anomalies</li> <li>• keep records according to procedures.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over

<b>EVIDENCE GUIDE</b>	
	a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• snips</li> <li>• tape guns</li> </ul>
<b>Materials</b>	<p>Materials may include:</p> <ul style="list-style-type: none"> <li>• strings</li> <li>• stakes</li> <li>• wires</li> <li>• tape</li> </ul>

<b>RANGE STATEMENT</b>	
<b>Method of training</b>	Method of training may vary according to workplace need, but may include: <ul style="list-style-type: none"> <li>• unilateral or bilateral techniques</li> </ul>
<b>Problems and anomalies</b>	Problems and anomalies may include: <ul style="list-style-type: none"> <li>• uneven growth</li> <li>• pests and diseases</li> <li>• dead vines</li> <li>• broken trellis or wires</li> </ul>
<b>Waste</b>	Waste may include: <ul style="list-style-type: none"> <li>• vine trimmings</li> <li>• faulty materials</li> <li>• packaging</li> </ul>

### **Unit Sector(s)**

<b>Unit sector</b>	Wine operations
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## FDFWGG2009A Operate specialised canopy management equipment

### Modification History

This unit supersedes and is equivalent to FDFWGGCMSB Operate specialised canopy management equipment.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to attach, set up, operate and detach canopy management equipment.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the operation of specialised equipment used in wine grape growing.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	AHCMOM202A Operate tractors
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### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for canopy management activities	1.1 Canopy management requirements are identified and planned 1.2 Canopy management equipment is confirmed as available and ready for use 1.3 Equipment is set up to meet requirements
2. Operate canopy management equipment	2.1 Equipment is started up according to workplace procedures 2.2 Canopy management techniques are applied to vines according to their vigour, capacity and manager's instructions 2.3 Equipment performance is monitored to confirm performance is maintained within specifications 2.4 Canopy management activities are monitored to confirm performance is maintained within specifications 2.5 Out-of-specification performance is identified, rectified and/or reported
3. Shut down canopy management equipment	3.1 Canopy management equipment is shut down according to workplace procedures 3.2 Equipment is cleaned and stored according to workplace procedures 3.3 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

**Required skills include:**

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Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Ability to:**

- access workplace information to identify canopy management requirements
- select, fit and use personal protective clothing and/or equipment
- liaise with other work areas
- identify canopy management requirements. Factors to be considered include:
  - grape variety
  - vine vigour
  - end use of fruit, quality and yield requirements
  - climate
  - operating conditions
  - workplace procedures, manager's instructions
- attach equipment to tractor
- set up equipment to meet requirements
- confirm equipment status and condition
- operate equipment to meet requirements
- recognise equipment performance problems and rectify and/or report according to workplace procedures
- monitor canopy management activities. This will include monitoring:
  - width of canopy
  - speed of tractor and power take-off rpm
  - density of foliage
  - air circulation
  - light penetration or shade
  - bud numbers, spur length
  - vine damage
  - progress
  - problems and anomalies
- shut down equipment in response to an emergency situation
- shut down equipment in response to routine shutdown requirements
- clean and store equipment
- detach equipment from tractor
- use appropriate cleaning techniques
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record problems and/or corrective action
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- maintain work area to meet housekeeping standards

- carry out routine maintenance of equipment according to enterprise procedures
- use hand tools according to enterprise procedures
- use power tools according to enterprise procedures
- interpret mechanical drawings according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

### **Required knowledge includes:**

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

### **Knowledge of:**

- key factors affecting the canopy management technique adopted. These may include:
  - climate, forecast and current weather conditions
  - vineyard aspect and terrain
  - grape variety and vigour
  - grape quality and characteristics required
  - trellis design
  - harvesting techniques
  - disease risk and occurrence
  - stage of maturity and development
- operating parameters and procedures
- recognition of correct vine growth stages at which to carry out canopy management activities
- factors influencing vine vigour, including:
  - grape variety
  - trellis design
  - vine spacing
  - fertilisers
  - irrigation
  - rootstock
- features and benefits of a range of canopy management styles and techniques and their respective affect on grape quality, cropping yield and wine production requirements. This should include techniques to manage:
  - light penetration and shading
  - air circulation and disease reduction
  - annual growth stages of vine development
  - crop quality and quantity
- significance and method of monitoring canopy management activities
- purpose and basic components of canopy management equipment
- operational procedures for equipment

- Occupational health and safety (OHS) hazards and controls
- environmental issues and controls
- basic vine canopy problems or anomalies
- procedures and responsibility for reporting problems
- cleaning and storage requirements and procedures for equipment
- shutdown sequence
- routine maintenance procedures for equipment where relevant
- procedures for using hand tools where relevant
- procedures for using power tools where relevant
- interpretation of mechanical drawings where relevant.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment</li> <li>• select and confirm availability of equipment and prepare according to instructions</li> <li>• attach, set up equipment to meet requirements</li> <li>• start and operate equipment in accordance with operation instructions and requirements of workplace and task</li> <li>• perform emergency and routine shutdowns</li> <li>• take corrective action in response to out-of-specification results or non-compliance</li> <li>• demonstrate knowledge of OHS hazards, controls and emergency procedures</li> <li>• sort, collect, treat, recycle or dispose of waste</li> <li>• record information appropriately.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p>



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Polices and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	Workplace information may include:

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal directions from manager, supervisor or senior operator</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• tractor</li> <li>• circular saws</li> <li>• cutter bars</li> <li>• blades</li> <li>• knives</li> <li>• drum pruners</li> <li>• mechanical leaf pluckers</li> <li>• wire lifters</li> </ul>
<b>Terrain</b>	<p>Terrain must enable safe and effective operation of equipment. It may include:</p> <ul style="list-style-type: none"> <li>• tracks</li> <li>• access roads</li> <li>• vineyard rows</li> <li>• open paddocks</li> <li>• flat, undulating, steep, hilly or terraced land</li> <li>• and on- and off-road environments</li> </ul>
<b>Conditions</b>	<p>Conditions must enable safe and effective operation of equipment. These may include:</p> <ul style="list-style-type: none"> <li>• dry</li> <li>• wet</li> <li>• slippery</li> <li>• boggy</li> <li>• icy</li> <li>• foggy</li> <li>• windy</li> <li>• day and night conditions</li> </ul>
<b>Confirming equipment status</b>	<p>Confirming equipment status will include:</p> <ul style="list-style-type: none"> <li>• checking that all safety standards and pre-start</li> </ul>

<b>RANGE STATEMENT</b>	
	requirements are met and that equipment is operational
<b>Information systems</b>	Information systems may be: <ul style="list-style-type: none"> <li>• print or screen based</li> </ul>
<b>Canopy management techniques</b>	Canopy management techniques may vary and should include: <ul style="list-style-type: none"> <li>• those required by the workplace (e.g. pruning, trimming, plucking and lifting)</li> </ul>
<b>Problems and anomalies</b>	Problems and anomalies may include: <ul style="list-style-type: none"> <li>• dead vines</li> <li>• signs of common pests and diseases, such as light brown apple moth (LBAM), boring insects, mildew, eutypa, phomopsis, dying arm, crown gall and diseased wood</li> <li>• signs of trellis and/or irrigation disrepair or problems</li> <li>• machinery breakdowns</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG2010A Field graft vines

### Modification History

This unit supersedes and is equivalent to FDFWGGFGVB Field graft vines.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. This unit covers the skills and knowledge required to select appropriate vine material and field graft vines.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to work conducted in the field to select and prepare vines for grafting and complete grafting activities. It includes application of treatment as required.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to field graft vines	1.1 Materials are confirmed and available to meet grafting requirements 1.2 Vine material is selected and prepared for grafting 1.3 Equipment is checked to confirm readiness for use
2. Field graft vines	2.1 Vines are field grafted according to instructions 2.2 Vine graft is treated and taped according to instructions 2.3 Grafting process and equipment are monitored to ensure results are maintained within specifications 2.4 Out-of-specification process and equipment performance are identified, rectified and/or reported
3. Complete field grafting activities	3.1 Equipment is cleaned as required 3.2 Unused grafting material is disposed of or stored according to workplace procedures 3.3 Waste generated by both the grafting and cleaning procedures is collected, treated, disposed of or recycled according to workplace procedures 3.4 Work is conducted in accordance with workplace environmental guidelines 3.5 Required documentation is completed

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Ability to:**

- access workplace information to identify grafting requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- liaise with other work areas and customers
- confirm supply of necessary materials
- select appropriate vine material for grafting. This may include consideration of:
  - variety and clone
  - matching cambium
  - matching bevels and sizes
  - viable buds
  - achievement of tight unions
- prepare vine material for grafting. This may include:
  - soaking buds
  - working appropriate incisions
  - hot water treatment of cuttings
  - virus tests
  - compatibility tests
  - hydration of cuttings
  - cutting to size
- select and prepare equipment as required
- graft vines in the field according to instructions. This should include:
  - selecting appropriate bud location to graft
  - ensuring cohesion of graft union
- operate equipment safely
- treat vines after grafting. This may include:
  - applying fungicide
  - securing with tape
  - painting
  - waxing
- monitor the process and equipment operation to identify out-of-specification results or non-compliance. This may include monitoring:
  - percentage take
  - weather conditions
  - pests and diseases (e.g. weevils)
- store unused grafting material
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record corrective action as required
- sort, collect, treat, recycle or dispose of waste as required
- maintain work area to meet housekeeping standards
- Clean equipment after use

- identify, rectify and/or report environmental non-compliance
- conduct routine maintenance of equipment according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- purpose of grafting and various methods of budding and grafting
- criteria for successful grafting
- advantages of using clonal rootstock material
- criteria for selecting parent vines for scion material
- correct procedure and optimum conditions for the storage and handling of material until required for grafting
- advantages of using clonal and registered vine improvement material
- importance of selection and use of rootstock
- stages of the grafting procedure and their purpose
- common problems and corrective action required
- purpose, components and operation of grafting equipment
- methods of callusing vine cuttings and the criteria for best callus development
- procedures and responsibilities for reporting problems
- Occupational health and safety (OHS) hazards and controls
- environmental issues and controls
- cleaning requirements for work area and equipment
- recording requirements and procedures
- routine maintenance procedures for equipment where relevant.

**Evidence Guide**

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance

<b>EVIDENCE GUIDE</b>	
	with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• select and prepare appropriate vine material for grafting, including disbudding</li> <li>• field graft vines to instructions</li> <li>• conduct post-grafting treatment and packing of vines</li> <li>• monitor grafted vines and identify and rectify or report out-of-specification grafted vines</li> <li>• follow personal and work area hygiene procedures</li> <li>• dispose of waste correctly</li> <li>• record and report results of grafting according to procedures.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.



## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Grafting methods</b>	<p>Grafting methods may include:</p> <ul style="list-style-type: none"> <li>• T buds</li> <li>• chip</li> <li>• wedge</li> <li>• side bark</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• secateurs</li> <li>• grafting knife</li> </ul>
<b>Grafting seals</b>	<p>Grafting seals may include:</p> <ul style="list-style-type: none"> <li>• tape</li> <li>• fungicides</li> <li>• paint</li> <li>• wax</li> </ul>
<b>Materials</b>	<p>Materials may include:</p> <ul style="list-style-type: none"> <li>• cuttings</li> <li>• buds</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• dormant or green material</li> <li>• nursery rootstock rootlings</li> <li>• mature vines for Vinifera varietal topworking</li> </ul>
<b>Information systems</b>	Information systems may be: <ul style="list-style-type: none"> <li>• print or screen based</li> </ul>
<b>Confirming equipment status</b>	Confirming equipment status will include: <ul style="list-style-type: none"> <li>• checking that safety standards and pre-start requirements are met and that equipment is operational</li> </ul>
<b>Work hazards</b>	Work may involve exposure to: <ul style="list-style-type: none"> <li>• chemical, dangerous or hazardous substances</li> </ul>

### **Unit Sector(s)**

<b>Unit sector</b>	Wine operations
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## FDFWGG2013A Deliver injection requirements

### Modification History

This unit supersedes and is equivalent to FDFWGGIRB Deliver injection requirements.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to deliver injection requirements via an irrigation system according to instructions
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to employees who inject various materials for delivery via equipment used to irrigate vines. Material to be injected may be wet or dry and includes fertilisers, chlorine, acid and cleaning agents. Identification of and calculation of the amount to be injected is included. The unit covers injection into various types of irrigation equipment, including flood, dripper, microjet, sprinkler, overhead and water winch. Injection of materials must be consistent with environmental and occupational health and safety (OHS) requirements.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare equipment for operation	1.1 Materials and services are confirmed as available and ready for operation 1.2 Materials are prepared to meet injection requirements 1.3 Equipment is checked to confirm readiness for use 1.4 Equipment is set to meet injection requirements
2. Operate the injection process	2.1 The injection process is started up according to workplace procedures 2.2 Control points are monitored to confirm performance is maintained within specification 2.3 Out-of-specification equipment performance is identified, rectified and/or reported 2.4 Injection requirements are delivered according to instructions 2.5 Equipment is maintained in good working order
3. Shut down injection equipment	3.1 Injection equipment is shut down according to workplace procedures 3.2 Injection equipment is cleaned according to workplace procedures 3.3 Waste generated by both the process and cleaning procedures is collected, treated, disposed of or recycled according to workplace procedures 3.4 Work is conducted in accordance with workplace environmental guidelines

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify injection requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of necessary services and materials
- liaise with other work areas
- identify, rectify and/or report environmental non-compliance
- delect and prepare injection materials as required. This may include the accurate completion of calculations, such as dilution rates
- confirm equipment status and condition
- set up and start up the process. This can involve the use of process control systems
- monitor the process and system operation to identify out-of-specification results or non-compliance. This can involve monitoring:
  - usage rates
  - dilution
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record corrective action as required
- shut down equipment in response to an emergency situation
- shut down equipment in response to routine shutdown requirements
- maintain work area to meet housekeeping standards
- demonstrate safe handling of hazardous chemicals
- implement routine maintenance and minor repairs of the system
- implement routine system cleaning requirements
- apply information technology systems according to enterprise procedures
- apply sampling techniques according to enterprise procedures
- conduct routine tests according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge include:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- purpose and principles of chemicals used and their effect on irrigation system or vine performance. This should include the effect of miscalculations and inaccurate deliveries
- purpose and operation of equipment and instrumentation components
- basic operating principles and process control systems where relevant
- services required
- control points and significance and methods of monitoring
- common causes of variation and corrective action required
- process specifications, procedures and operating parameters
- correct chemical handling techniques
- OHS hazards and controls
- lock-out and tag-out procedures
- environmental issues and controls
- procedures and responsibility for reporting problems
- cleaning requirements of system
- maintenance requirements of system
- shutdown sequence
- recording requirements and procedures
- cleaning procedures
- information technology systems where relevant
- sampling techniques and procedures where relevant
- routine testing procedures where relevant.

**Evidence Guide**

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

<b>EVIDENCE GUIDE</b>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment where required</li> <li>• correctly select and prepare injection materials</li> <li>• correctly pre-start checks of equipment</li> <li>• start injection process correctly</li> <li>• monitor injection process control points and equipment, including checking for environmental compliance, usage rates and dilution</li> <li>• take corrective action in response to out-of-specification results or non-compliance</li> <li>• perform routine and emergency shutdowns</li> <li>• handle and/or remove waste in accordance with specified procedures</li> <li>• record information appropriately.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
<p>Method of assessment</p>	<p>This unit should be assessed together with other units of competency relevant to the function or work role.</p>
<p>Guidance information for assessment</p>	<p>To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	<p>Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements</p>
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal directions from manager, supervisor or senior operator</li> </ul>
<b>Confirming equipment status</b>	<p>Confirming equipment status involves:</p> <ul style="list-style-type: none"> <li>• checking that all safety standards and pre-start requirements are met and equipment is operational</li> <li>• checking the operation and/or calibration of measuring instrumentation</li> </ul>
<b>Services</b>	<p>Services may include:</p> <ul style="list-style-type: none"> <li>• water and power</li> </ul>
<b>Monitoring the process</b>	<p>Monitoring the process may involve:</p> <ul style="list-style-type: none"> <li>• the use of production data, such as performance control charts</li> </ul>
<b>Process operation and monitoring functions</b>	<p>Process operation and monitoring functions may be:</p> <ul style="list-style-type: none"> <li>• manual or involve the use of a process control system</li> </ul>
<b>Control points</b>	<p>Control points refer to those key points in a work process</p>



<b>RANGE STATEMENT</b>	
	that must be monitored and controlled. This includes: <ul style="list-style-type: none"> <li>• quality and regulatory control points</li> <li>• inspection points</li> </ul>
<b>Irrigation systems</b>	Irrigation systems may include: <ul style="list-style-type: none"> <li>• flood</li> <li>• dripper</li> <li>• microjet</li> <li>• sprinkler</li> <li>• overhead</li> <li>• water winch</li> </ul>
<b>Materials to be injected</b>	Materials to be injected may be wet or dry and may include, but are not restricted to: <ul style="list-style-type: none"> <li>• fertilisers</li> <li>• chlorine</li> <li>• acid</li> <li>• cleaning agents</li> </ul>
<b>Equipment</b>	Equipment may include: <ul style="list-style-type: none"> <li>• injection pump</li> <li>• injection point</li> <li>• chemical holding tank</li> </ul>
<b>Information systems</b>	Information systems may be: <ul style="list-style-type: none"> <li>• print or screen based and may include information technology for injection scheduling systems, recording and reporting systems</li> </ul>
<b>Work hazards</b>	Work may involve exposure to: <ul style="list-style-type: none"> <li>• chemical, dangerous or hazardous substances</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG2015A Support mechanical harvesting operations

### Modification History

This unit supersedes and is equivalent to FDFWGGMHSB Support mechanical harvesting operations.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of wine sector. It covers the skills and knowledge required to collect grapes from a mechanical harvester and deliver them to the receival point.
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### Application of the Unit

<b>Application of the unit</b>	This unit includes the ability to attach, set up and detach equipment as required, and the support of activities from harvesting to preparation for receival.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		
	AHCMOM202A	Operate tractors
	FDFWGG2018A	Operate vineyard equipment

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for harvest support activities	1.1 Work requirements are identified 1.2 Equipment is checked to confirm readiness for use 1.3 Equipment is set up to meet harvest support requirements
2. Collect grapes from harvester	2.1 Tractor towing trailer or gondola is driven alongside mechanical harvester according to instructions 2.2 Collection activities are monitored to confirm performance is maintained within specification 2.3 Out-of-specification performance is recognised, rectified and/or reported 2.4 Problems and anomalies are recognised, rectified and/or reported 2.5 Equipment is maintained in good working order
3. Transfer grapes to receival point	3.1 Chemicals are added to grapes according to instructions 3.2 Grapes are delivered to receival point according to instructions
4. Complete harvest support activities	4.1 Equipment is cleaned according to workplace procedures 4.2 Waste generated by the process or cleaning procedures is collected, sorted and disposed of or recycled, according to workplace procedures 4.3 Work is conducted in accordance with workplace environmental guidelines
5. Record information	5.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

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Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify harvest support requirements
- liaise with other work areas
- select, fit and use appropriate personal protective clothing and/or equipment
- select, attach and set up appropriate equipment
- carry out pre-operational checks of equipment according to workplace procedures
- operate equipment safely
- identify and rectify, remove and/or report potential occupational health and safety (OHS) hazards
- collect grapes from the discharge conveyer. This should include:
  - avoiding all contact with or damage to other machinery and equipment, vines, trellises or fences
  - safe handling of equipment
  - maintaining appropriate speed and distance
  - starting off and swapping over
  - changing rows
  - day-time and night-time harvesting
  - variety of harvesting conditions and varieties
- monitor grape collection activities. This may include monitoring:
  - equipment breakages or malfunction
  - vine or trellis damage
  - grape quality and quantity
  - matter other than grapes (MOG) collected
  - load weight
  - chemical application to fruit loads
  - collection accuracy of grapes
  - tipping accuracy of grapes at receival point
  - progress
  - congestion or backlog at receival point
  - performance according to specifications
- report and/or record problems and/or corrective action
- identify, rectify and/or report environmental non-compliance
- shut down equipment in response to an emergency situation
- shut down equipment in response to routine shutdown requirements

- handle, prepare and add chemicals according to instructions
- take the necessary action to protect fruit quality where possible. This may include parking fruit carriers in a shaded area
- deliver grapes to receipt point according to instructions. This may include tipping the trailer or gondola
- maintain workplace records according to workplace standards
- maintain work area to meet housekeeping standards
- use appropriate cleaning techniques
- carry out routine maintenance of equipment according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

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**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- key factors that will affect grape and/or wine quality. This may include:
  - temperature
  - oxidation
  - MOG collected
  - speed of processing
  - chemical addition
- features and benefits of methods to preserve grape and/or wine quality
- common problems and anomalies
- procedures and operating parameters
- significance and methods of monitoring performance
- common faults and corrective action required
- OHS hazards and controls
- environmental issues and controls
- procedures and responsibility for reporting problems
- recording requirements and procedures
- cleaning requirements associated with changeovers
- shutdown sequence of equipment
- cleaning procedures
- routine maintenance procedures for equipment where relevant.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of ability to:

- use personal protective clothing and equipment
- confirm availability of specified materials and prepare according to instructions
- select and confirm status and suitability of equipment
- start and operate equipment in accordance with operation instructions and requirements of workplace and task
- monitor harvesting operation to achieve specified result
- take corrective action in response to out-of-specification results or non-compliance
- demonstrate knowledge of OHS hazards, controls and emergency procedures
- sort, collect, treat, recycle or dispose of waste
- record information appropriately.

Context of and specific resources for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- personal protective clothing and equipment as required
- work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements
- instructions, information, specifications and schedules as required
- equipment, services and corresponding information as required
- products and materials as required
- internal and external customers and suppliers as required
- cleaning procedures, materials and equipment as

<b>EVIDENCE GUIDE</b>	
	<p>required</p> <ul style="list-style-type: none"> <li>documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>Standard Operating Procedures (SOPs)</li> <li>specifications</li> <li>production schedules</li> <li>instructions</li> <li>routine maintenance schedules</li> <li>work notes</li> <li>Material Safety Data Sheets (MSDS)</li> <li>manufacturer instructions</li> <li>verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>tractors</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• trailers</li> <li>• gondolas</li> <li>• grape bins</li> <li>• forklift</li> </ul>
<b>Problems and anomalies</b>	<p>Problems and anomalies may include:</p> <ul style="list-style-type: none"> <li>• rotten, diseased, immature or over-ripe grapes</li> <li>• MOG</li> <li>• potential hazards for the harvester or operators</li> </ul>
<b>Terrain</b>	<p>Terrain must enable the safe and effective performance of harvest support activities. It may include:</p> <ul style="list-style-type: none"> <li>• tracks</li> <li>• access roads</li> <li>• straight or curving vineyard rows</li> <li>• flat, undulating, steep, hilly or terraced land</li> <li>• on- and off-road environments</li> </ul>
<b>Conditions</b>	<p>Conditions must enable the safe and effective performance of harvest support activities. These may include:</p> <ul style="list-style-type: none"> <li>• dry</li> <li>• wet</li> <li>• slippery</li> <li>• boggy</li> <li>• icy</li> <li>• foggy</li> <li>• windy</li> <li>• day and night conditions</li> </ul>
<b>Receival points</b>	<p>Receival points may include:</p> <ul style="list-style-type: none"> <li>• a winery</li> <li>• marshalling area</li> <li>• truck or loading bays</li> </ul>
<b>Equipment status</b>	<p>Confirming equipment status involves:</p> <ul style="list-style-type: none"> <li>• checking that all safety standards and pre-start requirements are met and equipment is operational</li> </ul>
<b>Information systems</b>	<p>Information systems may be:</p> <ul style="list-style-type: none"> <li>• print or screen based</li> </ul>
<b>Work hazards</b>	<p>Work may involve exposure to:</p>



**RANGE STATEMENT**

- chemical, dangerous or hazardous substances

**Unit Sector(s)****Unit sector**

Wine operations

## FDFWGG2016A Install and maintain vine trellis

### Modification History

This unit supersedes and is equivalent to FDFWGGMVTB Install and maintain vine trellis.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to install and maintain vine trellising.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to installing and maintaining trellises for vines used in winemaking. Trellises are installed and maintained according to written or verbal instructions. Equipment used is both manual and automatic.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare for trellising activities	1.1 Existing trellises are checked for signs of disrepair 1.2 Equipment is prepared and checked to confirm readiness for use 1.3 Materials are selected according to instructions 1.4 Posts and supports are laid out according to instructions 1.5 Wire is run out according to instructions
2. Erect and maintain trellises	2.1 Equipment is started up and operated according to workplace procedures 2.2 Trellis ends and posts are erected and assemblies strained according to instructions 2.3 Foliage and trellis wires are attached and tensioned according to instructions 2.4 Trellis maintenance is carried out according to workplace procedures 2.5 Problems and anomalies are recognised, rectified and/or reported
3. Complete trellising activities	3.1 Equipment is shut down according to workplace procedures as required 3.2 Equipment is cleaned and stored according to workplace procedures 3.3 Materials are stored according to workplace procedures 3.4 Waste is collected and disposed of or recycled according to workplace procedures 3.5 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify trellis requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- select appropriate materials. This will include type and quantity
- check equipment and complete pre-start checks as required
- repair trellis according to workplace standards. This may include:
  - positioning and depth of posts and strainers
  - positioning and number of wires
  - tightness and grade of wire
- lay out posts and supports according to instructions. This may include:
  - spacing
  - type
  - numbers
  - positioning
  - safe handling procedures
- run out wire according to instructions. This will include:
  - securing of ends
  - safe handling procedures
  - cutting correct length
  - positioning
- operate equipment according to instructions
- erect trellis ends and assemblies according to instructions
- attach foliage and trellis wires according to instructions. This includes:
  - spacing
  - alignment
  - height
  - tension
  - fixing method
  - joining systems (e.g. wire knots)
- recognise, rectify and/or report problems and anomalies of trellis installation
- use hand tools
- collect, sort, treat, dispose of and/or recycle waste
- identify, rectify and/or report environmental non-compliance

- clean and store equipment according to instructions
- use appropriate cleaning techniques
- implement appropriate occupational health and safety (OHS) procedures
- store unused materials
- maintain work area to meet housekeeping standards
- conduct routine maintenance of equipment according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- purpose, features and components of the trellis system
- trellis installation process and procedures
- common maintenance requirements of vineyard trellising and how to repair them
- common faults, problems and how to solve them
- safe handling of materials and equipment
- purpose and application of personal protective clothing and/or equipment
- OHS hazards and controls
- environmental issues and controls
- procedures and responsibility for reporting problems and anomalies
- cleaning and storage requirements and procedures for equipment
- storage requirements and procedures for materials
- maintenance procedures for equipment where relevant.

## Evidence Guide

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

<b>EVIDENCE GUIDE</b>	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment where required</li> <li>• carry out trellis repairs according to instructions</li> <li>• lay out posts and supports according to instructions</li> <li>• cut, cure, position and tension wires according to instructions</li> <li>• store unused materials correctly</li> <li>• collect and recycle or dispose of waste according to procedures.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• wire strainers</li> <li>• pliers</li> <li>• manual and mechanical post inserters</li> <li>• hammers</li> <li>• saws</li> </ul>
<b>Materials</b>	<p>Materials may include:</p> <ul style="list-style-type: none"> <li>• wire</li> <li>• staples</li> <li>• posts</li> </ul>
<b>Trellis installation and maintenance</b>	<p>Trellis installation and maintenance includes:</p> <ul style="list-style-type: none"> <li>• supports</li> <li>• posts</li> <li>• strainers</li> <li>• wires</li> </ul>
<b>Waste</b>	Waste may include:

**RANGE STATEMENT**

- wire lengths
- broken or faulty posts and supports
- faulty fastenings

**Unit Sector(s)****Unit sector**

Wine operations



## FDFWGG2018A Operate vineyard equipment

### Modification History

This unit supersedes and is equivalent to FDFWGGVEQB Operate vineyard equipment.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to operate a range of vineyard equipment that does not require calibration. Where the operation of specialised equipment is required, alternative units should be selected.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to the operation of equipment used in wine grape growing. It includes the ability to attach, set up and detach equipment as required.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare equipment for operation	1.1 Requirements are interpreted and confirmed 1.2 Equipment is selected and checked to confirm readiness for use 1.3 Equipment is attached and set up according to instructions as required
2. Operate equipment	2.1 Equipment is started up according to workplace procedures 2.2 Equipment is operated according to workplace procedures 2.3 Equipment performance is monitored to confirm performance is maintained within specification 2.4 Out-of-specification equipment performance is identified, rectified and/or reported 2.5 Problems and anomalies are recognised and/or reported
3. Complete operation of equipment	3.1 Equipment is shut down according to workplace procedures 3.2 Equipment is prepared for cleaning and storage 3.3 Equipment is cleaned according to workplace procedures 3.4 Waste generated by both the activities and cleaning procedure is collected, treated and disposed of, or recycled according to workplace procedures 3.5 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and

processes that are used in the particular winery or workplace.

**Ability to:**

- access workplace information to identify requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- liaise with other work areas
- select appropriate equipment for the task
- confirm equipment status and condition. This may include checking:
  - fuel
  - water
  - oil (e.g. engine, gearbox and hydraulics)
  - belts
  - air intake
  - tyre pressure
  - metal fatigue or wear and tear
- attach equipment to towing vehicle as required
- set up equipment as required to meet operating instructions
- start up equipment
- operate equipment to meet operating instructions. This should include:
  - driving forward and reversing
  - operating in confined spaces
  - operating amongst other vineyard activities and a variety of conditions as required
- monitor equipment performance. This may include monitoring:
  - status and condition
  - handling and stopping ability
  - operating depth of equipment
  - blockages
  - ground speed or power take-off speed
  - width and/or coverage
  - environmental operating conditions
- recognise equipment performance problems and amend and/or report as instructed
- shut down equipment in response to emergency situations
- shut down equipment in response to routine shutdown requirements
- prepare equipment for cleaning and storage
- clean equipment
- store equipment according to instructions
- maintain work area to meet housekeeping standards
- collect, treat, recycle or dispose of waste according to workplace procedures
- identify, rectify and/or report environmental non-compliance
- use appropriate cleaning techniques
- maintain workplace records

- carry out routine maintenance of equipment according to enterprise procedures.

**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- purpose, features and components of equipment
- equipment pre-start checks
- equipment operating procedures
- process specifications, procedures and operating parameters
- common causes of variation or malfunction and the corrective action required
- required weather conditions for equipment operation
- Occupational health and safety (OHS) hazards and controls in all operating conditions
- significance and methods of monitoring equipment performance
- lock-out and tag-out procedures
- recording requirements and procedures
- procedures and responsibility for reporting problems
- environmental issues and controls
- cleaning requirements of equipment associated with changeovers and types of shutdown
- cleaning procedures
- storage requirements
- shutdown sequence
- routine maintenance procedures for equipment where relevant.

**Evidence Guide**

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of ability to: <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment</li> <li>• select and confirm availability of equipment and</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>prepare according to instructions</p> <ul style="list-style-type: none"> <li>• attach and set up equipment to meet requirements</li> <li>• start and operate equipment in accordance with operation instructions and requirements of workplace and task</li> <li>• perform emergency and routine shutdowns</li> <li>• take corrective action in response to out-of-specification results or non-compliance</li> <li>• demonstrate knowledge of OHS hazards, controls and emergency procedures</li> <li>• sort, collect, treat, recycle or dispose of waste</li> <li>• record information appropriately.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	<p>This unit should be assessed together with other units of competency relevant to the function or work role.</p>
Guidance information for assessment	<p>To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Vineyard equipment</b>	<p>Vineyard equipment may include, but is not limited to:</p> <ul style="list-style-type: none"> <li>• all terrain vehicles</li> <li>• tractor mounted forklift</li> <li>• front-end loader</li> <li>• towed equipment (e.g. gondola)</li> <li>• three point linkage equipment (e.g. discs)</li> <li>• power take-off driven equipment (e.g. slasher)</li> <li>• equipment with hydraulics (e.g. tipping trailer)</li> <li>• stationary equipment (e.g. pumps and generators)</li> </ul>
<b>Terrain</b>	<p>Terrain, where applicable, must enable safe and effective operation of the equipment. It may include:</p> <ul style="list-style-type: none"> <li>• tracks</li> <li>• access roads</li> <li>• vineyard rows</li> <li>• open paddocks</li> <li>• flat, undulating, steep, hilly or terraced land</li> <li>• on- and off road environments</li> </ul>
<b>Conditions</b>	Conditions, where applicable, must enable safe and

<b>RANGE STATEMENT</b>	
	<p>effective operation of the equipment. These may include:</p> <ul style="list-style-type: none"> <li>• dry</li> <li>• wet</li> <li>• slippery</li> <li>• boggy</li> <li>• icy</li> <li>• foggy</li> <li>• windy</li> <li>• day and night conditions</li> </ul>
<b>Loads</b>	<p>Loads, where applicable, may range from:</p> <ul style="list-style-type: none"> <li>• full to empty as required</li> </ul>
<b>Confirming equipment status</b>	<p>Confirming equipment status will include:</p> <ul style="list-style-type: none"> <li>• checking that all safety standards and pre- start requirements are met and equipment is operational</li> </ul>
<b>Information systems</b>	<p>Information systems may be:</p> <ul style="list-style-type: none"> <li>• print or screen based</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG2020A Carry out hot water treatment

### Modification History

This unit supersedes and is equivalent to FDFWGGHWTB Carry out hot water treatment.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for wine grape nurseries. It covers the skills and knowledge required to carry out hot water treatment of grape vine cuttings.
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### Application of the Unit

<b>Application of the unit</b>	Working with vine cuttings includes the ability to recognise problems and anomalies with vines. People undertaking this unit of competency in the workplace will require accreditation by the <i>Australian Vine Improvement Association (AVIA)</i> .
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for hot water treatment	<p>1.1 Work instructions on hot water treatments are confirmed and understood</p> <p>1.2 Materials are confirmed as available and ready to meet requirements</p> <p>1.3 Equipment is set up according to specifications</p> <p>1.4 Water is prepared for cool down, hot water treatment and hydration according to specifications</p> <p>1.5 Potential and existing hazards are identified, rectified and/or reported according to workplace procedures</p>
2. Treat cuttings	<p>2.1 Cuttings are dipped in the hot water according to AVIA protocols</p> <p>2.2 The dipping process is monitored for compliance with AVIA specifications</p> <p>2.3 Safe work procedures are followed to minimise risk of hazards</p>
3. Carry out post-treatment procedures	<p>3.1 Cuttings are cooled down according to AVIA protocols</p> <p>3.2 Treated cuttings are stored according to AVIA and workplace procedures</p> <p>3.3 Waste is collected and disposed of according to workplace procedures</p> <p>3.4 Work is conducted in accordance with workplace environmental guidelines</p>
4. Record information	<p>4.1 Treatment information is recorded according to AVIA requirements</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

**Required skills include:**

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Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Ability to:**

- access workplace information required to carry out hot water treatments
- confirm supply of necessary materials
- liaise with other work areas
- select, fit and use appropriate personal protective clothing and/or equipment
- select, operate, maintain and store required equipment according to instructions
- maintain work area and equipment to meet workplace housekeeping standards
- maintain work area and equipment to meet workplace hygiene standards
- use appropriate cleaning techniques
- recognise problems and anomalies and correct and/or report them as instructed
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- set up equipment for hot water treatment. This will include:
  - placing correct volumes of water in the tanks
  - calibrating data loggers
  - calibrating temperature sensors against a certified thermometer
  - calibrating thermometers
- prepare water for cool down, hot water treatment and hydration. This will include:
  - testing and adjusting chlorination levels
  - checking and adjusting temperature levels
- prepare cuttings for treatment. This may include re-hydration
- dip cuttings, fully submersing for the specified amount of time, at the specified temperature in prepared hot water
- monitor the dipping process to ensure compliance with required specifications. This will include:
  - monitoring critical control points for compliance with specifications
  - analysing readouts from data logging devices
  - maintaining level of agitation in the tanks
  - maintaining chlorine level
  - recalibrating thermometers
- cool down cuttings in prepared cooling water immediately following hot water treatment. this is already mentioned above
- store treated cuttings. This will include:
  - separating from untreated cuttings to prevent contamination
  - covering with clean covers
  - placing cuttings in vented plastic bags to prevent dehydration
  - placing cuttings in the cold room

- dispose of waste. This may include:
  - settling the water
  - racking off clean water
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- purpose of hot water treatment
- importance of precise treatment
- consequences of mistreatment
- AVIA and workplace specifications for hot water treatments
- reasons for using different specifications for hot water treatments
- monitoring techniques to ensure temperature and water quality are within specifications
- quality assurance process for the hot water treatment process
- Occupational health and safety (OHS) hazards and controls when undertaking hot water treatments
- purpose and application of personal protective clothing and/or equipment
- correct operating procedures for equipment
- safe and effective handling of equipment
- principles of nursery hygiene
- cleaning requirements and procedures for work area and equipment
- environmental issues and controls
- waste disposal requirements and procedures
- reporting and recording requirements and procedures
- procedures and responsibilities for reporting problems and anomalies.

**Evidence Guide**

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the

<b>EVIDENCE GUIDE</b>	
	<p>assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment where required</li> <li>• follow hot water treatment safety procedures</li> <li>• apply AVIA standards to heat and cool cuttings</li> <li>• handle cuttings according to instructions</li> <li>• recognise vine problems</li> <li>• dispose of waste according to instructions</li> <li>• maintain required records.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	<p>This unit should be assessed together with other units of competency relevant to the function or work role.</p>
Guidance information for assessment	<p>To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• manufacturer instructions</li> <li>• verbal directions from manager or supervisor</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• hydration tanks</li> <li>• treatment tanks</li> <li>• cooling-off tanks</li> <li>• dipping apparatus</li> <li>• electronic data logging devices</li> <li>• monitoring apparatus</li> <li>• certified reference thermometer</li> <li>• dipping cages</li> <li>• appropriate personal protective clothing and/or equipment</li> <li>• forklift</li> </ul>
<b>Materials</b>	<p>Materials may include:</p> <ul style="list-style-type: none"> <li>• cuttings</li> <li>• rootlings</li> <li>• water</li> <li>• chlorine</li> </ul>
<b>Waste</b>	<p>Waste may include:</p> <ul style="list-style-type: none"> <li>• water</li> <li>• damaged plant material</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• sediment</li> </ul>
<b>Hazards</b>	Hazards may include: <ul style="list-style-type: none"> <li>• heat sources</li> <li>• hot water</li> <li>• transferring vines</li> <li>• moving machinery</li> <li>• chlorine</li> </ul>
<b>Specifications</b>	Specifications will include: <ul style="list-style-type: none"> <li>• temperature range</li> <li>• length of time in a treatment</li> <li>• relative humidity</li> <li>• level of chlorination</li> <li>• amount of agitation required</li> <li>• quality of the water</li> </ul>
<b>Records</b>	Records will include: <ul style="list-style-type: none"> <li>• data logger print out</li> <li>• batch number</li> <li>• date of treatment</li> <li>• start and finish time of treatment</li> <li>• maximum temperature for treatments and cold room</li> <li>• minimum temperature for treatments and cold room</li> <li>• average temperatures for treatments and cold room</li> <li>• calibration information</li> <li>• name of operator</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG2021A Operate nursery cold storage facilities

### Modification History

This unit supersedes and is equivalent to FDFWGGOCSB Operate nursery cold storage facilities.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for wine grape nurseries. It covers the skills and knowledge required to operate and monitor nursery cold storage facilities.
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### Application of the Unit

<b>Application of the unit</b>	Application of this unit requires cold room operation in accordance with specifications and knowledge of occupational health and safety (OHS), environmental and hygiene requirements.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare cold room for storage	1.1 Work instructions are confirmed and understood 1.2 Cold room facilities are cleaned and sanitised according to workplace procedures 1.3 Cold room specifications are set according to workplace procedures 1.4 Potential and existing hazards are identified, rectified and/or reported according to workplace procedures
2. Operate cold room	2.1 Environmental specifications are monitored according to workplace procedures 2.2 Movement of stock is monitored according to cold room plan and workplace procedures 2.3 Problems and anomalies are identified, rectified and/or reported according to workplace procedures 2.4 Safe work practices are employed to minimise work hazards
3. Shut down cold room	3.1 Cold room is shut down according to workplace procedures 3.2 Cold room is cleaned and secured according to workplace procedures 3.3 Waste is collected and disposed of according to workplace procedures 3.4 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.



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**Required skills include:**

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Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Ability to:**

- access workplace information required to operate cold storage facilities
- liaise with other work areas
- select, fit and use appropriate personal protective clothing and/or equipment
- select, operate, maintain and store required equipment according to instructions
- identify, rectify and/or report environmental non-compliance
- maintain work area and equipment to meet workplace housekeeping and hygiene standards
- use appropriate cleaning techniques
- recognise problems and anomalies and correct and/or report them as instructed
- follow safe work procedures to minimise hazards
- collect, treat and dispose of waste according to workplace procedures
- maintain workplace records
- interpret and apply cold room plan
- confirm equipment status and condition. This may include:
  - checking all safety standards
  - conducting pre-start checks
- move material in and out of cold room. This may include:
  - transferring stock manually
  - using a mechanical transfer device
- recognise equipment performance problems and amend and/or report as instructed
- monitor the health of cuttings during storage. This may include identifying:
  - signs of dehydration
  - signs of fungal infection
- monitor cold room facilities according to workplace procedures. This may include identifying:
  - temperature variations
  - humidity variations
  - air flow
- shut down equipment in response to emergency situations
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

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**Required knowledge includes:**

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- OHS hazards and controls when working in a cold room
- environmental issues and controls
- principles of nursery hygiene
- purpose and application of personal protective clothing and/or equipment
- procedures and responsibility for reporting problems
- lock-out and tag-out procedures
- cleaning requirements and procedures
- reporting and recording requirements and procedures
- waste disposal requirements and procedures
- principles of cold room planning
- principles of cold room operation
- purpose and use of components of a cold room
- cold room equipment operating procedures
- shutdown sequence
- principles of maintaining cold room performance
- methods of maintaining cold room performance
- methods of monitoring a cold room
- methods of packing a cold room
- common causes of variation or malfunction and the corrective action required
- effect of cold storage on cuttings
- post-storage treatment of cuttings.

**Evidence Guide**

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of ability to: <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment where required</li> <li>• observe housekeeping standards</li> <li>• monitor cold storage and stock conditions and make</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<p>required adjustments</p> <ul style="list-style-type: none"> <li>• shut down, clean and secure cold storage facilities</li> <li>• recognise and act upon out-of-specification conditions</li> <li>• record information appropriately.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

### **RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with

<b>RANGE STATEMENT</b>	
training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	Workplace information can include: <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal directions from manager, supervisor or senior operator</li> </ul>
<b>Waste</b>	Waste may include: <ul style="list-style-type: none"> <li>• cleaning agents</li> <li>• unused stock</li> </ul>
<b>Potential hazards</b>	Potential hazards may include: <ul style="list-style-type: none"> <li>• cold room door closing while working inside</li> <li>• working in cold conditions</li> <li>• slippery floors</li> <li>• obstacles on the floor</li> <li>• overhead objects</li> <li>• operating forklifts and other moving objects</li> </ul>
<b>Problems and anomalies</b>	Problems and anomalies may include: <ul style="list-style-type: none"> <li>• fluctuations in temperature</li> <li>• breakdown of data loggers</li> <li>• fans or temperature controls</li> <li>• inadequate air flows due to incorrect stacking</li> </ul>
<b>Cold room specifications</b>	Cold room specifications may include: <ul style="list-style-type: none"> <li>• temperature range</li> <li>• spacing pattern for airflow</li> <li>• humidity</li> </ul>
<b>Cold room plans</b>	Cold room plans may include: <ul style="list-style-type: none"> <li>• stacking patterns</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• stacking heights</li> <li>• movement of stock</li> </ul>
<b>Records</b>	Records will include: <ul style="list-style-type: none"> <li>• temperature logs</li> <li>• material entering or leaving cold room</li> <li>• batch numbers</li> </ul>

### **Unit Sector(s)**

<b>Unit sector</b>	Wine operations
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## FDFWGG2022A Take and process vine cuttings

### Modification History

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for wine grape nurseries. It covers the skills and knowledge required to take and process vine cuttings under supervision.
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### Application of the Unit

<b>Application of the unit</b>	This unit covers the taking of vine cuttings from vines used in wine making cuttings and processing. A variety of hand operated or handheld equipment is used. Working with vine cuttings includes the ability to recognise problems and anomalies with vines and to select the best cuttings according to instructions.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Take vine cuttings	1.1 Cutting requirements are confirmed and understood 1.2 Equipment is checked to confirm readiness for use 1.3 Vine cuttings are taken according to instructions 1.4 Vine anomalies and problems are recognised, rectified and/or reported 1.5 Equipment is maintained in good working order
2. Complete vine cutting operations	2.1 Vine cuttings are collected according to instructions 2.2 Equipment is cleaned and stored according to instructions 2.3 Waste is collected and disposed of according to instructions
3. Prepare to process cuttings	3.1 Work instructions on the processing of cuttings are confirmed and understood 3.2 Facilities are cleaned and sterilised to minimise risk of contamination 3.3 Materials are confirmed as available and ready to meet requirements 3.4 Equipment is collected and checked for serviceability and sterilised as required by workplace procedures 3.5 Potential and existing hazards are identified, rectified and/or reported according to workplace procedures 3.6 Work is conducted in accordance with workplace environmental guidelines
4. Process cuttings	4.1 Cuttings are treated and bundled according to instructions 4.2 Bundles are labelled, packed and stored according to instructions 4.3 Waste is collected and disposed of according to workplace procedures 4.4 Problems and anomalies are identified, rectified and/or reported according to workplace procedures 4.5 Safe work practices are employed to minimise work hazards
5. Record information	5.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

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Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify cutting processing requirements
- confirm supply of necessary materials
- liaise with other work areas and customers
- select, fit and use appropriate personal protective clothing and/or equipment
- select, operate, maintain and store required equipment according to instructions
- maintain work area and equipment to meet workplace housekeeping standards
- maintain work area and equipment to meet workplace hygiene standards
- use appropriate cleaning techniques
- recognise problems and anomalies and correct and/or report them as instructed
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- handle pruning secateurs safely. This includes following the correct handling and sharpening procedures
- recognise performance problems with secateurs and correct or report them as instructed. This includes oiling moving parts and sharpening blades
- identify different parts of the grapevine. This should include identifying:
  - vine trunk and permanent framework
  - canes and/or cordons
  - tendrils and buds
- select and take vine cuttings according to instructions. This may include:
  - correct length and diameter
  - correct number of buds on the cutting
  - degree of straightness
  - cuts made correctly and cleanly
  - top cut at 45° angle or bottom bud flat, 1-2 cm from nearest bud
  - number of buds left on the vine
- collect and store vine cuttings according to instructions. This may include:
  - numbers per bundle
  - all lying the same way in the bundle (basal and distal ends)
  - secure tying of bundles



- labelling
- maintaining hydration of cuttings
- prepare chemical treatments to required concentration and ensure homogenous mix
- treat cuttings as instructed. This may include:
  - completing hydration of all cuttings
  - completing chemical treatment of all cuttings
  - removing unwanted plant material
- monitor the standard of cuttings and grade them as instructed
- bundle and label cuttings as instructed. This may include:
  - including correct numbers per bundle
  - cuttings all lying the same way in the bundle
  - tying bundles securely
  - labelling legibly and accurately
- pack and store cuttings as instructed. This may include:
  - cold room layout
  - cold room temperature variations
  - customer requirements
  - storage time requirements
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

#### Required knowledge

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### **Knowledge of:**

- occupational health and safety (OHS) hazards and controls
- purpose and application of personal protective clothing and/or equipment
- correct operating procedures for equipment
- safe and effective handling of equipment
- cleaning requirements and procedures for work area and equipment
- reporting and recording requirements and procedures
- procedures and responsibilities for reporting problems and anomalies
- waste disposal requirements and procedures
- environmental issues and controls
- principles of nursery hygiene
- basic components of the vine
- basic vine problems and anomalies
- cutting requirements and procedures
- cutting collection and storage requirements, including hydration

- specifications of vine cuttings
- factors that influence how a cutting should be graded and why
- common features of healthy vine cuttings
- common features of unhealthy vine cuttings
- safe preparation and handling of chemicals.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment where required</li> <li>• follow cutting equipment safety procedures</li> <li>• select cuttings and cut according to instructions</li> <li>• handle, bundle, and label cuttings according to instructions</li> <li>• recognise vine problems</li> <li>• dispose of waste according to instructions</li> <li>• maintain required records.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>

<b>RANGE STATEMENT</b>	
<b>Facilities</b>	<p>Facilities may include:</p> <ul style="list-style-type: none"> <li>• cold storage</li> <li>• fungicide treatment areas</li> <li>• storage bins or tanks</li> <li>• soakage tanks</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• secateurs</li> <li>• personal protective clothing and/or equipment</li> <li>• bins</li> <li>• boxes</li> <li>• packing machine</li> <li>• counting machine</li> <li>• forklift</li> </ul>
<b>Materials</b>	<p>Materials may include:</p> <ul style="list-style-type: none"> <li>• string</li> <li>• labels</li> <li>• chemicals</li> <li>• sand</li> <li>• water</li> <li>• pallets</li> </ul>
<b>Waste</b>	<p>Waste may include:</p> <ul style="list-style-type: none"> <li>• off-cuts</li> <li>• dropped or rejected cuttings</li> <li>• packaging materials</li> <li>• chinisol</li> <li>• chemical containers</li> </ul>
<b>Work hazards</b>	<p>Hazards may include:</p> <ul style="list-style-type: none"> <li>• damaging fingers or eyes from use of tools and equipment</li> <li>• manual handling</li> <li>• lifting bundles</li> <li>• falling over in an untidy work area</li> <li>• using chemicals and disinfectants</li> </ul>
<b>Problems and anomalies</b>	<p>Problems and anomalies may include:</p> <ul style="list-style-type: none"> <li>• physical damage or signs of common pests and diseases, such as eutypa, phomopsis, nematodes, crown gall, diseased wood, dehydration, infection,</li> </ul>

<b>RANGE STATEMENT</b>	
	physical damage, damaged buds, immature wood <ul style="list-style-type: none"> <li>• different wood characteristics indicative of a different vine variety</li> </ul>
<b>Records</b>	Records will include: <ul style="list-style-type: none"> <li>• type of cuttings</li> <li>• quantity of cuttings</li> <li>• the count per bundle</li> <li>• number of bundles</li> <li>• treatments carried out</li> <li>• source identification code</li> </ul>
<b>Treatments</b>	Treatments may include: <ul style="list-style-type: none"> <li>• hydration</li> <li>• chemical treatment</li> <li>• trimming</li> <li>• grading</li> </ul>
<b>Grading</b>	Grading cuttings may include: <ul style="list-style-type: none"> <li>• sorting for length, diameter, appearance and number of viable buds</li> </ul>
<b>Label information</b>	Label information may include: <ul style="list-style-type: none"> <li>• class of the material</li> <li>• variety and clone</li> <li>• grade of cutting</li> <li>• the source identification code</li> </ul>
<b>Packing</b>	Packing may include: <ul style="list-style-type: none"> <li>• packing, venting and sealing cuttings into polythene film bags or packing bins</li> <li>• wrapping cuttings in wet hessian</li> <li>• packing in woven polypropylene wool packs</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG3002A Coordinate canopy management activities

### Modification History

This unit supersedes and is equivalent to FDFWGGCCMA Coordinate canopy management activities.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to identify and implement manual and automated canopy management activities.
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### Application of the Unit

<b>Application of the unit</b>	Coordination skills required in applying this unit involve facilitating a team.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for canopy management activities	1.1 Canopy management requirements are identified 1.2 Vine vigour and growth are assessed according to workplace procedures 1.3 Appropriate manual and/or automated canopy management techniques are selected 1.4 Equipment is confirmed as available and ready for use 1.5 Operators are instructed as required
2. Implement canopy management requirements	2.1 Canopy management activities are carried out according to vine vigour, growth guidelines and manager's instructions 2.2 Canopy management activities are monitored to confirm that performance is maintained within specification 2.3 Out-of-specification performance is identified, rectified and/or reported 2.4 Problems and anomalies are identified, corrected and/or reported
3. Record information	3.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

### Ability to:

- access workplace information to identify canopy management requirements
- select, fit and use appropriate personal protective clothing and/or equipment

- identify, rectify and/or report environmental non-compliance
- implement canopy management requirements. This may include consideration of:
  - equipment and materials required
  - personnel required
  - location
  - transport
  - timing
  - environmental operating conditions
  - other vineyard activities (e.g. spraying)
- select appropriate canopy management techniques. This will include consideration of:
  - vine vigour
  - trellis design
  - grape variety
  - quality requirements
  - climate, current and forecast weather conditions
  - vineyard terrain and aspect
  - phenological development
  - workplace procedures and manager's instructions
- monitor canopy management activities. This may include monitoring:
  - removal of unwanted growth
  - positioning of vine shoots
  - cutting procedure and quality
  - manipulation and securing of vine
  - vine damage
  - exposure of crop to sunlight
  - addition and positioning of foliage wires or shade cloth
  - correct disposal of waste
  - cleaning and storage of equipment
  - problems and anomalies
  - equipment performance and maintenance
  - team performance and progress
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record problems and/or corrective actions
- maintain canopy management records according to workplace standards
- facilitate and train teams and individuals
- conduct routine maintenance of equipment according to enterprise procedures
- apply information technology systems according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor



- work cooperatively within a culturally diverse workforce.

**Required knowledge include:**

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- basic vine physiology as it applies to:
  - water intake
  - nutrient uptake
  - photosynthesis
  - respiration, transpiration
  - translocation
- parts of the root, trunk, shoot and fruit systems of the grapevine, their role in how the vine works and their contribution to fruit quality, including:
  - buds, nodes and tendrils
  - cambium, epidermis, phloem and xylem
  - leaf blade, bract and petiole
  - bunches, berries and flowers
- vine types, their characteristics and uses, including:
  - family, genus and species
  - *Vitis vinifera* and commercial varieties
  - native species and hybrids (e.g. *labrusca*)
  - rootstocks and scion stock
- industry processes for new variety development
- annual grapevine growth stages, including:
  - budburst
  - flowering
  - veraison
  - maturity
- key grape varieties and their distinguishing features. This may include factors, such as:
  - berry and bunch characteristics
  - frost and disease resistance
  - flavour and style
- effects of vine canopy reduction and grape exposure on fruit and wine quality
- features and benefits of a range of manual and/or automated canopy management styles and techniques and their respective affect on grape quality, cropping yield and wine production requirements. This should include techniques to manage:
  - light penetration and shading
  - air circulation and disease reduction
  - phenological stages of vine development

- crop quality and quantity
- factors influencing vine vigour, including:
  - grape variety
  - trellis design
  - vine spacing
  - fertilisers
  - irrigation
  - rootstock
- key factors affecting the canopy management technique adopted. These may include:
  - climate, forecast and current weather conditions
  - vineyard aspect and terrain
  - grape variety and vigour
  - grape quality and characteristics required
  - trellis design
  - harvesting techniques
  - disease risk and occurrence
  - stage of maturity and development
- recognition of correct vine growth stages at which to carry out canopy management activities
- significance and method of monitoring canopy management activities
- safe handling of equipment
- correct operating procedures for equipment
- purpose and application of personal protective clothing and/or equipment
- Occupational health and safety (OHS) hazards and controls
- identification of common problems and anomalies
- procedures and responsibility for reporting problems
- environmental issues and controls
- cleaning and storage requirements of equipment
- Reporting and recording requirements and procedures
- team facilitation and training techniques
- routine maintenance procedures for equipment where relevant
- information technology systems where relevant.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>EVIDENCE GUIDE</b>	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of ability to: <ul style="list-style-type: none"> <li>• use personal protective clothing and equipment</li> <li>• determine requirements for canopy management according to vine vigour, growth guidelines and manager's instructions</li> <li>• select canopy management techniques</li> <li>• coordinate team activities to implement determined canopy management techniques</li> <li>• address problems and anomalies</li> <li>• complete workplace records.</li> </ul>
Context of and specific resources for assessment	Assessment must occur in a real or simulated workplace where the assessee has access to: <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• hydraulic or pneumatic pruners</li> <li>• a range of secateurs</li> <li>• knives</li> <li>• tractor</li> <li>• circular and hand saws</li> <li>• cutter bars</li> <li>• blades</li> <li>• drum pruners</li> <li>• mechanical leaf pluckers and wire lifters</li> <li>• bare hands</li> <li>• maintenance tools and team support equipment (e.g. toilet facilities, first aid box and spare equipment)</li> </ul>
<b>Unwanted growth</b>	Unwanted growth may include:

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• suckers</li> <li>• water shoots</li> <li>• congested shoots</li> <li>• excess bunches</li> </ul>
<b>Canopy management systems</b>	<p>Canopy management systems will vary with workplace requirements, but may include:</p> <ul style="list-style-type: none"> <li>• vertically shoot positioned (VSP)</li> <li>• wide T</li> <li>• Scott Henry</li> <li>• single wire</li> </ul>
<b>Canopy management activities</b>	<p>Canopy management activities may include:</p> <ul style="list-style-type: none"> <li>• leaf removal</li> <li>• shoot removal</li> <li>• applying or removing shade cloth</li> <li>• lifting or lowering foliage wires</li> <li>• positioning shoots</li> <li>• trimming shoots</li> <li>• bunch thinning</li> </ul>
<b>Problems and anomalies</b>	<p>Problems and anomalies include:</p> <ul style="list-style-type: none"> <li>• signs of common pests and diseases, such as mildew, eutypa, phomopsis, boring insects, dying arm, crown gall, and diseased wood or berries</li> <li>• signs of trellis and/or irrigation disrepair or problems</li> <li>• machinery breakdown</li> <li>• team performance</li> </ul>
<b>Information systems</b>	<p>Information systems may be:</p> <ul style="list-style-type: none"> <li>• screen or print based and may include information technology systems, such as recording and reporting, weather forecasting, rainfall maps and infrared canopy monitoring</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG3004A Coordinate nursery activities

### Modification History

This unit supersedes and is equivalent to FDFWGGCNAB Coordinate nursery activities.

September 2012: clarified pre-requisite information.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for wine grape nurseries. It covers the skills and knowledge required to coordinate nursery personnel in a range of day-to-day activities.
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### Application of the Unit

<b>Application of the unit</b>	This unit includes allocation and monitoring of individual performance targets and requirements.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Pre requisite units</b>		
	FDFWGG2002A	Carry out potting operations
	FDFWGG2006A	Obtain and process rootlings
	FDFWGG3009A	Monitor and maintain nursery plants* <i>FDFWGG2007A Tend containerised nursery plants</i> <i>FDFWGG2012A Identify and treat nursery plant disorders</i>

## Employability Skills Information

Employability skills	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. Prepare to coordinate nursery activities	1.1 Activity goals and performance requirements are identified and clarified 1.2 Tasks required to achieve performance requirements are identified 1.3 Personnel required are confirmed as available and having the appropriate competence 1.4 Equipment is confirmed as available and ready for use 1.5 Materials are confirmed as available and ready to meet requirements
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<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
2. Coordinate nursery activities	<p>2.1 Individual work tasks and roles are allocated to ensure activity goals and performance requirements are met</p> <p>2.2 Work targets and timelines are negotiated to achieve activity goals and performance requirements</p> <p>2.3 Activities are monitored to ensure compliance with workplace procedures on occupational health and safety (OHS), environmental and quality issues</p> <p>2.4 Activities are monitored against timelines and performance requirements</p> <p>2.5 Potential barriers to achieving targets and performance requirements are identified, rectified and/or reported</p>
3. Complete coordination of nursery activities	<p>3.1 Activities are monitored to ensure compliance with relevant workplace procedures on completion, shutdown and waste disposal</p> <p>3.2 Work is conducted in accordance with workplace environmental guidelines</p> <p>3.3 Personnel are debriefed as appropriate</p>
4. Record information	<p>4.1 Workplace information is recorded in the appropriate format</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information to identify nursery activity requirements
- confirm supply of necessary resources
- select, fit and use appropriate personal protective clothing and/or equipment
- identify, rectify and/or report environmental non-compliance
- liaise with other work areas and customers
- plan nursery activities. This may include considering:
  - personnel requirements
  - equipment and materials required
  - location



- transport
- timing
- environmental conditions
- other nursery activities
- quality and quantity requirements
- instruct individuals and/or a group
- provide feedback to individuals and/or a group
- monitor nursery activities. This may include monitoring:
  - compliance with OHS, environmental and quality procedures
  - individual and/or team performance
  - achievement of targets, timelines and performance requirements
  - own and other team members' learning needs
  - compliance with completion, shutdown and waste disposal procedures
- resolve conflicts
- take corrective action in response to out-of-specification results or non-compliance
- recognise, correct and/or report problems and anomalies
- maintain workplace records
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

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**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

***Knowledge of:***

- workplace planning processes
- workplace activity scheduling processes
- OHS hazards and controls
- environmental issues and controls
- reporting and recording requirements and procedures
- procedures and responsibility for reporting problems and anomalies
- communication principles and strategies
- procedures for monitoring and reporting on individual and team performance
- competency identification and training arrangements
- conflict resolution, negotiation and problem-solving strategies.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• determine activities required of nursery and individuals in order to meet performance targets</li> <li>• allocate activities and monitor their implementation</li> <li>• provide leadership and instruction for nursery personnel</li> <li>• address performance issues</li> <li>• complete workplace records.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over

**EVIDENCE GUIDE**

a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

**Range Statement**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Policies and procedures**

Work is carried out in accordance with workplace procedures, licensing requirements, legislative requirements and industrial awards and agreements

**Team practices**

Team practices and work allocation occurs within the context of competency and licensing requirements and industrial agreements

**Workplace information**

Workplace information can include:

- Standard Operating Procedures (SOPs)
- specifications
- production schedules
- instructions
- routine maintenance schedules
- work notes
- Material Safety Data Sheets (MSDS)
- manufacturer instructions
- verbal direction from manager, supervisor or senior operator

**Nursery activities**

Nursery activities may include:

- any activity undertaken within the wine grape nursery environment including preparing, conducting, monitoring and completing work in the establishment and care of wine grape vines

**Goal and performance**

Goal and performance requirements may be:

<b>RANGE STATEMENT</b>	
<b>requirements</b>	<ul style="list-style-type: none"> <li>determined by organisation or departmental operational plans and customer requirements</li> </ul>
<b>Resources</b>	Resources may include: <ul style="list-style-type: none"> <li>personnel</li> <li>equipment</li> <li>materials</li> </ul>
<b>Records</b>	Records will include: <ul style="list-style-type: none"> <li>operational plans</li> <li>nursery activities</li> <li>personnel and maintenance records</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG3005A Perform field nursery activities

### Modification History

This unit supersedes and is equivalent to FDFWGGFNAB Perform field nursery activities.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. This unit covers the skills and knowledge required to plant, maintain and process field nursery vines.
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### Application of the Unit

<b>Application of the unit</b>	This unit includes preparation for plantings, care of young vines and preparation for transfer and transportation.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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### Elements and Performance Criteria Pre-Content

Elements describe the            Performance criteria describe the performance needed to

essential outcomes of a unit of competency.

demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for field nursery planting	1.1 Field nursery bed is prepared according to instructions 1.2 Field nursery maintenance infrastructure is checked to confirm readiness for use as required
2. Maintain field nursery vines	2.1 Appropriate vine protection methods are applied 2.2 Field nursery activities are carried out as instructed 2.3 Young vine growth and health are monitored according to instructions 2.4 Problems and anomalies are recognised, rectified and/or reported
3. Process field nursery rootlings for removal from nursery	3.1 Vine rootlings are undercut and lifted according to instructions 3.2 Rootlings are prepared for transport according to instructions 3.3 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

### Ability to:

- access workplace information to identify nursery requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- liaise with other work areas and customers
- prepare field nursery bed for planting. This may include:
  - herbicide treatment
  - soil cultivations
  - fertiliser additions

- planning vine planting (e.g. number of vines, area size, varietal lots, row spacing for mechanical operations and row orientation)
- application of weed matting
- positioning irrigation pipes and points
- checking readiness of maintenance infrastructure
- select and apply appropriate vine protection methods. This should include consideration of:
  - climate, weather and prevailing wind
  - vineyard pests (e.g. rabbits)
  - aspect, orientation of vineyard
  - irrigation or fertilisation schedule
  - frost incidence
- maintain and care for young vines
- monitor the health and growth of young vines. This may involve monitoring:
  - soil moisture
  - signs of disease and pests
  - water stress
  - signs of nutrient deficiency
  - growth rate
- take corrective action in response to out-of-specification growth or appearance, or non-compliance
- report and/or record corrective action as required
- identify, rectify and/or report environmental non-compliance
- use appropriate cleaning techniques
- maintain work area to meet housekeeping standards
- lift rootlings from the beds whilst ensuring minimal plant damage. This may include:
  - roots undercut adequately
  - gentle handling
- prepare rootlings for transport. This may include:
  - trimming
  - counting and bundling
  - labelling
  - grading
  - packing
- plant vines according to enterprise procedures
- take samples and conduct tests according to enterprise procedures
- conduct routine maintenance of equipment according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- purpose, requirements and procedures for nursery bed preparation
- protection and maintenance requirements of young vines
- requirements of growing vines
- common causes and signs of young vine growth disorders and corrective action required
- Occupational health and safety (OHS) hazards and controls
- correct procedures and requirements for lifting vine rootlings from the nursery bed
- preparation requirements and procedures for transporting rootlings
- storage requirements of rootlings
- procedures and responsibility for reporting problems
- environmental issues and controls
- reporting and recording requirements and procedures
- planting procedures where relevant
- sampling and testing procedures where relevant
- routine maintenance procedures for equipment where relevant.

**Evidence Guide**

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective equipment, MSDS and follow other specified OHS procedures</li> <li>• follow vine protection procedures</li> <li>• prepare for, implement and monitor nursery activities</li> <li>• prepare vine rootlings for transport</li> <li>• monitor the health of rootlings.</li> </ul>



<b>EVIDENCE GUIDE</b>	
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements

<b>RANGE STATEMENT</b>	
<b>Workplace information</b>	Workplace information can include: <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Bed preparation</b>	Bed preparation may include, but is not limited to: <ul style="list-style-type: none"> <li>• cultivating</li> <li>• fertilising</li> <li>• planning layout</li> </ul>
<b>Maintenance infrastructure</b>	Maintenance infrastructure may include: <ul style="list-style-type: none"> <li>• irrigation or fertilisation equipment and components</li> <li>• windbreaks</li> </ul>
<b>Vine protection methods</b>	Vine protection methods include: <ul style="list-style-type: none"> <li>• waxing</li> <li>• windbreaks</li> <li>• row orientation</li> <li>• pest control</li> </ul>
<b>Maintenance activities</b>	Maintenance activities include: <ul style="list-style-type: none"> <li>• irrigation</li> <li>• fertilising</li> <li>• mulching</li> <li>• weed and pest control</li> </ul>
<b>Problems and anomalies</b>	Problems and anomalies include: <ul style="list-style-type: none"> <li>• signs of pests and diseases</li> <li>• equipment malfunction</li> <li>• rogue vines</li> </ul>
<b>Information systems</b>	Information systems may be: <ul style="list-style-type: none"> <li>• screen or print based</li> </ul>
<b>Work hazards</b>	Work may involve exposure to:

**RANGE STATEMENT**

- chemical, dangerous or hazardous substances

**Unit Sector(s)****Unit sector**

Wine operations

## FDFWGG3006A Coordinate hand pruning activities

### Modification History

This unit supersedes and is equivalent to FDFWGGHPB Coordinate hand pruning activities.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. This unit covers the skills and knowledge required to identify and implement hand pruning requirements, including supervising a team of casual hand pruners.
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### Application of the Unit

<b>Application of the unit</b>	Coordination skills required in the application of this unit will involve facilitating others.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Pre requisite units</b>		
	FDFWGG2003A	Hand prune vines

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for hand pruning activities	1.1 Pruning requirements are identified 1.2 Appropriate pruning techniques are selected 1.3 Pruning equipment is confirmed as available and ready for use 1.4 Pruning equipment is set up to meet requirements 1.5 Operators are instructed as required
2. Implement hand pruning requirements	2.1 Pruning activities are monitored to confirm performance is maintained within specification 2.2 Out-of-specification performance is identified, rectified and/or reported 2.3 Vines are pruned according to crop levels, vine vigour and workplace procedures 2.4 Anomalies and problems are identified, corrected and/or reported 2.5 Work is conducted in accordance with workplace environmental guidelines
3. Record information	3.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

### Ability to:

- access workplace information to identify pruning requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- train and/or facilitate a team of hand pruners
- implement hand pruning requirements. This may include consideration of:
  - equipment and materials required
  - personnel required
  - location
  - transport
  - timing
  - environmental conditions
  - other vineyard activities (e.g. spraying)
- select appropriate pruning techniques. This will include consideration of:
  - grape variety
  - vine vigour
  - quality and yield requirements
  - climate
  - workplace procedures and manager's instructions
- monitor pruning activities. This will include monitoring:
  - selection of best possible spurs and canes
  - positioning of spurs and canes
  - clean removal of sucker shoots
  - correct quantity of spurs, rods, canes and buds left
  - cuts made correctly and cleanly
  - recognition and removal of unwanted growth
  - rolling and securing extension canes onto trellis wire as required
  - correct disposal of pruned material
  - equipment performance
  - cleaning and storage of equipment
  - team performance and progress
- identify problems and anomalies
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record problems and/or corrective action
- identify, rectify and/or report environmental non-compliance
- maintain work area to meet housekeeping standards
- maintain pruning records according to workplace standards
- conduct routine maintenance of equipment according to enterprise procedures
- apply information technology systems according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge includes:**

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- basic vine physiology, as it applies to:
  - water intake
  - nutrient uptake
  - photosynthesis
  - respiration, transpiration
  - translocation
- parts of the root, trunk, shoot and fruit systems of the grapevine, their role in how the vine works and their contribution to fruit quality, including:
  - buds, nodes and tendrils
  - cambium, epidermis, phloem and xylem
  - leaf blade, bract and petiole
  - bunch, berries and flowers
- vine types, their characteristics and uses, including:
  - family, genus and species
  - *Vitis Vinifera* and commercial varieties
  - native species and hybrids (e.g. *labrusca*)
  - rootstocks and scion stock
- industry processes for new variety development
- annual vine growth stages, including:
  - budburst
  - flowering
  - veraison
  - maturity
- key grape varieties and their distinguishing features. This may include factors, such as:
  - berry and bunch characteristics
  - frost and disease resistance
  - flavour and style
- different types of pruning and their features, benefits and effects on grape quality
- relationship between bud numbers and cropping levels and the effect on wine quality
- effects of different pruning levels on wine quality
- concept of pruning to vine vigour
- safe handling of pruning equipment
- correct operating procedures for pruning equipment
- Occupational health and safety (OHS) hazards and controls
- common problems and anomalies associated with hand pruning activities

- procedures and responsibility for reporting problems
- cleaning and storage requirements of pruning equipment
- recording requirements and procedures
- team facilitation and training techniques
- environmental issues and controls
- routine maintenance procedures for equipment where relevant
- information technology systems where relevant.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• ensure use of personal protective clothing and equipment</li> <li>• determine requirements for hand pruning according to crop levels, vine vigour and workplace procedures</li> <li>• select hand pruning techniques</li> <li>• coordinate activities to implement determined hand pruning techniques</li> <li>• address problems and anomalies</li> <li>• complete workplace records.</li> </ul>
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information</li> </ul>



<b>EVIDENCE GUIDE</b>	
	as required <ul style="list-style-type: none"> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	Workplace information can include: <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• pneumatic secateurs</li> <li>• petrol air compressors</li> <li>• hydraulic snips</li> <li>• electronic secateurs</li> <li>• knives</li> <li>• saws</li> <li>• hand secateurs</li> <li>• maintenance tools</li> <li>• team support equipment (e.g. toilet facilities, first aid box, spare pruning equipment)</li> </ul>
<b>Pruning methods</b>	<p>Pruning methods may include:</p> <ul style="list-style-type: none"> <li>• spur pruning</li> <li>• cane pruning</li> <li>• rod and spur pruning</li> <li>• hand clean up after machine pruning</li> </ul>
<b>Information systems</b>	<p>Information systems may be:</p> <ul style="list-style-type: none"> <li>• screen or print based and may include information technology systems, such as reporting, monitoring and recording, weather forecasting and rainfall mapping systems</li> </ul>
<b>Problems and anomalies</b>	<p>Problems and anomalies may include:</p> <ul style="list-style-type: none"> <li>• dead vines</li> <li>• split cordon</li> <li>• extending cordon</li> <li>• poor bud position</li> <li>• signs of common pests and diseases, such as mildew, eutypa, phomopsis, boring insects, dying arm, crown gall or diseased wood</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG3009A Monitor and maintain nursery plants

### Modification History

This unit supersedes and is equivalent to FDFWGGMNPB Monitor and maintain nursery plants.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for wine grape nurseries. It covers the skills and knowledge required to monitor and maintain containerised nursery plants.
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### Application of the Unit

<b>Application of the unit</b>	This unit includes maintaining the plant environment to ensure it supports optimum growth and health and meets stock requirements.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Pre requisite units</b>		
	FDFWGG2007A	Tend containerised plants
	FDFWGG2012A	Identify and treat nursery plant disorders

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. Monitor environmental parameters	1.1 Environmental parameters are monitored against the production plan and according to workplace procedures 1.2 Environmental parameters are altered to meet the needs of the plants and according to workplace procedures
2. Determine daily water requirements	2.1 Plant water needs are determined according to workplace procedures 2.2 Water is applied according to the needs of the plants and workplace procedures 2.3 Water requirements are monitored according to workplace procedures
3. Implement treatments to promote plant growth	3.1 Potting media is tested to ensure specifications are met 3.2 Overall health of plants is monitored according to workplace procedures 3.3 Plant treatments are implemented according to production plans and workplace procedures 3.4 Problems and anomalies are identified, rectified and/or reported according to workplace procedures
4. Monitor the dispatch of stock	4.15 Availability of stock and timing of dispatch is confirmed with customers according to workplace procedures 4.2 Plants are prepared for dispatch in line with customer requirements 4.3 Stock is checked to ensure it meets quality specifications 4.4 Orders are checked against stock being dispatched to ensure

ELEMENT	PERFORMANCE CRITERIA
	compliance
5. Record information	5. Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

#### Ability to:

- access workplace information required to monitor and maintain nursery plants
- liaise with other work areas and customers
- select, fit and use appropriate personal protective clothing and/or equipment
- identify potential and existing hazards in the work area
- identify, rectify and/or report environmental non-compliance
- monitor work areas to ensure they meet workplace housekeeping standards
- monitor work area to ensure they meet workplace hygiene standards. This may include:
  - removing weeds
  - removing dead or diseased plant materials
  - washing work area on transfer of plants
  - disinfecting tools, equipment and work areas
  - using foot baths on entry to different work areas
- identify, rectify and/or report problems and anomalies
- implement safe work procedures to minimise hazards
- maintain workplace records
- maintain irrigation systems. This may include:
  - fixing blockages
  - servicing irrigation system components
  - identifying and reporting faults in the irrigation system
  - fixing leaking heads and hoses
- monitor water requirements. This may include:
  - using soil moisture devices
  - checking plants for physical signs of water stress or waterlogging
- test potting media. This may include identifying:
  - pH
  - drainage

- aeration
- salinity
- nitrate levels
- water repellence
- monitor health of the vines
- apply treatments to vines. These may include:
  - fungicides
  - fertilisers
  - insecticides
  - hormones
  - pruning
  - hardening off
  - irrigation
- monitor and/or prepare stock for dispatch. This may include:
  - labelling containers
  - checking orders against stock prepared
  - hydrating stock
- prepare, mix and use chemicals as required
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

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**Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- basic vine physiology, as it applies to:
  - transpiration
  - water intake
  - nutrient uptake
  - photosynthesis
  - respiration
  - translocation
- parts of the root, trunk, shoot and fruit systems of the grapevine, their role in how the vine works and their contribution to fruit quality, including:
  - buds, nodes and tendrils
  - cambium, epidermis, phloem and xylem
  - leaf blade, bract and petiole
  - bunch, berries and flowers

- industry processes for new variety development
- key grape varieties and their distinguishing features. This may include factors, such as:
  - berry and bunch characteristics
  - frost and disease resistance
  - flavour and style
- annual grapevine growth stages, including:
  - budburst
  - flowering
  - veraison
  - maturity
- methods of calculating daily water needs
- methods for monitoring water use
- relationship between water needs of nursery plants and environmental parameters
- characteristics of various types of potting media
- tests to determine quality of potting media
- principles of nursery hygiene
- optimum growing conditions for plants in a nursery
- quality parameters for a range of nursery plants
- symptoms of unhealthy plants
- treatments required by plants at different growth stages and environmental parameters
- packing, dispatch and handling techniques of nursery plants
- Occupational health and safety (OHS) hazards and controls
- environmental issues and controls
- reporting and recording requirements and procedures
- procedures and responsibility for reporting problems and anomalies

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate</p>	<p>Evidence of ability to:</p>



<b>EVIDENCE GUIDE</b>	
competency in this unit	<ul style="list-style-type: none"> <li>• use personal protective equipment, MSDS and follow other specified OHS procedures</li> <li>• identify environmental factors on plant growth and health</li> <li>• monitor and control application of water and special treatments to meet production outcomes</li> <li>• identify and address anomalies and problems</li> <li>• maintain stock levels to meet requirements</li> <li>• prepare stock for dispatch</li> <li>• complete documentation.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	<p>This unit should be assessed together with other units of competency relevant to the function or work role.</p>
Guidance information for assessment	<p>To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• product labels</li> <li>• integrated pest management (IPM) programs</li> <li>• verbal directions from manager, supervisor, or senior operator</li> </ul>
<b>Nursery environment</b>	<p>Nursery environment may include:</p> <ul style="list-style-type: none"> <li>• glasshouses</li> <li>• shade houses</li> <li>• field nurseries</li> <li>• hardening-off areas</li> </ul>
<b>Environmental parameters</b>	<p>Environmental parameters may include:</p> <ul style="list-style-type: none"> <li>• light</li> <li>• temperature</li> <li>• humidity</li> <li>• wind</li> </ul>
<b>Crop water needs</b>	<p>Crop water needs are determined by:</p> <ul style="list-style-type: none"> <li>• using water monitoring devices or physical observation</li> </ul>
<b>Problems and anomalies</b>	<p>Problems and anomalies may include:</p> <ul style="list-style-type: none"> <li>• evidence of pests and diseases</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• insufficient new roots</li> <li>• insufficient number of new shoots</li> <li>• weak graft union</li> <li>• signs of dehydration</li> <li>• changes in environmental parameters</li> <li>• poor equipment performance</li> </ul>
<b>Stock</b>	Stock may include: <ul style="list-style-type: none"> <li>• cuttings and rootlings</li> </ul>
<b>Records</b>	Records will include: <ul style="list-style-type: none"> <li>• date</li> <li>• environmental parameters</li> <li>• treatments applied</li> <li>• rate of treatments</li> <li>• name of operator</li> <li>• dispatch records</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG3010A Implement a soil management program

### Modification History

This unit supersedes but is not equivalent to FDFWGG3010B Implement a soil management program.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. This unit covers the skills and knowledge required to monitor soil requirements and implement and evaluate a soil management program.
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### Application of the Unit

<b>Application of the unit</b>	The application of this unit involves consultation with the manager and may require supervision of others in the implementation process.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		
	FDFWGG2018A	Operate vineyard equipment
	FDFWGG3001A	Apply chemicals and biological agents

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor vineyard soil management requirements	1.1 Vineyard soil is monitored according to workplace procedures 1.2 Results are interpreted correctly 1.3 Appropriate soil management activities are identified and recommended
2. Implement soil management program	2.1 Resources are coordinated and personnel briefed to deliver requirements 2.2 Agreed soil management program is implemented
3. Evaluate effectiveness of soil management activities	3.1 Vineyard is monitored to evaluate effectiveness of activities 3.2 Surrounding areas are monitored to evaluate environmental impact of soil management activities
4. Record information	4.1 Workplace information is recorded in the appropriate format

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

### Ability to:

- access workplace information to identify soil management requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- liaise with other work areas
- consult with appropriate senior personnel
- apply sampling techniques
- conduct routine tests
- monitor the vineyard and interpret the results to identify vineyard soil management requirements. This may include monitoring:
  - soil moisture content
  - watertable level
  - weed population
  - signs of vine nutrient deficiencies
  - climatic conditions
  - cover crop practices
  - soil analyses (e.g. pH and salinity)
  - evidence of hard pans
  - soil texture
  - vine root distribution
  - nutrient levels in plant and soil
  - irrigation water quality
  - climatic conditions
  - erosion risk
  - soil management history
  - growth of mid-row sward
- calculate application rates for soil addition requirements (e.g. fertilisers and ameliorants)
- present and justify recommendations to senior personnel
- implement the soil management program. This will include consideration of:
  - resources, including operators with appropriate skills
  - equipment availability and capability
  - materials and chemicals
  - maintenance programs and supplies
  - specific needs of individual blocks
  - environmental conditions
  - other vineyard activities
- instruct operators as required
- monitor soil management activities. This will include monitoring:
  - operator performance
  - operating conditions
  - operating results
  - material supplies

- equipment performance
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record problems and/or corrective action
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- maintain work area to meet housekeeping standards
- report and/or record problems according to instructions
- plan and organise
- supervise operators according to enterprise procedures
- apply information technology systems according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

### **Required knowledge includes:**

Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

### **Knowledge of:**

- ideal soil environment for vines plus specific requirements of grapes grown
- soil management techniques and their affect on soil, vine growth, cropping levels and wine quality
- visual signs of vine nutrient deficiencies
- sampling techniques and procedures
- routine testing techniques and procedures
- interpretation of routine tests
- Occupational health and safety (OHS) hazards and controls
- environmental issues and controls
- procedures and responsibility for reporting problems
- resource requirements and availability
- reporting and recording requirements and procedures
- consultation requirements and procedures
- supervision techniques where relevant
- information technology systems where relevant
- resources required for assessment where relevant

## **Evidence Guide**

### **RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work

<b>RANGE STATEMENT</b>	
environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	Workplace information may include: <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• soil management programs</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal directions from manager or supervisor</li> </ul>
<b>Monitoring activities</b>	Monitoring activities may include: <ul style="list-style-type: none"> <li>• drainage</li> <li>• soil moisture, pH and texture</li> <li>• watertable levels</li> <li>• rainfall</li> <li>• vine and soil nutrient deficiencies</li> <li>• weeds</li> <li>• air temperatures</li> </ul>
<b>Area management</b>	Area managed may not be limited to the area under vines. Adjacent or ecologically linked landscapes may require management or consideration, and may include: <ul style="list-style-type: none"> <li>• woodlots</li> <li>• seepage areas</li> <li>• waterways</li> <li>• landcare sites</li> <li>• revegetation sites</li> <li>• windbreaks</li> <li>• neighbouring vineyards and other primary production</li> </ul>
<b>Soil management activities</b>	Soil management activities may include, but are not limited to: <ul style="list-style-type: none"> <li>• the addition of ameliorants and fertilisers</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• cover cropping</li> <li>• mulching</li> <li>• cultivating</li> <li>• slashing</li> <li>• tilling</li> <li>• ploughing</li> <li>• weeding</li> <li>• spraying</li> <li>• frost management</li> </ul>
<b>Information systems</b>	Information systems may be: <ul style="list-style-type: none"> <li>• print or screen based</li> </ul>

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## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	Workplace information may include: <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• soil management programs</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal directions from manager or supervisor</li> </ul>
<b>Monitoring activities</b>	Monitoring activities may include: <ul style="list-style-type: none"> <li>• drainage</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• soil moisture, pH and texture</li> <li>• watertable levels</li> <li>• rainfall</li> <li>• vine and soil nutrient deficiencies</li> <li>• weeds</li> <li>• air temperatures</li> </ul>
<b>Area management</b>	<p>Area managed may not be limited to the area under vines. Adjacent or ecologically linked landscapes may require management or consideration, and may include:</p> <ul style="list-style-type: none"> <li>• woodlots</li> <li>• seepage areas</li> <li>• waterways</li> <li>• landcare sites</li> <li>• revegetation sites</li> <li>• windbreaks</li> <li>• neighbouring vineyards and other primary production</li> </ul>
<b>Soil management activities</b>	<p>Soil management activities may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• the addition of ameliorants and fertilisers</li> <li>• cover cropping</li> <li>• mulching</li> <li>• cultivating</li> <li>• slashing</li> <li>• tilling</li> <li>• ploughing</li> <li>• weeding</li> <li>• spraying</li> <li>• frost management</li> </ul>
<b>Information systems</b>	<p>Information systems may be:</p> <ul style="list-style-type: none"> <li>• print or screen based</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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## FDFWGG3011A Perform shed nursery activities

### Modification History

This unit supersedes and is equivalent to FDFWGGSNAB Perform shed nursery activities.

April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to treat and prepare vine cuttings and freshly dug rootlings for sale or planting in the vineyard.
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### Application of the Unit

<b>Application of the unit</b>	This unit includes preparation for plantings, treating and callusing cuttings, care of rootlings and preparation for transfer and transportation.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare cuttings for callusing	<p>1.1 Cuttings are counted, bundled and labelled according to instructions as required</p> <p>1.2 Cuttings are chemically treated according to instructions</p> <p>1.3 Cuttings are stored according to instructions</p>
2. Prepare and maintain callusing environment	<p>2.1 Sand bed or callusing room is prepared according to workplace procedures</p> <p>2.2 Cuttings are placed into callusing environment according to instructions</p> <p>2.3 Optimum callusing environment is maintained</p>
3. Prepare rootlings for customer or planting	<p>3.1 Rootlings are trimmed, graded, packed and stored according to instructions</p> <p>3.2 Waste is collected and disposed of according to workplace procedures</p> <p>3.3 Problems and anomalies are recognised, rectified and/or reported</p> <p>3.4 Work is conducted in accordance with workplace environmental guidelines</p>
4. Record information	<p>4.1 Workplace information is recorded in the appropriate format</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

### Ability to:

- access workplace information to identify nursery requirements

- select, fit and use appropriate personal protective clothing and/or equipment
- liaise with other work areas and customers
- count, bundle and label cuttings as required
- treat cuttings as required prior to callusing. This may include:
  - fungicide treatment
  - re-hydration
  - scoring
  - root promoter treatment
  - cutting just below basal bud
  - assimilation after cool storage
- store cuttings. This may include maintaining and monitoring cold storage facilities
- prepare sand bed or callusing room. This may include:
  - packing sand or vermiculite
  - lining boxes
  - ensuring heaters and ventilators are working correctly to required temperature
- plant or place cuttings in callusing environment. This may include:
  - feeling into ground or sand
  - packing into boxes with vermiculite
  - watering in
  - correct number of cuttings per box
  - spacing (e.g. not too tight)
  - correct way up (e.g. basal end at bottom)
  - arranging according to variety, clone and source
  - labelling and mapping of beds
  - adding hormone mixes
- maintain optimum callusing environment. This will include consideration of:
  - temperature
  - relative humidity
  - moisture levels of growing medium
  - weed and pest prevention
- trim rootlings (top growth and roots) ready for planting
- grade rootlings according to workplace or customer requirements and standards
- pack rootlings. This should include consideration of:
  - customer requirements
  - maintenance of rootling health
  - minimisation of vine damage
  - mode of transport
  - destination time
  - storage time and method
  - prevention of dehydration

- recognise problems and anomalies with vines, equipment and materials
- take corrective action in response to out-of-specification results, activity or non-compliance
- report and/or record problems and/or corrective action
- identify, rectify and/or report environmental non-compliance
- collect, sort, grade, treat and/or dispose of waste as required
- handle cuttings or rootlings to minimise damage
- select and operate equipment as required
- select and use materials as required
- maintain work area to meet housekeeping standards
- clean equipment as required
- prepare and mix chemicals as required
- conduct routine maintenance of equipment according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

**Required knowledge includes:**

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Note: The following required knowledge should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

**Knowledge of:**

- common features of healthy vine cuttings or rootlings. This may include:
  - thickness of original cane
  - no evidence of pests and diseases
  - number, strength and distribution of new roots
  - number, maturity and distribution of shoots
  - visually complete and robust graft union
- common features of unhealthy vine cuttings or rootlings. This may include:
  - galls on stem (e.g. crown gall)
  - galls on roots (e.g. nematodes)
  - no shoots or roots
  - damaged or destroyed buds
  - excessive disease staining or spots on canes
  - immature wood
  - shoots on incorrect nodes
  - faulty or broken graft unions
  - too few or unevenly distributed root development
- pre-callusing treatment requirements
- purpose and benefit of treatments
- storage requirements of cuttings prior to callusing
- preparation requirements of callusing environment

- callusing options (e.g. features, pros and cons)
- optimum callusing environment and its effect on the vine cutting
- common problems that occur during callusing and how they should be resolved (e.g. uneven callusing or evidence of dehydrated cuttings on arrival)
- preparation requirements for rootlings and procedures for sales or transfer to vineyard
- package or storage requirements and procedures for rootlings ready for sale or transfer
- factors that influence how a cutting should be graded and why
- reasons for specific requirements, for example:
  - rootling preparation
  - packing preparation
  - packaging and storage requirements
- waste disposal requirements and procedures
- reporting and recording requirements and procedures
- safe handling of chemicals
- equipment operation requirements and procedures
- Occupational health and safety (OHS) hazards and controls
- procedures and responsibilities for reporting problems
- environmental issues and controls
- cleaning requirements and procedures for work area and equipment. This should include additional considerations when cleaning between batches and varieties
- safe preparation and mixing of chemicals
- routine maintenance procedures for equipment where relevant.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• use personal protective equipment, MSDS and follow other specified OHS procedures</li> <li>• conduct cutting and callusing activities</li> <li>• monitor the health of and tend rootlings</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• prepare for, implement and monitor nursery activities</li> <li>• prepare vine rootlings for transport</li> <li>• maintain nursery environment to optimise plant health</li> <li>• complete documentation.</li> </ul>
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

<b>RANGE STATEMENT</b>
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with</p>



<b>RANGE STATEMENT</b>	
training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	Workplace information can include: <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Rootlings</b>	Rootlings may include: <ul style="list-style-type: none"> <li>• those developed from cuttings in a sand bed or callusing room</li> <li>• those freshly dug from a field nursery</li> </ul>
<b>Equipment</b>	Equipment may include: <ul style="list-style-type: none"> <li>• secateurs</li> <li>• personal protective clothing and/or equipment</li> <li>• bins</li> <li>• boxes</li> <li>• spades</li> <li>• trowels</li> <li>• watering or irrigating equipment</li> <li>• heating equipment</li> <li>• packing machine</li> <li>• counting machine</li> </ul>
<b>Materials</b>	Materials may include: <ul style="list-style-type: none"> <li>• string</li> <li>• labels</li> <li>• chemicals</li> <li>• sand</li> <li>• wax</li> </ul>

<b>RANGE STATEMENT</b>	
<b>Problems and anomalies</b>	Problems and anomalies may include: <ul style="list-style-type: none"> <li>• evidence of nematodes, crown gall, dehydration, infection, physical damage and graft union failure</li> </ul>
<b>Facilities</b>	Facilities may include: <ul style="list-style-type: none"> <li>• cold storage</li> <li>• callusing room</li> <li>• hot beds</li> <li>• sand storage bins</li> <li>• water</li> <li>• fungicide treatment areas</li> <li>• storage bins or tanks</li> <li>• soakage tanks</li> <li>• glasshouses</li> </ul>
<b>Work hazards</b>	Work may involve exposure to: <ul style="list-style-type: none"> <li>• chemical, dangerous or hazardous substances</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Wine operations
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# FNSFMK512A Apply knowledge of emissions markets

## Modification History

Version	Comments
Release 1	This version first released with <i>FNS10 Financial Services Training Package v4.0</i>

## Unit Descriptor

This unit describes the background knowledge and understanding required and performance outcomes expected of a market participant in the emissions markets.

This unit is intended, to address the specialist knowledge requirements of those intending to operate in the emissions marketplace. This embodies that mandatory knowledge outlined in ASIC RG146 Appendix A2.11.

**Note:** this competency **does not** address the skills or the generic knowledge requirements in ASIC RG 146

## Application of the Unit

This unit applies to individuals who are engaged in the financial services industry, including advisers who provide advice on defined financial products in the emissions markets or other emissions market participants

## Licensing/Regulatory Information

This unit may apply to job roles subject to licensing, legislative, regulatory or certification requirements; Commonwealth, State or Territory requirements should be confirmed with the relevant body.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

<p><i>Elements describe the essential outcomes of a unit of competency.</i></p>	<p><i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i></p>
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### Elements and Performance Criteria

<p>1. Comply with the regulatory framework unique to emissions markets</p>	<p>1.1 Identify the domestic and international regulatory framework within which emissions reduction schemes are placed</p> <p>1.2 Identify the key legislation, regulation and industry codes of practice relevant to operating within Australian <b><i>emissions markets</i></b></p> <p>1.3 Comply with relevant legal and regulatory principles when operating in emissions markets</p> <p>1.4 Discuss regulatory risk for both voluntary and regulated emissions markets and determine possible impacts of pending regulatory or legislative change</p>
<p>2. Evaluate the scope and impact of the emissions market</p>	<p>2.1 Identify regulated and voluntary carbon markets and outline how they operate</p> <p>2.2 Distinguish the respective supply and demand drivers for voluntary and regulated markets</p> <p>2.3 Describe price drivers for emissions products</p> <p>2.4 Differentiate participants in carbon markets and the motivations for their participation</p> <p>2.5 Distinguish the functions of the primary and secondary emissions markets</p> <p>2.6 Discuss auction types and processes</p> <p>2.7 Describe the functions, requirements and rules for registries</p>
<p>3. Identify the types of emissions products, their characteristics and</p>	<p>3.1 Compare the different types of <b><i>emissions products</i></b> available of emissions instruments traded in the compliance and voluntary markets</p>

liabilities	<p>3.2 Identify the key features of compliance market products</p> <p>3.3 Describe the risks inherent within each product and their potential impact in a given context.</p> <p>3.4 Describe <b>transactional processes</b> for each product, including acquiring, transferring and surrendering</p> <p>3.5 Describe the tax treatment of emissions products, including deductibility of costs where relevant</p>
4. Apply knowledge of emissions products	<p>4.1 Determine relevant <b>market information</b> influencing the market</p> <p>4.2 Analyse relevant information when selecting products for an emissions <b>markets transaction</b></p> <p>4.3 Devise strategies for using emissions market products</p> <p>4.4 Seek advice and guidance of specialist expertise where required</p> <p>4.5 Apply knowledge of financial market transactional processes when operating in emissions markets</p> <p>4.6 Complete relevant documentation and complete any additional organisational processes</p>
5. Maintain emissions market knowledge	<p>5.1 Relevant emissions trading markets sources are reviewed regularly and any changes are applied in daily work</p> <p>5.2 Maintain professional competence in market knowledge in accordance with codes of conduct and/or organisational requirements</p> <p>5.2 Processes for maintaining up-to-date knowledge about relevant aspects of emissions trading markets are implemented</p>

## Required Skills and Knowledge

*This section describes the skills and knowledge required for this unit.*

### Required skills

communication skills to:

- liaise with others, share information, seek advice and guidance
- learning skills to maintain knowledge of changes to regulation, markets and emissions
- research and analysis skills to:
  - identify economic influences, operations of emissions markets and characteristics of

- financial products traded in the regulated and voluntary markets
- access and interpret legislation and regulation impacting on emissions markets and market operations
  - identify and interpret relevant information
  - analyse information and data relative to carbon markets
  - maintain currency of products and services knowledge
  - self-management skills to:
    - monitor and adapt to changes in compliance issues

### Required knowledge

- Understanding of the types of products and their characteristics:
  - analysis of the types of emissions units, and their characteristics (encompassing carbon units, Australian carbon credit units, and eligible international emissions units)
  - characteristics of emissions units including their status as personal property, and how they are typically derived from inception to the point of acquiring status as a financial product
  - risks associated with each type of emission unit, including rating, restrictions on their use, transfer, and bankability for future use
  - processes for acquiring, transferring and surrendering emissions units, including compliance with the requirements of the Australian National Registry of Emissions Units
- Knowledge of the operation of regulated and voluntary carbon markets
  - geopolitical context of carbon markets including the influence of political and economic factors and corporate social responsibility
  - main participants in carbon markets, and their key objectives and participation behaviours as factors influencing market activity
  - emissions unit supply and demand factors and regulated price factors influencing market activity and prices
  - issue of carbon units via auction, and auction types
  - types of transactions in carbon markets, including transactions relating to the carbon pricing mechanism and in voluntary markets, and the function of financial markets facilitating such trading (including internationally)
  - potential trading strategies and their implementation in carbon markets (e.g. hedging and investment strategies)
  - risks associated with carbon markets, including liquidity, pricing, credit, operational, and regulatory risks
  - carbon market transaction documentation, including the types used for different types of counterparties and transactions, their key terms and conditions and advantages and disadvantages
- Understanding of the regulated emissions legal environment—disclosure and compliance
  - domestic regulatory framework for the carbon pricing mechanism, including the role of the Clean Energy Regulator and the Australian National Registry of Emissions Units
  - domestic regulatory framework for the Carbon Farming Initiative, including the role of the Clean Energy Regulator and the Australian National Registry of Emissions Units

- international regulatory framework for carbon trading, including the Clean Development Mechanism
- relevant legal principles (e.g. Corporations Act, ASIC Act, Privacy Amendment (Private Sector) Act, Australian National Registry of Emissions Units Act 2011, National Greenhouse and Energy Reporting Act 2007, Carbon Credits (Carbon Farming Initiative) Act 2011, Clean Energy Act 2011)
- the relationship between ethical and regulatory requirements (e.g. good faith, utmost good faith, full disclosure of remuneration/fees and any other conflicts of interest that may influence the adviser's recommendation), and the application of these requirements in professional practice
- relevant industry standards and codes of conduct
- regulators' guidelines, including our requirements in this policy
- dispute resolution procedures (external and internal)
- Understanding of the taxation obligations in the emissions market
  - taxation treatment of emissions units and taxation issues relating to emissions units
  - deductibility of costs associated with emissions units

## Evidence Guide

Not applicable.

## Range Statement

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.*

<b><i>Emissions markets include:</i></b>	<ul style="list-style-type: none"> <li>• Domestic and international carbon markets           <ul style="list-style-type: none"> <li>• Voluntary markets</li> <li>• Compliance markets</li> </ul> </li> </ul>
<b><i>Emissions products include:</i></b>	<ul style="list-style-type: none"> <li>• carbon units (issued by the Clean Energy Regulator under the Clean Energy Act) (ACUs);</li> <li>• Australian carbon credit units (issued by the Clean Energy Regulatory under the Carbon Farming Initiative) (ACCU); and</li> <li>• eligible international emissions units (EIEUs).</li> <li>• voluntary environmental schemes</li> </ul>
<b><i>Participants include:</i></b>	<ul style="list-style-type: none"> <li>• Liable entities</li> </ul>

	<ul style="list-style-type: none"> <li>• Financial intermediaries</li> <li>• Carbon farming project proponents</li> <li>• Speculators</li> </ul>
<i>Transactional processes</i> include	<ul style="list-style-type: none"> <li>• Acquiring emissions units</li> <li>• Transferring emissions units</li> <li>• Auction processes</li> <li>• Registry processes</li> <li>• Surrendering emissions units</li> <li>• Transaction documentation <ul style="list-style-type: none"> <li>• Regulatory</li> <li>• Organisation</li> <li>• Exchange-required</li> </ul> </li> </ul>
<i>Market information</i> includes:	<ul style="list-style-type: none"> <li>• Economic statistics and data</li> <li>• Government policy changes</li> <li>• Trading data, including pricing, liquidity and limits (market and credit)</li> <li>• Market standards and conventions affecting transaction sizes</li> </ul>
<i>Emissions market transaction purpose</i> includes:	<ul style="list-style-type: none"> <li>• Hedging</li> <li>• Acquitting liability</li> <li>• Trading</li> <li>• Advising</li> <li>• speculating</li> </ul>

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## Unit Sector(s)

Financial Markets

## Custom Content Section

Not applicable.



## **FPICOT2221B Trim and cross cut felled trees**

### **Modification History**

Not Applicable

### **Unit Descriptor**

Not Applicable

### **Application of the Unit**

Not Applicable

### **Licensing/Regulatory Information**

Not Applicable

### **Pre-Requisites**

Not Applicable

### **Employability Skills Information**

Not Applicable

### **Elements and Performance Criteria Pre-Content**

Not Applicable

### **Elements and Performance Criteria**

Not Applicable

### **Required Skills and Knowledge**

Not Applicable

### **Evidence Guide**

Not Applicable

## **Range Statement**

Not Applicable

## **Unit Sector(s)**

Not Applicable

## FPICOT2234B Operate 4x4 vehicle

### Modification History

Not Applicable

### Unit Descriptor

**Unit descriptor** This unit describes the outcomes required to operate a 4x4 vehicle safely in a range of conditions, including on normal roads, traversing slopes, ascending and descending steep slopes, and stall recovery

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPICOT2234A Operate 4x4 vehicle

### Application of the Unit

**Application of the unit** The unit involves operating a 4x4 vehicle in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

Not Applicable

### Employability Skills Information

**Employability skills** This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |                               |   |
|-------------------------------|---|
| 1. Prepare for 4x4 operations | <p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to operating a 4x4 <i>vehicle</i> are identified and followed</p> <p>1.2. <i>Pre-start checks</i> of 4x4 vehicle and equipment are carried out in line with <i>manufacturer specifications</i> and roadworthy requirements</p> <p>1.3. Tyres are checked for pressure suitable for terrain and changed as required in line with organisational procedures</p> <p>1.4. Loads are secured in line with organisational and legislative requirements</p> <p>1.5. <i>Communication</i> with others is established and maintained in line with OHS requirements</p> |
| 2. Operate 4x4 vehicle        | <p>2.1. Intended vehicle path is inspected for potential <i>hazards and risks</i> prior to negotiation in line with OHS and environmental requirements</p> <p>2.2. 4x4 vehicle is driven on and off-road at speeds appropriate for <i>conditions</i> in line with organisational and legislative requirements, and environmental regulations</p> <p>2.3. 4x4 vehicle is parked and shut down in line with manufacturer specifications and organisational requirements</p> <p>2.4. 4x4 vehicle and equipment are cleaned and stored after use in line with manufacturer specifications and organisational procedures</p>   |

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
3. Operate 4x4 vehicle on a steep slope	<p>3.1. Intended 4x4 vehicle path is inspected prior to negotiation of slope</p> <p>3.2. Appropriate gear is selected to negotiate grade and engine revolutions are maintained to ensure constant traction</p> <p>3.3. Airconditioning unit is turned off to avoid engine acceleration</p> <p>3.4. Braking is used to control descent/ascent and skidding is avoided through application of brakes to emulate ABS</p> <p>3.5. Traction is maintained in line with requirements of 4x4 vehicle and surrounding terrain</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

#### Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operate a 4x4 vehicle; safely negotiate steep slopes; clean and store 4x4 vehicle and equipment; attach equipment to 4x4 vehicle; operate a jack
- Communication skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for operating a 4x4 vehicle; use appropriate communication and interpersonal techniques with colleagues and others; record and report workplace information; maintain documentation
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for operating a 4x4 vehicle
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures; identify potential hazards and operational faults

#### Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a 4x4 vehicle

## REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material, and the minimisation of carbon emissions
- Environmental risks and hazards
- Using energy effectively and efficiently
- Operational knowledge of 4x4 vehicle, including controls, instruments and indicators and their use
- Road rules, regulations, permit and licence requirements of the relevant state/territory road traffic authority
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently operate a 4x4 vehicle

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to operating a 4x4 vehicle
- following organisational policies and procedures relevant to operating a 4x4 vehicle
- communicating and working safely with others in rough terrain or water crossing location
- performing pre-start checks of vehicle and equipment
- safely operating a 4x4 vehicle in a range of on and

## EVIDENCE GUIDE

- off-road conditions, including negotiating steep slopes
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
  - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
  - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
  - Assessment is to follow relevant regulatory or Australian Standards requirements
  - The following resources should be made available:
    - workplace location or simulated workplace
    - materials and equipment relevant to undertaking work applicable to this unit
    - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI05 Training Package
  - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
  - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
  - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
  - Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
  - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
  - Assessment may be in conjunction with assessment of other units of competency
  - The assessment environment should not disadvantage the candidate
  - Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other

## EVIDENCE GUIDE

than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

#### **OHS requirements:**

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

#### **Environmental requirements may include:**

#### **Legislative requirements:**

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:



## RANGE STATEMENT

- award and enterprise agreements
  - industrial relations
  - Australian Standards
  - confidentiality and privacy
  - OHS
  - the environment
  - equal opportunity
  - anti-discrimination
  - relevant industry codes of practice
  - duty of care
- Organisational requirements** may include:
- legal
  - organisational and site guidelines
  - policies and procedures relating to own role and responsibility
  - quality assurance
  - procedural manuals
  - quality and continuous improvement processes and standards
  - OHS, emergency and evacuation procedures
  - ethical standards
  - recording and reporting requirements
  - equipment use, maintenance and storage requirements
  - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Vehicles** may include:
- all terrain vehicles
  - cars
  - utilities
  - trailers
  - light trucks
- Pre-start checks** may include:
- fuel
  - water
  - oil
  - brake and transmission fluid levels
  - battery water levels and electrolyte checks
  - tyres
  - belts
  - leads
  - hydraulic lines and connections
  - aircleaners

## RANGE STATEMENT

- Manufacturer specifications** may include:
- airconditioners
  - brakes
  - off-road safety equipment
  - engine characteristics
  - systems warning function
  - four wheel drive operation
  - radius of turning circle
  - safety procedures
- Communication** may include:
- verbal and non-verbal language
  - constructive feedback
  - active listening
  - questioning to clarify and confirm understanding
  - use of positive, confident and cooperative language
  - use of language and concepts appropriate to individual social and cultural differences
  - control of tone of voice
- Hazards and risks** may include:
- rocks and other unexpected obstacles
  - damage to vehicle
  - wet and iced terrain
  - flooded terrain
  - fire in vehicle
  - faulty brakes
  - leaking fuel
  - faulty steering mechanism on vehicle
  - animals and objects in vehicle path
  - windy or foggy sections of terrain
  - steep slopes
  - oil on road
  - parked vehicles on road
  - pedestrians crossing the road
  - poor visibility
  - on and off-road conditions
- Conditions** are to include:
- which may include:
- smooth
  - rough
  - uneven
  - slippery
  - boggy

**RANGE STATEMENT**

- sandy
- steep or hilly terrain
- rock
- ice
- snow
- mud
- adverse weather conditions
- speed limits for non-response operation
- legal parking
- traffic pattern and density
- visibility
- effects of weather on roads

**Unit Sector(s)**

Not Applicable

**Competency field**

**Competency field**                      Common Technical

## FPICOT3202B Navigate in remote or trackless areas

### Modification History

Not Applicable

### Unit Descriptor

#### Unit descriptor

This unit describes the outcomes required to navigate in untracked, remote areas in situations where difficult environmental conditions and poor visibility are likely to occur. The unit includes interpretation and use of maps and other navigation aids

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3202A Navigate in remote or trackless areas

### Application of the Unit

#### Application of the unit

The unit involves navigating in a remote or trackless area in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability skills** This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for navigation	<p>1.1.Applicable <b><i>occupational health and safety</i></b> (OHS), <b><i>environmental, legislative</i></b> and <b><i>organisational requirements</i></b> relevant to navigating in a remote or trackless areas are identified and followed</p> <p>1.2.<b><i>Information</i></b> is gathered and <b><i>relevant factors</i></b> are identified and checked with <b><i>appropriate personnel</i></b></p> <p>1.3.Suitable <b><i>maps, equipment</i></b> and <b><i>navigation aids</i></b> are selected and checked for accuracy, currency and operational effectiveness in line with manufacturer recommendations</p> <p>1.4.Faults or errors in maps and equipment are detected and corrected</p> <p>1.5.<b><i>Communication</i></b> with others is established and maintained in line with OHS requirements</p>
2. Plan the route	<p>2.1.Route is planned in line with assignment instructions and OHS requirements</p> <p>2.2.Maps are examined to identify relevant <b><i>symbols, information, navigation data and environmental requirements</i></b></p> <p>2.3.Accurate grid and magnetic bearings are calculated using maps and equipment in line with assignment instructions</p> <p>2.4.Emergency or contingency exit routes are planned</p>

ELEMENT	PERFORMANCE CRITERIA
3. Conduct navigation	<p>and other <i>risks</i> are planned for</p> <p>2.5. <i>Limitations</i> in planning are specified and assistance is sought in line with organisational requirements</p> <p>3.1. Navigation is undertaken in line with planned route and schedule</p> <p>3.2. Maps are correctly orientated to <i>surroundings</i> in line with planned route</p> <p>3.3. Equipment and navigation aids are used in line with manufacturer recommendations</p> <p>3.4. Alternative routes are navigated to bypass <i>obstacles</i> and improve efficiency of route or course</p> <p>3.5. Impact on the environment as a result of navigation is minimised</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

#### Required skills

- Technical skills sufficient to use and maintain relevant tools and equipment
- Communication skills sufficient to use appropriate communication and interpersonal techniques and methods with colleagues and others
- Literacy skills sufficient to follow legislation, regulations, standards, codes of practice and established safe practices and procedures for navigating in remote or trackless areas; record and report workplace information; maintain documentation
- Numeracy skills sufficient to calculate bearings using maps and compass correctly
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures; interpret maps, charts, distances, grid references, relevant symbols, map meaning and line types; estimate resource and equipment requirements; solve problems and bypass obstacles; locate own position on a map

#### Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for navigating in a remote or trackless area
- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition

## REQUIRED SKILLS AND KNOWLEDGE

on completion of activity

- Organisational and site standards, requirements, policies and procedures for navigating in a remote or trackless areas
- Environmental risks and hazards
- Types of maps and charts, and their uses
- Representation of topographic features on maps and plans
- Common scales used on maps and plans
- Features and use of a compass and factors that affect its accuracy
- Advantages and disadvantages of different map and chart types and sources of error
- Techniques for estimating distance travelled within a particular activity context
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently navigate in a remote or trackless area, demonstrating the correct orientation and use of maps, plans and compass

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to navigating in a remote or

## EVIDENCE GUIDE

trackless area

- following organisational policies and procedures relevant to navigating in a remote or trackless area
- selecting, interpreting, and applying maps and other relevant information in written, diagrammatic and verbal form
- using maps, compass and navigation aids to navigate in remote or trackless area, confirming factors affecting the use of navigation equipment
- planning and conducting an efficient navigation, effectively bypassing obstacles within designated timeframes

### Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
  - workplace location or simulated workplace
  - materials and equipment relevant to undertaking work applicable to this unit
  - specifications and work instructions

### Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that



## EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

#### **OHS requirements:**

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire

## RANGE STATEMENT

- Environmental requirements may include:**
- manual handling including shifting, lifting and carrying
  - legislation
  - organisational policies and procedures
  - workplace practices

**Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
  - industrial relations
  - Australian Standards
  - confidentiality and privacy
  - OHS
  - the environment
  - equal opportunity
  - anti-discrimination
  - relevant industry codes of practice
  - duty of care
- Organisational requirements may include:**
- legal
  - organisational and site guidelines
  - policies and procedures relating to own role and responsibility
  - quality assurance
  - procedural manuals
  - quality and continuous improvement processes and standards
  - OHS, emergency and evacuation procedures
  - ethical standards
  - recording and reporting requirements
  - equipment use, maintenance and storage requirements
  - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

- Information may relate to:**
- local inhabitants
  - type of terrain or features of the route
  - access and exit routes
  - natural protection or shelter
  - land management and legislative requirements
  - guide books

## RANGE STATEMENT

**Relevant factors** may relate to:

- types of terrain and gradient
- weather conditions
- obstacles
- hazards and access to required resources and facilities
- distance
- estimated travelling time
- magnetic bearings

**Appropriate personnel** may include:

- supervisors
- clients
- colleagues
- line management

**Maps** may include:

- cadastral and topographic maps
- charts
- guide books
- aerial photographs
- sketches and cave maps
- diagrams

**Equipment** may include:

- compass
- track and survey markers
- beacons
- personal protective equipment and clothing
- global positioning system (GPS) units

**Navigation aids** may include:

- track and creek junctions and crossings
- survey markers
- beacons
- track markers
- cairns
- paths
- signs
- arrows
- compass

**Communication** may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language

## RANGE STATEMENT

- Symbols and information** may include:
- use of language and concepts appropriate to individual social and cultural differences
  - control of tone of voice
  - grid lines and numbers
  - contour lines
  - magnetic variation
  - scale
  - map legend
  - topographic features
  - markers and beacons
  - water depth
- Navigation data** may include:
- grid reference points
  - grid and magnetic bearings
  - distances
  - estimated travelling times
  - height gain and loss
  - gradient
  - identifiable features
  - exit routes
- Risks** may include:
- weather
  - obstacles
  - availability of resources, such as:
    - water
    - camp sites
    - rest stops
  - type of terrain
  - access and exit routes
  - natural protection or shelter
- Limitations** may relate to:
- job role and responsibilities
  - own competency level
  - industry requirements
  - own understanding of risk identification processes
  - own interpretation of maps
  - legislation
  - regulations and procedures
  - legal responsibilities
  - OHS and environmental requirements
- Surroundings** may include:
- ground/terrain
  - bodies of water

**RANGE STATEMENT****Obstacles may include:**

- beacons and markers
- natural formations
- landmarks
- man-made features
- thick vegetation
- drops and climbs
- marshes and bogs
- fog
- rivers
- lakes and dams
- tides
- hazards, such as rocks

**Unit Sector(s)**

Not Applicable

**Competency field****Competency field**                      Common Technical

## FPIFGM2201B Collect seed

### Modification History

Not Applicable

### Unit Descriptor

**Unit descriptor** This unit describes the outcomes required to collect, treat and store seed

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM2201A Collect seed

### Application of the Unit

**Application of the unit** The unit involves collecting seed in a forest environment setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

Not Applicable

### Employability Skills Information

**Employability skills** This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to collect seed	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to collecting seed are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Site <i>environmental protection measures</i> are followed in line with relevant legislation and regulations</p> <p>1.4. Potential locations for the collection of required seeds are identified and required <i>approvals</i> are sought and obtained from <i>relevant authorities</i></p> <p>1.5. <i>Equipment and resources</i> appropriate to work requirements are selected and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.6. Seed collecting operations are checked to ensure safe working conditions and <i>planned</i> in line with site procedures</p> <p>1.7. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Select and assess seed	<p>2.1. Plant species and condition are visually assessed and checked to ensure the collection of healthy seeds</p> <p>2.2. <b>Method of seed collection</b> is selected and applied without causing damage to <i>health of parent plant</i></p> <p>2.3. Seed is collected from a range of plants and from different areas of plants to maintain genetic diversity</p> <p>2.4. Seed is placed in clean containers and accurately</p>

ELEMENT	PERFORMANCE CRITERIA
3. Clean and store seed	<p><i>labelled</i> in line with industry, site and organisational requirements</p> <p>3.1. Seed is <i>separated</i> from other materials, weighed and stored in line with species requirements and site procedures</p> <p>3.2. <i>Seed treatment</i> is applied to prevent deterioration in line with seed species and site procedures</p> <p>3.3. <i>Seed information</i> is accurately recorded in line with site procedures</p> <p>3.4. Seed is <i>packaged</i> for storage in line with industry, legislative and organisational requirements</p> <p>3.5. Seed collection information and results are <i>recorded and reported</i> in line with site procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

#### Required skills

- Technical skills sufficient to use and maintain relevant equipment and resources; efficiently and safely carry out seed collecting procedures; identify a range of seed species and apply accurate identifying information; use a range of seed collection methods and related equipment
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and maintain information, including details of seed species, weight and place of origin
- Numeracy skills sufficient to apply appropriate mathematical techniques to calculate seed weights and quantities
- Problem solving skills sufficient to review and identify work requirements; identify problems and equipment faults; demonstrate appropriate response procedures

#### Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for collecting seed
- Environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition



## REQUIRED SKILLS AND KNOWLEDGE

on completion of activity

- Organisational and site standards, requirements, policies and procedures for collecting seed
- Environmental risks and hazards
- Procedures for minimising environmental impact
- Range of seed species and appropriate collection, treatment and packaging processes, including storage requirements for different seed species
- Types of diseases and pests likely to infect a range of seed species
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can apply safe and efficient techniques to collect, treat and store a range of seed species in line with species requirements and organisational guidelines

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to collecting seed
- following organisational policies and procedures relevant to collecting seed
- safely and efficiently using and maintaining seed collecting equipment and resources

## EVIDENCE GUIDE

### Context of and specific resources for assessment

- treating and storing seed in line with site and industry specifications
- recording seed collection information and results, and maintaining workplace information
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
  - workplace location or simulated workplace
  - materials and equipment relevant to undertaking work applicable to this unit
  - specifications and work instructions

### Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any

## EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

#### **OHS requirements:**

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

#### **Environmental requirements** may include:

#### **Legislative requirements:**

are to be in line with applicable commonwealth, state or territory legislation, regulations,

## RANGE STATEMENT

certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

### **Organisational requirements**

may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

**Work order** is to include:

- information and instructions for collecting, treating and storing seed

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

**Appropriate personnel** may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

## RANGE STATEMENT

**Environmental protection measures** may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards
- obstacles

**Approvals** may include:

- licences and permits required for commercial and non-commercial seed collection
- government permits
- landholder permits

**Relevant authorities** may include:

- local governments
- parks and reserves managers
- forestry managers
- relevant government departments and agencies/ authorities, such as those involved in sustainability and environmental issues
- relevant Indigenous organisations and agencies

**Equipment and resources** may include:

- personnel
- vehicles
- pruning and shaking equipment
- sheets
- tarpaulins
- clean containers for holding seeds
- vacuum seed collecting machines
- ladders or elevated work platforms
- personal protective equipment

**Planning** includes:

consideration of:

- seed collection seasons
- when the required species have fruit at optimal condition

**Communication** may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding

## RANGE STATEMENT

- use of positive, confident and cooperative language
  - use of language and concepts appropriate to individual social and cultural differences
  - control of tone of voice
  - collecting after falling or felling
  - using ladders
  - climbing
  - shaking
  - high-powered rifles
  - cherry-pickers
  - hand picking
  - careful and selective pruning
- Method of seed collection** may include:
- Health of parent plant** may require:
- Labelling** may include:
- Separation** methods may include:
- seed location
  - genetic identity
  - hand selection
  - wind separation/winnowing
  - sieving
  - vibrating
  - flotation
  - drying
  - crumbling of husks
- Seed treatment** may include:
- heat
  - mechanical
  - chemical protection against pests
- Seed information** may include:
- time and date of harvest
  - time and date of receipt into store
  - weight
  - species
  - place or origin of seed
  - container identifier
- Packaging** may include:
- vacuum sealing
  - use of inert atmospheres, such as nitrogen and carbon dioxide
  - control of packing environment, including temperature, light and moisture
- Records and reports** may be maintained by:
- electronic database
  - card index

**RANGE STATEMENT**

- data sheets
- filing systems

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

**Unit Sector(s)**

Not Applicable

**Competency field**

**Competency field**                      Forest Growing and Management

## **FPIFGM2208A Fall trees manually (basic)**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

This unit specifies the outcomes required to assess, plan and safely carry out manual tree falling operations using a chainsaw. This unit is intended for use in situations where the production of timber is not the primary focus of the activity. Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM110A Fall trees manually - basic (non-commercial/non production)

### **Application of the Unit**

#### **Application of the Unit**

This unit supports the attainment of skills and knowledge required for competent workplace performance in forest and forest products operations of all sizes. The unit applies to a forest environment and involves application of skills and knowledge at a production worker level. These skills and knowledge are to be used within the scope of the person's job and authority

### **Licensing/Regulatory Information**

Refer to Unit Descriptor

### **Pre-Requisites**

Not Applicable



## Employability Skills Information

Not Applicable

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |  |  |
|--|--|
| 1 Prepare and maintain falling equipment | <p>1.1 Applicable <b><i>Occupational Health and Safety (OHS)</i></b>, <b><i>legislative</i></b> and <b><i>organisational</i></b> requirements relevant to falling <b><i>trees</i></b> are identified and complied with</p> <p>1.2 Site <b><i>environmental protection measures</i></b> are adhered to in accordance with relevant legislation and regulations</p> <p>1.3 <b><i>Work plan</i></b> is reviewed and checked as required with <b><i>appropriate personnel</i></b></p> <p>1.4 <b><i>Tools and equipment</i></b> are selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturer's recommendations</p> <p>1.5 Blunt or damaged chainsaw is detected, rectified and reported in accordance with workplace procedures</p> <p>1.6 Operational effectiveness of chainsaw is monitored to <b><i>maintain</i></b> falling safety and productivity</p> <p>1.7 <b><i>Communication</i></b> with others is established and maintained in accordance with OHS requirements</p> |
| 2 Assess conditions and surroundings     | <p>2.1 Site environmental concerns are identified and complied with in accordance with relevant national, state, and local legislation or regulations</p> <p>2.2 <b><i>Environmental conditions</i></b> are identified and assessed in accordance with work plan requirements</p> <p>2.3 Awareness of environmental conditions and other personnel activity in the work area is maintained and falling activity modified</p>   |

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	2.4 General factors affecting falling requirements are assessed and specific forest or site risks and hazards are detected and controlled
3 Assess tree and plan falling	<p>3.1 Tree is located and visually assessed for falling characteristics</p> <p>3.2 Required falling direction and degree of allowable error is assessed and checked</p> <p>3.3 Sequence of cuts to fall tree is planned in accordance with standard falling procedures</p> <p>3.4 Suitable escape route is selected and cleared of growth and other obstacles in accordance with environmental care principles and statutory requirements</p> <p>3.5 Personal <i>limitations</i> in safely falling trees with own skills are assessed and <i>assistance</i> sought from appropriate personnel</p> <p>3.6 Location and activity of other personnel in the work area is noted and monitored</p>
4 Fall tree	<p>4.1 All work is conducted using established safe operating practices and in accordance with workplace procedures</p> <p>4.2 Tree falling <i>operations</i> are safely undertaken appropriate to site conditions and at a safe distance from other personnel in the work area</p> <p>4.3 Unexpected characteristics of tree and other problems are identified, assistance sought and planning reviewed</p> <p>4.4 Planned escape route is used when tree starts to fall and the fall and movement of tree on ground is monitored until determined stable</p> <p>4.5 Chainsaw is monitored for operational effectiveness and any faults, malfunctions or problems are recorded and reported in accordance with workplace procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit

- Required skills include:**
- comply with legislation, regulations, standards, codes of practice and established safe practices and procedures relating to basic manual tree falling

operations

- review and accurately identify work requirements
- use and maintain relevant tools, machinery and equipment
- identify problems and equipment faults and demonstrate appropriate response procedures
- use appropriate communication and interpersonal techniques and methods with colleagues and others
- accurately locate, record and report information
- safely operate and maintain a chainsaw
- use hand signals with other operators to maintain effective and safe tree falling
- recognise own limitations in conditions and trees for falling
- assess, plan and carry out tree falling operations appropriate to site conditions
- recognise common diseases, pests and nutrition deficiencies
- read and interpret written material
- basic knowledge and understanding of applicable Commonwealth, State or Territory licensing, legislative, regulatory or certification requirements and codes of practice relevant to basic manual tree falling operations
- organisational and site standards, requirements, policies and procedures relating to basic manual tree falling operations
- principles of cultural diversity and access and equity
- environmental protection requirements, including the safe disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- identification and evaluation of structural defects in trees
- types and purposes of a range of cuts to fall trees
- hazards of operating a chainsaw and falling trees
- types of tools and equipment and procedures for their use, operation and maintenance
- operational principles and limitations of a chainsaw
- procedures for recording and reporting workplace information
- appropriate mathematical procedures for estimating

**Required knowledge and understanding includes:**

and measuring, including calculating time to complete tasks

## KEY COMPETENCIES

The seven key competencies represent generic skills considered necessary for effective participation by an individual in the workplace

Performance Level 1 - at this level, the candidate is required to undertake tasks effectively

Performance Level 2 - at this level, the candidate is required to manage tasks

Performance Level 3 - at this level, the candidate is required to use concepts for evaluating and reshaping tasks

Key Competency	Example of Application	Performance Level
How are ideas and information communicated?	By communicating in simple language to confirm work requirements, convey information to colleagues, and report outcomes relating to falling trees	1
How can information be collected, analysed and organised?	By collecting, organising and understanding information required to plan and undertake tree falling	2
How are activities planned and organised?	By organising and conducting tree falling activities in the correct sequence to complete within the designated timeframes	2
How is team work used?	By using effective communication and interpersonal techniques with colleagues and others to maximise confidence, satisfaction and productivity during tree falling operations	1
How are mathematical ideas and techniques used?	By calculating slopes, wind speed and direction time to complete tasks	2
How are problem solving skills applied?	By establishing safe and effective tree falling procedures and processes which anticipate likely problems to avoid wastage and downtime	2
How is the use of technology applied?	By accessing and locating applicable legislative, regulatory and environmental guidelines relevant to	1

	tree falling operations	
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## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package

#### Overview of assessment

- A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess, plan and conduct basic manual tree falling operations in accordance with environmental and organisational requirements

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS, environmental and organisational policies and procedures, relevant to basic manual falling of trees
- Comply with applicable licensing or certification requirements
- Effectively communicate and work safely with others including maintaining an awareness of other personnel activity in the work area
- Contribute to a tree assessment, plan and fall trees within the range of variables for trees and conditions
- Select, use and maintain appropriate tools and equipment and recognise faults, problems or malfunctions
- Safely operate and maintain a chainsaw

#### Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
  - workplace location or simulated workplace
  - materials and equipment relevant to basic manual falling of trees

## EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package

### Method of assessment

- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI05 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies.
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

## RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

- OHS requirements are to be in accordance with Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures. Requirements may include:**
- the use of personal protective equipment and clothing
  - safety equipment
  - first aid equipment
  - fire fighting equipment
  - hazard and risk control
  - elimination of hazardous materials and substances
  - safe forest practices including required actions relating to forest fire
  - manual handling including shifting, lifting and carrying
- Legislative requirements are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include:**
- award and enterprise agreements
  - industrial relations
  - Australian Standards
  - confidentiality and privacy
  - OHS
  - the environment
  - equal opportunity
  - anti-discrimination
  - relevant industry codes of practice
  - duty of care
  - heritage and traditional land owner issues
- Organisational requirements**
- may include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
- Trees**
- for falling will have the following characteristics: diameter not more than 50 centimetres at position of cut, height not more than 20 metres, lean and weight distribution consistent with falling direction, single leader, sound wood condition in barrel, species and growth conditions not prone to twisting or splitting, ground slope not excessive
- Environmental protection**
- may include ground growth, canopy, general forest lean, wind speed and direction, fallen trees, density

## RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

<b>measures</b>	of trees, ground slope, soil and water protection, ground hazards, obstacles. Measures may also include contingencies for modifying operations during wet or other adverse weather conditions
<b>Work plan</b>	<ul style="list-style-type: none"> <li>is to include information and instructions relevant to tree falling operations including processing location details and trees to be felled and retained. Information may also include general environmental requirements, site plan and environmental features</li> </ul>
<b>Appropriate personnel</b>	<ul style="list-style-type: none"> <li>may include supervisors, clients, colleagues, line management</li> </ul>
<b>Tools and equipment</b>	<ul style="list-style-type: none"> <li>may include warning signs, chainsaw and components, personal protective equipment and clothing, first aid equipment, maintenance requirements, fuel</li> </ul>
<b>Maintenance</b>	<ul style="list-style-type: none"> <li>of chainsaw and components may include sharpening and making adjustments</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language, hand signals</li> </ul>
<b>Environmental conditions</b>	<ul style="list-style-type: none"> <li>may relate to ground growth, canopy, general forest lean, ground slope, ground hazards, wind speed and direction</li> </ul>
<b>Conditions</b>	<ul style="list-style-type: none"> <li>in which falling will be undertaken include minimal canopy affecting free fall, ground slope not excessive, wind not significantly affecting falling characteristics, absence of ground growth or fallen trees preventing free movement around stump or preventing complete fall, absence of stags and hazardous ground features in falling radius, clear falling or sparse tree density</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>may relate to job role and responsibilities, own competency level, industry requirements, own understanding of risk identification processes, own interpretation of legislation, regulations and procedures, complying with OHS requirements</li> </ul>



## RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

### Assistance

- may be required in situations where cuts made may lead to loss of control of tree in falling, to confirm and adjust cutting techniques in response to movement and condition of tree, to help clear trees that hang up during falling

### Operations

- may include scarf-cutting to plan, backcutting to provide planned hinge-wood and maintain control of tree, using wedges to assist in controlling falling direction

## Unit Sector(s)

Not Applicable

## Competency Field

### Competency Field

Forest Growing and Management

## FPIFGM3201B Manage seed collection

### Modification History

Not Applicable

### Unit Descriptor

#### Unit descriptor

This unit describes the outcomes required to plan and monitor the implementation of seed collection or sowing programs. The unit includes collection of native and non-native species

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM3201A Manage seed collection

### Application of the Unit

#### Application of the unit

The unit involves managing seed collection in a variety of work settings, including:

- forest environments
- farms
- agriculture
- nurseries
- local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

### Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability skills** This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. Plan seed collection

- 1.1. Applicable ***occupational health and safety*** (OHS), ***environmental, legislative*** and ***organisational requirements*** relevant to managing ***seed collection*** are identified and followed
- 1.2. Site ***environmental protection measures*** are identified and adhered to in line with relevant legislation and regulations
- 1.3. Seeding and/or planting program is analysed and required ***seed characteristics*** and ***implementation issues*** are identified
- 1.4. Seed collection ***opportunities*** are identified and a suitable area for seed collection is determined and documented
- 1.5. ***Method of seed collection*** is selected and quantity, cost and ***impacts*** on provenances and species to be collected are determined and documented
- 1.6. Required ***approvals*** are identified, sought and obtained from relevant authorities
- 1.7. Measurable performance indicators, specifications

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	and targets are determined and documented
	1.8. Seed collection <i>plan</i> and its performance indicators are clearly documented and communicated to <i>appropriate personnel</i>
2. Implement and monitor seed collection	2.1. <i>Resources</i> required for seed collection are coordinated and scheduled and required <i>documentation</i> is completed clearly and accurately
	2.2. Relevant <i>individuals, bodies and groups</i> are consulted as required using appropriate interpersonal techniques
	2.3. Seed collection plan is implemented and monitored in line with quality standards for seed collection
	2.4. Systematic <i>checks</i> are carried out to ensure compliance requirements relevant to seed collection activities are adhered to
	2.5. Adjustments to seed collection activities are made as required and communicated to appropriate personnel
	2.6. <i>Communication</i> with others is established and maintained in line with OHS requirements
	2.7. <i>Limitations</i> are identified and assistance is sought as required in line with workplace procedures
3. Review seed collection	3.1. Data and documentation from seed collection are assessed and evaluated to confirm techniques, methodologies and budgets are in line with plan
	3.2. Issues and impediments to seed collection activities and program costs are identified and documented
	3.3. Cost benefit analysis is prepared and recommendations are made, based on the analysis of data and identified issues
	3.4. Results of seed collection are clearly communicated and disseminated to appropriate personnel
	3.5. Seed collection process is <i>recorded and reported</i> to the appropriate personnel

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; collate and assess information against specified criteria; supervise operational staff and contractors to achieve specific outcomes; recognise common diseases, pests and nutritional deficiencies; efficiently and safely manage the extraction of collected material
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others, including landholders, and internal and external bodies and groups
- Literacy skills sufficient to record and report workplace information; maintain documentation; write reports and submissions in appropriate style and format
- Numeracy skills sufficient to interpret numerical data; identify quantities and costings
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

### Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for managing seed collection
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for managing seed collection
- Environmental risks and hazards
- Flowering biology of the target species
- Biological signs that indicate that the seed crop is ready to be collected
- Procedures to extract and handle seed from collected material, including handling procedures of the seed crop after picking
- Treatment and documentation requirements of extracted seed
- Seed collection methods
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

# Evidence Guide

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently plan and supervise the implementation of seed collection activities within applicable environmental, legislative and organisational guidelines

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to managing seed collection
- following organisational policies and procedures relevant to managing seed collection
- developing measurable performance indicators, specifications and targets and a seed collection plan within specified budgetary guidelines
- coordinating and scheduling resources, and managing the work of others to achieve specific outcomes
- monitoring seed collection operations, ensuring that relevant quality standards are followed
- documenting results from seed collection activities and preparing a report for dissemination to relevant personnel

### Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
  - workplace location or simulated workplace

## EVIDENCE GUIDE

### Method of assessment

- materials and equipment relevant to undertaking work applicable to this unit
- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised**

## RANGE STATEMENT

wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- OHS requirements:** are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:
- personal protective equipment and clothing
  - safety equipment
  - first aid equipment
  - fire fighting equipment
  - hazard and risk control
  - fatigue management
  - elimination of hazardous materials and substances
  - safe forest practices, including required actions relating to forest fire
  - manual handling including shifting, lifting and carrying
- Environmental requirements** may include:
- legislation
  - organisational policies and procedures
  - workplace practices
- Legislative requirements:** are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
  - industrial relations
  - Australian Standards
  - confidentiality and privacy
  - OHS
  - the environment
  - equal opportunity
  - anti-discrimination
  - relevant industry codes of practice
  - duty of care
- Organisational requirements** may include:
- legal
  - organisational and site guidelines
  - policies and procedures relating to own role



## RANGE STATEMENT

and responsibility

- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

**Seed** may include:

- native species
- non-native species

**Seed collection** may include:

- seed orchards
- forests
- softwoods and hardwoods
- rainforest
- understorey plants

**Environmental protection measures** may include:

- ground growth
- canopy
- general forest lean
- wind speed and direction
- fallen trees
- density of trees
- ground slope
- soil and water protection
- ground hazards and obstacles
- contingencies for modifying operations during wet or other adverse weather conditions
- hygiene of the area
- relevant commonwealth, state or territory, and local legislation and regulations

**Seed characteristics** may include:

- provenance
- potential growth characteristics
- forest types
- optimum time to collect
- physiology and biology
- dormancy
- species

## RANGE STATEMENT

**Implementation issues** may include:

- scheduling
- people and skills involved
- materials
- hazards
- seed quantities
- selection

**Opportunities** may include:

- field observation
- organisational and other relevant information

**Method of seed collection** may include:

- climbing
- removal of branches with rifle
- elevated platform vehicles

consideration of the:

- geography of the local area
- size and type of trees
- available resources
- organisational guidelines

and may also include:

- collecting after falling or felling
- ladders
- shaking
- high-powered rifles
- cherry pickers

**Impacts** may include:

- requirements for genetic diversity
- frost
- heat
- salt hardiness
- potential growth characteristics

**Approvals** may include:

- heritage requirements
- environmental sustainability requirements
- other issues applying to seed collection operation

**Plan** may include:

- organisational terminology
- guidelines
- budgets
- policies and timelines
- internal memos
- resources, including people, material and equipment

**Appropriate personnel** may

- clients

**RANGE STATEMENT**

include:

- colleagues
- line management

those collecting the seed, such as:

- organisational employees
- contractors
- community groups

**Resources** may include:

- people
- material
- equipment

**Documentation** may include:

- provenance
- seed species and location
- identity of collector
- weight of seed collected

**Individuals, bodies and groups** may include:

- landholders
- commonwealth, state or territory, and local government authorities
- private individuals

**Checks** may include:

ensuring:

- relevant organisational OHS procedures, practices, policies and precautions are observed and followed
- site environmental requirements follow relevant commonwealth, state or territory, and local legislation and regulations
- performance indicators, targets and specifications are met
- quantity, cost and provenances collected are in line with plan specifications
- required organisational documentation is completed clearly and accurately

**Communication** may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice

## RANGE STATEMENT

**Limitations** may include:

- job role and responsibilities
- own competency level
- industry requirements
- own understanding of risk identification processes
- own interpretation of legislation, regulations and procedures
- OHS and environmental requirements
- difficulties or issues faced
- recommendations for future work, results and costs
- collation of information or documentation
- interpreting information in a way relevant to workplace requirements
- organising and maintaining records accurately
- using a full range of information media, including written, printed, verbal, electronic, visual display units and personal computers

**Records and reports** may include:

and may be:

- manual
- computer-based system
- other appropriate organisational communication system

## Unit Sector(s)

Not Applicable

## Competency field

**Competency field**

Forest Growing and Management

## FPIFGM3202B Extract seed

### Modification History

Not Applicable

### Unit Descriptor

#### Unit descriptor

This unit describes the outcomes required to extract and process native or non-native seed using an extraction unit. It includes seed storage requirements and extraction unit maintenance

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIFGM3202A Extract seed

### Application of the Unit

#### Application of the unit

The unit involves extracting seed in a variety of work settings, including forest environment settings such as farms, agriculture, workshops, domestic, nurseries and local councils

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability skills** This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Receive seed-bearing material into store	<p>1.1.Applicable <i>occupational health and safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to extracting <i>seed</i> are identified and followed</p> <p>1.2.<i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.3.Seed bearing material is received, visually assessed, and species are identified and checked with container label</p> <p>1.4.Received containers are <i>weighed</i> and <i>identified</i> in line with site procedures</p> <p>1.5.Material is stored in dry and well-ventilated <i>conditions</i> in line with site procedures</p> <p>1.6.<i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Extract seed	<p>2.1.Seed is extracted in line with work order, and environmental and OHS requirements</p> <p>2.2.Seed extraction processes are planned and checked for safe working conditions</p> <p>2.3.<i>Extraction units and equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	2.4. Seed extraction <i>systems</i> are operated and monitored in line with manufacturer recommendations
	2.5. Seed-bearing material is placed in or on extraction unit and agitation is undertaken as required to maximise yield
	2.6. Seed capsules are inspected and unextracted seed is reprocessed as required to ensure maximum yield
3. Clean and store seed	3.1. Seed is separated from other material, weighed and stored in line with species requirements and site procedures
	3.2. <i>Seed information</i> is accurately recorded in line with site procedures
	3.3. Seed is <i>packaged</i> for storage in line with industry, legislative, organisational and environmental requirements
4. Clean and maintain extraction unit	4.1. Residue and other waste material is disposed of in line with site environmental management guidelines
	4.2. Extraction units and equipment are cleaned, maintained and calibrated in line with manufacturer recommendations, site procedures and environmental requirements
	4.3. Abnormal operation or faults with extraction units and equipment are reported for corrective action in line with site procedures
	4.4. Work areas are cleaned and maintained in line with site procedures, and organisational and environmental requirements
	4.5. Seed extraction information and results are <i>recorded and reported</i> in line with site procedures

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

#### Required skills

- Technical skills sufficient to use and maintain seed extraction units; efficiently and safely carry out seed extraction techniques; identify a range of seed species from capsules and apply accurate identifying information

## REQUIRED SKILLS AND KNOWLEDGE

- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to apply appropriate mathematical techniques to calculate seed weights
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

### Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for extracting seed
- Environmental protection requirements, including the safe disposal of waste material, the minimisation of environmental impact, and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for extracting seed
- Environmental risks and hazards
- Hazards associated with seed extraction, processing and storage
- Range of seed species, including native and non-native
- Seed extraction processes for native and non-native species
- Storage procedures and requirements for different seed species
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must



## EVIDENCE GUIDE

be able to provide evidence that they can apply safe and efficient techniques to identify, extract, clean and store seed in line with species requirements and organisational guidelines

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to extracting seed
- following organisational policies and procedures relevant to extracting seed
- applying seed extraction and storage techniques in line with work order instructions and within prescribed organisational tolerances
- operating, cleaning and maintaining seed extraction units and equipment
- recording seed species information and extraction results, and maintaining workplace information

### Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
  - workplace location or simulated workplace
  - materials and equipment relevant to undertaking work applicable to this unit
  - specifications and work instructions

### Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks,

## EVIDENCE GUIDE

with questioning on required knowledge and it must also reinforce the integration of employability skills

- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

#### **OHS requirements:**

are to be in line with applicable commonwealth, state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing

## RANGE STATEMENT

- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

**Environmental requirements**  
may include:

**Legislative requirements:**

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

**Organisational requirements**  
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements

**RANGE STATEMENT**

- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Seed** may include:
- native species
  - non-native species
- Work order** is to include:
- information and instructions on material to be extracted
  - site seed extraction requirements
- and may also include:
- instructions for the environmental monitoring of work and procedures
  - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
  - suppliers
  - clients
  - colleagues
  - managers
- Weight** may include:
- properly calibrating and maintaining scales
  - using scales for weighing under licence from the weights and measures authority
- Identifiers** may include:
- alphanumeric
  - bar codes
  - colour codes
  - symbols
- Conditions** for storage of material must be free of humidity or wetness to protect against incidence of fungus
- Communication** may include:
- verbal and non-verbal language
  - constructive feedback
  - active listening
  - questioning to clarify and confirm understanding
  - use of positive, confident and cooperative language
  - use of language and concepts appropriate to individual social and cultural differences
  - control of tone of voice
- Extraction units and equipment** may include:
- kilns operated by gas, solar energy, oil or electricity
  - sieves of various sizes

## RANGE STATEMENT

- air-drying racks and trays
  - lifting devices, such as overhead gantry, fork lift and conveyor belt
  - electronic and manual scales
- Systems** may include:
- electronic
  - manual
- Seed information** includes details of:
- species
  - weight
  - place or origin
  - container identifier
- Packaging** must:
- ensure protection of seeds
  - maintain traceability to collection source
- Records and reports may include:**
- seed species information
  - seed extraction processes and results
  - storage procedures
- and may be:
- manual
  - a computer-based system
  - other appropriate organisational communication system

## Unit Sector(s)

Not Applicable

## Competency field

**Competency field** Forest Growing and Management

## **FPIFGM3204A Fall trees manually (intermediate)**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

This unit specifies the outcomes required to assess, plan and safely carry out intermediate manual tree falling operations. This unit is intended for use in situations where the production of timber is not the primary focus of the activity. Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM111A Fall trees manually - intermediate (non-commercial/non-production)

### **Application of the Unit**

#### **Application of the Unit**

This unit supports the attainment of skills and knowledge required for competent workplace performance in forest and forest products operations of all sizes. The unit applies to a forest environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the person's job and authority

### **Licensing/Regulatory Information**

Refer to Unit Descriptor

### **Pre-Requisites**

Not Applicable

## Employability Skills Information

Not Applicable

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |  |  |
|--|--|
| 1 Prepare and maintain falling equipment | <p>1.1 Applicable <i>Occupational Health and Safety (OHS)</i>, <i>legislative</i> and <i>organisational</i> requirements relevant to <i>falling trees</i> are identified and complied with</p> <p>1.2 Site <i>environmental protection measures</i> are adhered to in accordance with relevant legislation and regulations</p> <p>1.3 <i>Work plan</i> is reviewed and checked as required with <i>appropriate personnel</i></p> <p>1.4 <i>Tools and equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturer's recommendations</p> <p>1.5 Blunt or damaged chainsaw is detected, rectified and reported in accordance with workplace procedures</p> <p>1.6 Operational effectiveness of chainsaw is monitored to <i>maintain</i> falling safety and productivity</p> <p>1.7 <i>Communication</i> with others is established and maintained in accordance with OHS requirements</p> |
| 2 Assess conditions and surroundings     | <p>2.1 Site environmental concerns are identified and complied with in accordance with relevant national, state, and local legislation and/or regulations</p> <p>2.2 <i>Environmental conditions</i> are identified and assessed in accordance with work order requirements</p> <p>2.3 Awareness of environmental conditions and other personnel activity in the work area is maintained and</p>   |

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	falling activity modified
	2.4 General factors affecting falling requirements are determined and specific forest or site risks and hazards are assessed and controlled
3 Assess tree and plan falling	3.1 Tree falling sequence for individual trees is assessed and progressively planned
	3.2 Tree to be felled is located and growth is cleared to enable a <i>visual assessment</i> of falling characteristics
	3.3 Required falling direction is assessed and checked in accordance with planned falling
	3.4 Sequence of cuts to fall tree is planned in accordance with standard falling procedures
	3.5 Suitable escape route is selected and cleared of growth and other obstacles in accordance with environmental care principles and statutory requirements
	3.6 Personal <i>limitations</i> in safely falling trees with own skills are assessed and <i>assistance</i> sought from appropriate personnel
	3.7 Location and activity of other personnel in the work area is noted and monitored
4 Fall tree	4.1 All work is conducted using established safe operating practices and in accordance with workplace procedures
	4.2 Tree falling operations are safely undertaken appropriate to site conditions and at a safe distance from other personnel in the work area
	4.3 Unexpected characteristics of tree and other problems are identified, assistance sought and planning reviewed
	4.4 Planned escape route is used when tree starts to fall and the fall and movement of tree on ground is monitored until stability is determined
	4.5 Chainsaw is monitored for operational effectiveness and any faults, malfunctions or problems are reported in accordance with workplace procedures

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this



**unit**

- Required skills include:**
- comply with legislation, regulations, standards, codes of practice and established safe practices and procedures relating to intermediate manual tree falling operations
  - use and maintain relevant tools, machinery and equipment
  - identify problems and equipment faults and demonstrate appropriate response procedures
  - use appropriate communication and interpersonal techniques and methods with colleagues and others
  - accurately record and report workplace information, and maintain documentation
  - use hand signals with other operators to maintain effective and safe tree falling
  - recognise own limitations in conditions and trees for falling
  - contribute to a tree assessment and plan and fall trees within the range of variables for trees and conditions
  - recognise common diseases, pests and nutrition deficiencies
  - calculate slopes and weights in the metric system
- Required knowledge and understanding includes:**
- applicable Commonwealth, State or Territory licensing, legislative, regulatory or certification requirements and codes of practice relevant to intermediate manual tree falling operations
  - organisational and site standards, requirements, policies and procedures relating to intermediate manual tree falling operations
  - principles of cultural diversity and access and equity
  - environmental protection requirements, including the safe disposal of waste material
  - established communication channels and protocols
  - problem identification and resolution
  - types of tools and equipment and procedures for their safe use, operation and maintenance
  - identification and evaluation of structural defects in trees
  - types and purposes of a range of cuts to fall trees
  - hazards of operating a chainsaw and falling trees
  - operational principles and limitations of a chainsaw
  - procedures for recording, reporting and maintaining workplace records and information
  - appropriate mathematical procedures for estimation

and measurement

## KEY COMPETENCIES

The seven key competencies represent generic skills considered necessary for effective participation by an individual in the workplace

Performance Level 1 - at this level, the candidate is required to undertake tasks effectively

Performance Level 2 - at this level, the candidate is required to manage tasks

Performance Level 3 - at this level, the candidate is required to use concepts for evaluating and reshaping tasks

Key Competency	Example of Application	Performance Level
How are ideas and information communicated?	By communicating in simple language to confirm work requirements, convey information to colleagues, and report outcomes relating to falling trees	2
How can information be collected, analysed and organised?	By collecting, organising and understanding information required to plan and undertake tree falling	2
How are activities planned and organised?	By organising and conducting tree falling activities in the correct sequence to complete within the designated timeframes	2
How is team work used?	By using effective communication and interpersonal techniques with colleagues and others to maximise confidence, satisfaction and productivity during tree falling operations	1
How are mathematical ideas and techniques used?	By calculating slopes, wind speed and direction time to complete tasks	3
How are problem solving skills applied?	By establishing safe and effective tree falling procedures and processes which anticipate likely problems to avoid wastage and downtime	2
How is the use of technology applied?	By selecting and using equipment to fall trees	1

## Evidence Guide

### EVIDENCE GUIDE

**The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package**

#### Overview of assessment

- A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess, plan and conduct tree falling operations in accordance with environmental and organisational requirements

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS, environmental and organisational policies and procedures, relevant to falling trees manually (intermediate)
- Comply with applicable licensing or certification requirements
- Communicate effectively and work safely with others including maintaining an awareness of other personnel activity in the work area
- Contribute to a tree assessment, plan and fall trees within the range of variables for trees and conditions
- Visually assess trees and determine falling characteristics
- Select, use and maintain appropriate tools and equipment and recognise faults, problems or malfunctions
- Safely operate and maintain a chainsaw

#### Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
  - workplace location or simulated workplace
  - materials and equipment relevant to manual falling of trees (intermediate)
  - specifications and work instructions

## EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package

### Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI05 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

**OHS requirements are to** • the use of personal protective equipment and clothing

## RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

- be in accordance with Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures. Requirements may include:**
- safety equipment
  - first aid equipment
  - fire fighting equipment
  - hazard and risk control
  - elimination of hazardous materials and substances
  - safe forest practices including required actions relating to forest fire
  - manual handling including shifting, lifting and carrying
- Legislative requirements are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include:**
- award and enterprise agreements
  - industrial relations
  - Australian Standards
  - confidentiality and privacy
  - OHS
  - the environment
  - equal opportunity
  - anti-discrimination
  - relevant industry codes of practice
  - duty of care
  - heritage and traditional land owner issues
- Organisational requirements**
- may include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
- Falling**
- may require the use of multiple back-cuts
- Trees**
- for falling will have the following characteristics: height not more than 40 metres, lean and weight distribution which can be adapted to falling direction with the use of wedges and or control with hinge wood, single leader, sound wood condition in barrel
- Environmental protection measures**
- may include noise, ground growth, canopy, general forest lean, wind speed and direction, fallen trees, density of trees, ground slope, soil and water protection, ground hazards, obstacles. Measures may

## RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

- Work plan**

  - also include contingencies for modifying operations during wet or other adverse weather conditions
  - is to include information and instructions relevant to tree falling operations including processing location details and trees to be felled and retained. Information may also include general environmental requirements, site plan and environmental features
- Appropriate personnel**

  - may include supervisors, clients, colleagues, line management
- Tools and equipment**

  - may include warning signs, chainsaw and components, personal protective equipment and clothing, first aid equipment, maintenance requirements, fuel
- Maintenance**

  - of chainsaw and components may include sharpening and making adjustments as required
- Communication**

  - may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language, hand signals
- Environmental conditions**

  - may relate to ground growth, canopy, general forest lean, ground slope, ground hazards, wind speed and direction, wet weather including ice and snow
- Conditions**

  - in which falling will be undertaken include ground slope not more than 15 degrees, moderate wind speed, absence in growth of fallen trees preventing complete fall, works with general supervision available to provide assistance related to planning, falling
- Limitations**

  - may relate to job role and responsibilities, own competency level, industry requirements, own understanding of risk identification processes, own interpretation of legislation, regulations and procedures, complying with OHS requirements
- Assistance**

  - may be required in situations where cuts made may lead to loss of control of tree in falling, to confirm and adjust cutting techniques in response to movement and condition of tree, to help clear trees

## RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

- Visual assessment**
- that hang up during falling
  - may cover size, weight distribution, lean, species, multi leaders, soundness of timber, growth characteristics and stresses

## Unit Sector(s)

Not Applicable

## Competency Field

**Competency Field** Forest Growing and Management

## **FPIFGM3205A Fall trees manually (advanced)**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

This unit specifies the outcomes required to assess, plan and safely carry out advanced tree falling operations. This unit is intended for use in situations where the production of timber is not the primary focus of the activity.

Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM112A Fall trees manually - advanced (non-commercial/non-production)

### **Application of the Unit**

#### **Application of the Unit**

This unit supports the attainment of skills and knowledge required for competent workplace performance in forest and forest products operations of all sizes. The unit applies to a forest environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the person's job and authority

### **Licensing/Regulatory Information**

Refer to Unit Descriptor

### **Pre-Requisites**

Not Applicable



## Employability Skills Information

Not Applicable

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |  |  |
|--|--|
| 1 Prepare and maintain falling equipment | 1.1 Applicable <i>Occupational Health and Safety (OHS)</i> , <i>legislative</i> and <i>organisational</i> requirements relevant to <i>falling trees</i> are identified and complied with<br>1.2 Site <i>environmental protection measures</i> are adhered to in accordance with relevant legislation and regulations<br>1.3 <i>Work plan</i> is reviewed and checked as required<br>1.4 <i>Tools and equipment</i> are selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturer's recommendations<br>1.5 Blunt or damaged chainsaw is detected, rectified and reported in accordance with workplace procedures<br>1.6 Operational effectiveness of chainsaw is monitored to <i>maintain</i> falling safety and productivity<br>1.7 <i>Communication</i> with others is established and maintained in accordance with OHS requirements |
| 2 Assess conditions and surroundings     | 2.1 Site environmental concerns are identified and complied with in accordance with relevant national, state, and local legislation or regulations<br>2.2 <i>Environmental conditions</i> are identified and assessed in accordance with work plan requirements<br>2.3 Awareness of environmental conditions and other personnel activity in the work area is maintained and falling activity modified   |

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
3 Assess tree and plan falling	<p>2.4 General factors affecting falling requirements are assessed and specific forest or site risks and hazards identified and controlled</p> <p>3.1 General falling direction and working face are planned to minimise danger and damage to self, others and the environment</p> <p>3.2 Tree falling sequence for individual trees is assessed and progressively planned</p> <p>3.3 Tree to be felled is located and growth is cleared to enable a <i>visual assessment</i> of falling characteristics</p> <p>3.4 Required falling direction and degree of allowable error is assessed and checked</p> <p>3.5 Sequence of cuts to fall tree is planned in accordance with standard falling procedures</p> <p>3.6 Suitable <i>escape route</i> is selected and cleared of growth and other obstacles in accordance with environmental care principles and statutory requirements</p> <p>3.7 Personal <i>limitations</i> in safely falling trees with own skills are assessed and <i>assistance</i> sought from appropriate personnel</p>
4 Fall tree	<p>4.1 All work is conducted using established safe operating practices and in accordance with site procedures</p> <p>4.2 Location and activity of other personnel in the work area is noted and monitored</p> <p>4.3 Cutting techniques used are appropriate for advanced tree falling operations</p> <p>4.4 Unexpected characteristics of tree and other problems are assessed, assistance sought and planning reviewed</p> <p>4.5 Planned escape route is used when tree starts to fall and the fall and movement of tree on ground is monitored until stability is determined</p> <p>4.6 Chainsaw is monitored for operational effectiveness and any faults, malfunctions or problems are reported in accordance with site procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this

**unit**

- Required skills include:**
- comply with legislation, regulations, standards, codes of practice and established safe practices and procedures relating to advanced tree falling operations
  - use and maintain relevant tools, machinery and equipment including chainsaws
  - identify problems and equipment faults and demonstrate appropriate response procedures
  - use appropriate communication and interpersonal techniques and methods with colleagues and others
  - accurately record and report workplace information, and maintain documentation
  - use hand signals with other operators to maintain effective and safe tree falling
  - recognise own limitations in assessing conditions and trees for falling
  - contribute to a tree assessment and plan and fall trees within the range of variables for trees and conditions including techniques for control of falling direction consistent with this range
  - recognise common diseases, pests and nutrition deficiencies
  - calculate slopes and weights in the metric system
- Required knowledge and understanding includes:**
- applicable Commonwealth, State or Territory licensing, legislative, regulatory or certification requirements and codes of practice relevant to advanced tree falling operations
  - organisational and site standards, requirements, policies and procedures relating to advanced tree falling operations
  - principles of cultural diversity and access and equity
  - environmental protection requirements, including the safe disposal of waste material
  - established communication channels and protocols
  - problem identification and resolution
  - types of tools and equipment and procedures for their safe use, operation and maintenance
  - identification and evaluation of structural defects in trees
  - types and purposes of a range of cuts to fall trees
  - hazards of operating a chainsaw and falling trees
  - operational principles and limitations of a chainsaw
  - procedures for the recording, reporting and

- maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

## KEY COMPETENCIES

The seven key competencies represent generic skills considered necessary for effective participation by an individual in the workplace

Performance Level 1 - at this level, the candidate is required to undertake tasks effectively

Performance Level 2 - at this level, the candidate is required to manage tasks

Performance Level 3 - at this level, the candidate is required to use concepts for evaluating and reshaping tasks

Key Competency	Example of Application	Performance Level
How are ideas and information communicated?	By communicating in simple language to confirm work requirements, convey information to colleagues, and report outcomes relating to falling trees	2
How can information be collected, analysed and organised?	By collecting, organising and understanding information required to plan and undertake tree falling	2
How are activities planned and organised?	By organising and conducting tree falling activities in the correct sequence to complete within the designated timeframes	2
How is team work used?	By using effective communication and interpersonal techniques with colleagues and others to maximise confidence, satisfaction and productivity during tree falling operations	2
How are mathematical ideas and techniques used?	By calculating slopes, wind speed and direction time to complete tasks	2
How are problem solving skills applied?	By establishing safe and effective tree falling procedures and processes which anticipate likely problems to avoid wastage and downtime	2
How is the use of	By accessing and locating applicable legislative, regulatory and	2

technology applied?	environmental guidelines relevant to tree falling operations	
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## Evidence Guide

### EVIDENCE GUIDE

**The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package**

#### Overview of assessment

- A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess, plan and conduct advanced tree falling operations in accordance with environmental and organisational requirements

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS, environmental and organisational policies and procedures, relevant to advanced tree falling operations
- Comply with applicable licensing or certification requirements
- Communicate effectively and work safely with others including maintaining an awareness of other personnel activity in the work area
- Contribute to a tree assessment, plan and undertake advanced tree falling within the range of variables for trees and conditions
- Visually assess trees and determine falling characteristics
- Determine and plan falling sequence for individual trees
- Select and maintain appropriate tools and equipment and recognise faults, problems or malfunctions
- Safely operate and maintain a chainsaw
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements

#### Context of and specific resources for assessment

## EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package

### Method of assessment

- The following resources should be made available:
  - workplace location or simulated workplace
  - materials and equipment relevant to advanced tree falling operations
  - specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI05 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

- OHS requirements are to be in accordance with Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures. Requirements may include:**
- the use of personal protective equipment and clothing
  - safety equipment
  - first aid equipment
  - fire fighting equipment
  - hazard and risk control
  - elimination of hazardous materials and substances
  - safe forest practices including required actions relating to forest fire
  - manual handling including shifting, lifting and carrying
- Legislative requirements are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include:**
- award and enterprise agreements
  - industrial relations
  - Australian Standards
  - confidentiality and privacy
  - OHS
  - the environment
  - equal opportunity
  - anti-discrimination
  - relevant industry codes of practice
  - duty of care
  - heritage and traditional land owner issues
- Organisational requirements**
- may include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
- Falling**
- may require the use of multiple back-cuts and/or boring techniques and will be undertaken in all conditions for which it is safe including slopes up to the maximum allowed by relevant regulations
- Trees**
- selected for falling include those of any size and condition that are determined can be safely fallen
- Environmental protection**
- may include noise, ground growth, canopy, general

## RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

<b>measures</b>	forest lean, wind speed and direction, fallen trees, density of trees, ground slope, soil and water protection, ground hazards, obstacles. Measures may also include contingencies for modifying operations during wet or other adverse weather conditions
<b>Work plan</b>	<ul style="list-style-type: none"> <li>• is to include information and instructions relevant to tree falling operations including processing location details and trees to be felled and retained. Information may also include general environmental requirements, site plan and environmental features</li> </ul>
<b>Tools and equipment</b>	<ul style="list-style-type: none"> <li>• may include warning signs, chainsaw and components, personal protective equipment and clothing, first aid equipment, maintenance requirements, fuel</li> </ul>
<b>Maintenance</b>	<ul style="list-style-type: none"> <li>• of chainsaw and components may include sharpening and making adjustments as required</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>• may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language, hand signals</li> </ul>
<b>Environmental conditions</b>	<ul style="list-style-type: none"> <li>• may relate to ground growth, canopy, general forest lean, ground slope, ground hazards, wind speed and direction</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• may relate to job role and responsibilities, own competency level, industry requirements, own understanding of risk identification processes, own interpretation of legislation, regulations and procedures, complying with OHS requirements</li> </ul>
<b>Assistance</b>	<ul style="list-style-type: none"> <li>• may be required in situations where cuts made may lead to loss of control of tree in falling, to confirm and adjust cutting techniques in response to movement and condition of tree, to help clear trees that hang up during falling</li> </ul>
<b>Visual assessment</b>	<ul style="list-style-type: none"> <li>• of tree may cover size, weight distribution, lean, species, multi leaders, soundness of timber, growth characteristics and stresses</li> </ul>
<b>Escape route</b>	<ul style="list-style-type: none"> <li>• clearance may require the assistance from a dozer or</li> </ul>



**RANGE STATEMENT**

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

other machine

**Unit Sector(s)**

Not Applicable

**Competency Field**

**Competency Field**                      Forest Growing and Management

# FPIHAR2206B Operate a mobile chipper/mulcher

## Modification History

Not Applicable

## Unit Descriptor

**Unit descriptor** This unit describes the outcomes required to operate a mobile chipping/mulching unit to clean up after felling operations and chip excess branches and timber refuse

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIHAR2206A Operate a mobile chipper/mulcher

## Application of the Unit

**Application of the unit** The unit involves operating a mobile chipper/mulcher in a forest and forest products setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

## Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

**Prerequisite units**

## Employability Skills Information

**Employability skills** This unit contains employability skills

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. Prepare for mobile chipping/mulching

- 1.1. Applicable *Occupational Health and Safety* (OHS), *environmental*, *legislative* and *organisational requirements* relevant to operating a mobile chipper/mulcher are identified and followed
- 1.2. *Work order* is reviewed and checked with *appropriate personnel*
- 1.3. Type and quantity of *timber refuse* to be *chipped/mulched* are identified and assessed for safe working conditions
- 1.4. Timber refuse assessed as not suitable for chipping/mulching is set aside for recycling or re-use in line with site procedures
- 1.5. *Equipment* is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer's recommendations
- 1.6. Chipping/mulching activities are planned in line with site procedures, environmental requirements
- 1.7. *Communication* with others is established and maintained in line with OHS requirements

ELEMENT	PERFORMANCE CRITERIA
2. Chip/mulch timber	2.1. <b>Chipping/mulching unit</b> is positioned, secured and set up in line with manufacturer's specifications 2.2. <b>Pre start-up checks</b> are carried out on equipment in line with site requirements 2.3. Timber refuse is fed into the chipper/mulcher at a rate applicable to the <b>capacity</b> of the machinery in line with applicable safe handling techniques 2.4. Timber refuse is chipped to the <b>chip sizes</b> set on the chipping unit and in line with the work order 2.5. Chipping/mulching processes and equipment faults are <b>recorded and reported</b> to the appropriate personnel
3. Conduct operator maintenance	3.1. Equipment lock-out procedures are followed in line with OHS legislation and site procedures 3.2. Chipper/mulcher is checked for blunt or damaged condition 3.3. Components are removed, maintained, adjusted and replaced in line with manufacturer's recommendations 3.4. Chipper/mulcher set-up is assessed and adjusted to suit chipping conditions 3.5. Chipper/mulcher is kept clear of <b>foreign matter</b> and checked to ensure it meets relevant standards prior to use

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

#### Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; efficiently and safely operating a mobile chipper/mulcher
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately locate, record and report information
- Numeracy skills sufficient to estimate measure and calculate time required to complete a task
- Problem solving skills sufficient to review and accurately identify work

## REQUIRED SKILLS AND KNOWLEDGE

requirements; identify problems and equipment faults and demonstrate appropriate response procedures

### Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for operating a mobile chipper/mulcher
- Environmental protection requirements, including the safe disposal of waste material and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for operating a mobile chipper/mulcher
- Characteristics of trees and timber defects
- Chipping/mulching procedures
- Mobile chipper/mulcher operation and safety
- Chipper/mulcher condition assessment
- Social/community benefit of uses for chipped/mulched timber
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently operate a mobile chipper/mulcher within organisational requirements

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include

## EVIDENCE GUIDE

demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to operating a mobile chipper/mulcher
- following organisational policies and procedures relevant to operating a mobile chipper/mulcher
- operating a mobile chipper/mulcher in line with the work order and within prescribed organisational tolerances
- conducting operator maintenance on a mobile chipping unit

### Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
  - workplace location or simulated workplace
  - materials and equipment relevant to undertaking work applicable to this unit
  - specifications and work instructions

### Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

## EVIDENCE GUIDE

competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

#### OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire

## RANGE STATEMENT

- Environmental requirements** may include:
- manual handling including shifting, lifting and carrying
  - legislation
  - organisational policies and procedures
  - workplace practices
- Legislative requirements:** are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:
- award and enterprise agreements
  - industrial relations
  - Australian Standards
  - confidentiality and privacy
  - OHS
  - the environment
  - equal opportunity
  - anti-discrimination
  - relevant industry codes of practice
  - duty of care
- Organisational requirements** may include:
- legal
  - organisational and site guidelines
  - policies and procedures relating to own role and responsibility
  - quality assurance
  - procedural manuals
  - quality and continuous improvement processes and standards
  - OHS, emergency and evacuation procedures
  - ethical standards
  - recording and reporting requirements
  - equipment use and maintenance and storage requirements
  - environmental management requirements (waste disposal, recycling and re-use guidelines)
- Work order** is to include:
- instructions for the chipping/mulching and despatch of chipped/mulched timber refuse from the work site
- and may include:
- type



## RANGE STATEMENT

- size
- length
- quantity
- grade

and may also include:

- instructions for the environmental monitoring of work and procedures
- environmental care requirements relevant to the work

**Appropriate personnel** may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

**Timber refuse** may include:

- branches
- tree heads
- bark
- other timber waste

**Chipping/mulching**

is the process of converting timber refuse into varying chip sizes using mechanised chipping/mulching units

**Equipment** may include:

- mobile chipping/mulching units
- specific safety attire
- maintenance tools and equipment

and is to include procedures for equipment lock-out, such as protecting operators and co-workers from accidental injury by isolating the machine

**Communication** may include:

- verbal and non-verbal language
- hand or other agreed signals
- eye contact with other operators or personnel
- active listening
- questioning to clarify and confirm understanding
- use of electronic communication devices

**Chipping/mulching unit** may include:

- a truck mounted chipping/mulching unit or trailer mounted chipping/mulching unit feeding into a truck or other form of transportation

## RANGE STATEMENT

and is usually petrol driven, with high powered spinning cutters which shred timber refuse into chips/mulch

### Pre start-up checks

are conducted to ensure:

- equipment has been set-up correctly
- systems are performing accurately and operating to optimum performance

### Capacity may include:

- the capacity of the machinery to cope with certain size diameters of branch
- the speed by which waste is fed into the chipper/mulcher

### Chip sizes

may vary in size, dependent on the customer or work order and the capability of the chipper/mulcher to set chip sizes

### Records and reports may include:

- timber type
- size
- outcomes
- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be compiled manually or by using a computer-based system or another appropriate organisational communication system

### Foreign matter may include:

- contamination of chip
- stones
- rocks
- metal
- other foreign matter which may blunt the cutters or affect operation of the chipper/mulcher

## Unit Sector(s)

### Unit sector

No sector assigned

## Co-requisite units

Co-requisite units

## Competency field

Competency field      Harvesting and Haulage

# HLTFA201A Provide basic emergency life support

## Modification History

## Unit Descriptor

This unit of competency describes the skills and knowledge required to recognise and respond to life threatening emergencies using basic life support measures only

## Application of the Unit

The skills and knowledge described here enable a first aider to provide an initial response to an emergency in line with practised actions and Australian Resuscitation Council (ARC) Guidelines and/or state/territory regulations, legislation and policies and accepted industry guidelines

Application should be contextualised as required to reflect workplace and community requirements relating to specific risks and hazards and associated injuries

## Licensing/Regulatory Information

## Pre-Requisites

## Employability Skills Information

The required outcomes described in this unit of competency contain applicable facets of Employability Skills

The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements

## Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in *italics* are elaborated in the Range Statement.

## Elements and Performance Criteria

### Elements and Performance Criteria

#### Element

#### Performance Criteria

- 1 Respond in an emergency situation
  - 1.1 Recognise emergency situation and identify **hazards** to health and safety of self and others
  - 1.2 Minimise immediate risk to health and safety of self, casualty and others by isolating any hazard(s)
  - 1.3 Assess casualty and identify injuries, illnesses and conditions
  - 1.4 Assess the need for assistance
- 2 Apply identified first aid procedures
  - 2.1 Reassure casualty in a caring and calm manner and make comfortable using available resources
  - 2.2 Determine and explain the nature of **casualty's injury/condition** and relevant first aid procedures to provide comfort
  - 2.3 Seek consent from casualty or significant other prior to applying first aid management
  - 2.4 Respond to the casualty in a culturally aware, sensitive and respectful manner
  - 2.5 Use **identified first aid procedures** as required in accordance with established first aid principles, policies and procedures, ARC Guidelines and/or state/territory regulations, legislation and policies and industry requirements
  - 2.6 Use safe manual handling techniques as required
- 3 Communicate details of the incident
  - 3.1 Request ambulance support and/or appropriate medical assistance according to relevant circumstances and using available means of communication
  - 3.2 Accurately convey assessment of casualty's condition and first aid procedures undertaken to emergency services/relieving personnel
  - 3.3 Calmly provide information to reassure casualty, adopting a communication style to match the casualty's level of consciousness
  - 3.4 Provide reports, where applicable, in a timely manner, presenting all relevant facts according to established procedures

- 3.5 Maintain confidentiality of records and information in line with privacy principles and statutory and/or organisation policies
- 4 Evaluate own performance
  - 4.1 Seek feedback from **appropriate clinical expert**
  - 4.2 Recognise the possible psychological impacts on rescuers of involvement in critical incidents
  - 4.3 Participate in debriefing/evaluation as appropriate to improve future response and address individual needs

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

### Essential knowledge:

Basic anatomy and physiology relating to:

severe bleeding

absence of signs of life:

unconscious

unresponsive

not moving

not breathing normally

choking/airway obstruction

shock

First aid procedures for:

bleeding control

care of unconscious

infection control as it relates to standard precautions

airway management

chest pain  
casualty with no signs of life  
shock  
respiratory distress, including asthma  
severe allergic reaction

#### Chain of survival

How to access emergency response support services/personnel  
Understanding of the use of an Automated External Defibrillator (AED), including when to use and when not to  
State/territory regulations, legislation and policies, ARC Guidelines and accepted industry practice relating to currency of skill and knowledge  
Privacy and confidentiality requirements  
Duty of care requirements  
Need to be culturally aware, sensitive and respectful  
Relevant workplace hazards  
Own skills and limitations  
Awareness of stress management techniques and available support

#### **Essential skills:**

Ability to:

Demonstrate first aid casualty management principles:  
assess and minimise danger  
check for response  
maintain casualty's airway, breathing and circulation.

Assess vital signs and responses of casualty

Demonstrate:

safe manual handling of casualty.  
consideration of the welfare of the casualty  
correct procedures for CPR on a resuscitation manikin  
implementation of standard precautions

Plan an appropriate first aid response in line with established first aid principles, policies

and procedures, ARC Guidelines and/or state/territory regulations, legislation and policies and industry requirements and respond appropriately to contingencies in line with own level of skills and knowledge

Call an ambulance and/or medical assistance, according to circumstances and report casualty's condition

Identify and minimise hazards to health and safety of self and others in the immediate workplace or community environment

Report details of emergency incident and first aid provided

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

### Critical aspects of assessment:

Assessment must include demonstrated evidence of specified Essential Knowledge and Essential Skills identified in this competency unit

Competence should be demonstrated working individually and, where appropriate, as part of a first aid team.

Consistency of performance should be demonstrated over the required range of situations relevant to the workplace or community setting

Currency of CPR knowledge and skills is to be demonstrated in line with state/territory regulations, legislation and policies, ARC and industry guidelines

### Context and resources required for assessment:

For assessment purposes, demonstration of skills in CPR procedures requires using a model of the human body (resuscitation manikin) in line with Australian Resuscitation Council Guidelines



**Access and equity considerations:**

All workers in the health industry should be aware of access and equity issues in relation to their own area of work

All workers should develop their ability to work in a culturally diverse environment

In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people

Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

**Range Statement****RANGE STATEMENT**

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

**Condition of the casualty must include, but is not limited to:**

Severe bleeding

Absence of signs of life:

unconscious

unresponsive

not moving

not breathing normally

Choking/airway obstruction

Severe allergic reaction

**Identified first aid procedures must include:**

Cardiopulmonary Resuscitation (CPR)

Control severe bleeding

Airway management

Provide assistance with self-administered medications, such as auto-injector, puffer/inhaler in line with state/territory regulations, legislation and policies and any available medical/pharmaceutical instructions

Care of the unconscious person

**Resources and equipment may include:**

First aid kit

Resuscitation mask or barrier

Casualty's medication

Manikin

AED (if available)

Auto-injector

Puffer/inhaler

**A hazard is:**

A source or situation with the potential for harm in terms of human injury or ill-health, damage to property, the environment, or a combination of these

**Appropriate clinical expert may include:**

Supervisor/manager

Ambulance officer/paramedic

Other medical/health worker

## Unit Sector(s)

## HLTFA301C Apply first aid

### Modification History

Not Applicable

### Unit Descriptor

#### Descriptor

This unit of competency describes the skills and knowledge required to provide first aid response, life support, management of casualty(s), the incident and other first aiders, until the arrival of medical or other assistance

### Application of the Unit

#### Application

These skills and knowledge may be applied in a range of situations, including community and workplace settings

Training Package users should ensure implementation is consistent with any specific workplace and/or relevant legislative requirements in relation to first aid, including State/Territory requirements for currency

Application of these skills and knowledge should be contextualised as required to address specific industry, enterprise or workplace requirements and to address specific risks and hazards and associated injuries

A current Senior First Aid, Workplace Level 2 or Level 2 qualification may provide evidence of skills and knowledge required by this competency unit. However, as with all evidence of competence, evidence must be assessed against the requirements specified in the competency unit

## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability Skills** This unit contains Employability Skills

## Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. Assess the situation

1.1 Identify assess and minimise *hazards* in the situation that may pose a risk of injury or illness to self and others

1.2 Minimise immediate *risk* to self and casualty's health and safety by controlling any hazard in accordance with occupational health and safety requirements

1.3 Assess casualty and identify injuries, illnesses and conditions

2. Apply first aid procedures

2.1 Calmly provide information to reassure casualty, adopting a communication style to match the casualty's level of consciousness

2.2 Use available *resources and equipment* to make the casualty as comfortable as possible

**ELEMENT****PERFORMANCE CRITERIA**

- 2.3 Respond to the casualty in a culturally aware, sensitive and respectful manner
- 2.4 Determine and explain the nature of casualty's injury/condition and relevant first aid procedures to provide comfort
- 2.5 Seek consent from casualty prior to applying first aid management
- 2.6 Provide *first aid management* in accordance with *established first aid principles* and Australian Resuscitation Council (ARC) Guidelines and/or State/Territory regulations, legislation and policies and industry requirements
- 2.7 Seek first aid assistance from others in a timely manner and as appropriate
- 2.8 Correctly operate first aid equipment as required for first aid management according to manufacturer/supplier's instructions and local policies and/or procedures
- 2.9 Use safe manual handling techniques as required
- 2.10 Monitor *casualty's condition* and respond in accordance with effective first aid principles and procedures
- 2.11 Finalise casualty management according to casualty's needs and first aid principles
3. Communicate details of the incident
- 3.1 Request ambulance support and/or appropriate medical assistance according to relevant circumstances using relevant *communication media and equipment*
- 3.2 Accurately convey assessment of casualty's condition and management activities to ambulance services /other emergency services/relieving personnel
- 3.3 Prepare reports as appropriate in a timely manner, presenting all relevant facts according to established procedures
- 3.4 Accurately record details of casualty's physical condition, changes in conditions, management and response to management in line with established procedures
- 3.5 Maintain confidentiality of records and

**ELEMENT****PERFORMANCE CRITERIA**

information in line with privacy principles and statutory and/or organisation policies

## 4. Evaluate own performance

4.1 Seek feedback from *appropriate clinical expert*

4.2 Recognise the possible psychological impacts on rescuers of involvement in critical incidents

4.3 Participate in debriefing/evaluation as appropriate to improve future response and address individual needs

**Required Skills and Knowledge****REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

*Essential knowledge:*

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- ARC Guidelines relating to provision of first aid as outlined
- Awareness of stress management techniques and available support
- First aid management of:
  - abdominal injuries
  - allergic reactions
  - altered and loss of consciousness
  - bleeding
  - burns - thermal, chemical, friction, electrical
  - cardiac arrest
  - casualty with no signs of life
  - chest pain
  - choking/airway obstruction
  - injuries: cold and crush injuries; eye and ear injuries; head, neck and spinal injuries;

## REQUIRED SKILLS AND KNOWLEDGE

- minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations
- envenomation - snake, spider, insect and marine bites
- environmental impact such as hypothermia, hyperthermia, dehydration, heat stroke
- fractures
- medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions
- near drowning
- poisoning and toxic substances (including chemical contamination)
- respiratory distress
- seizures
- shock
- stroke
- substance misuse - common drugs and alcohol, including illicit drugs
- Social/legal issues:
  - duty of care
  - need to be culturally aware, sensitive and respectful
  - importance of debriefing
  - confidentiality
  - own skills and limitations
- Understanding of the use of an Automated External Defibrillator (AED), including when to use and when not to

*continued ...*

### *Essential knowledge (contd):*

- Working knowledge of:
  - basic occupational health and safety requirements in the provision of first aid
  - basic principles and concepts underlying the practice of first aid
  - chain of survival
  - first aiders' skills and limitations
  - infection control principles and procedures, including use of standard precautions
  - priorities of management in first aid when dealing with life threatening conditions
  - procedures for dealing with major and minor injury and illness

### *Essential skills:*

It is critical that the candidate demonstrate the ability to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role



## REQUIRED SKILLS AND KNOWLEDGE

This includes the ability to:

- Administer medication in line with state/territory regulations, legislation and policies
- Apply first aid principles
- Call an ambulance and/or medical assistance according to relevant circumstances and report casualty's condition
- Communicate effectively and assertively in an incident
- Conduct an initial casualty assessment
- Demonstrate correct procedures for performing CPR using a manikin, including standard precautions (i.e. as per unit *HLTCPR201A Perform CPR*)
- Demonstrate:
  - ability to call an ambulance
  - consideration of the welfare of the casualty
  - safe manual handling
  - site management to prevent further injury
- Evaluate own response and identify appropriate improvements where required
- Follow OH&S guidelines
- Infection control, including use of standard precautions
- Make prompt and appropriate decisions relating to managing an incident in the workplace
- Plan an appropriate first aid response in line with established first aid principles, policies and procedures, ARC Guidelines and/or State/Territory regulations, legislation and policies and industry requirements and respond appropriately to contingencies in line with own skills
- Prepare a written incident report or provide information to enable preparation of an incident report
- Provide assistance with self-medication as per subject's own medication regime and in line with State/Territory legislation, regulations and policies and any available medical/pharmaceutical instructions
- Use literacy and numeracy skills as required to read, interpret and apply guidelines and protocols

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package. The evidence guide supplements assessment requirements that apply to all units in this Training Package. Users of this

## EVIDENCE GUIDE

evidence guide should first read the package's assessment guidelines.

### *Critical aspects of assessment:*

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Competence should be demonstrated working individually and, where appropriate, as part of a first aid team
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace or community setting
- Currency of first aid knowledge and skills is to be demonstrated in line with State/Territory regulations, legislation and policies, ARC and industry guidelines

### *Context and resources required for assessment:*

- Skills in performing first aid procedures are to be assessed through demonstration, with questioning to confirm essential knowledge
- For assessment purposes, demonstration of skills in CPR procedures requires using a model of the human body (resuscitation manikin) in line with Australian Resuscitation Council Guidelines

### *Access and equity considerations:*

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

### *Related units:*

This unit incorporates the content of units:

- HLTCPR201B Perform CPR
- HLTFA201B Provide basic emergency life support

## EVIDENCE GUIDE

### Range Statement

#### RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

*Contextualisation to address specific requirements may include:*

- Focus on first aid management of specific types of injury
- First aid provision under specific constraints or circumstances (e.g. in confined spaces, in maritime work environment or in work environment involving identified risks/hazards)

*Established first aid principles include:*

- Preserve life
- Prevent illness, injury and condition(s) becoming worse
- Promote recovery
- Protect the unconscious casualty

*Vital signs include:*

- Consciousness
- Breathing
- Circulation

*A hazard is:*

- A source or situation with the potential for harm in terms of human injury or ill-health, damage to property, the environment, or a combination of these

## RANGE STATEMENT

*Hazards may include:*

- Physical hazards
- Biological hazards
- Chemical hazards
- Hazards associated with manual handling

*Risks may include:*

- Risks from equipment, machinery and substances
- Risks from first aid equipment
- Environmental risks
- Exposure to blood and other body substances
- Risk of further injury to the casualty
- Risks associated with the proximity of other workers and bystanders
- Risks from vehicles

*Casualty's condition is managed for:*

- Abdominal injuries
- Airway obstruction
- Allergic reactions
- Altered and loss of consciousness
- Bleeding
- Burns - thermal, chemical, friction, electrical
- Chest pain/cardiac arrest
- Injuries: cold and crush injuries; eye and ear injuries; head, neck and spinal injuries; minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations
- Near drowning
- Envenomation - snake, spider, insect and marine bites
- Environmental conditions such as hypothermia, hyperthermia, dehydration, heat stroke
- Fractures
- Medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions
- No signs of life
- Poisoning and toxic substances (including chemical contamination)
- Respiratory distress/arrest
- Seizures
- Shock
- Stroke

## RANGE STATEMENT

- Substance misuse - common drugs and alcohol, including illicit drugs.
- First aid management must take into account applicable aspects of:*
- The setting in which first aid is provided, including:
    - workplace policies and procedures
    - industry/site specific regulations, codes etc.
    - OHS requirements
    - state and territory workplace health and safety legislative requirements
    - location and nature of the incident
    - situational risks associated with, for example, electrical and biological hazards, weather, motor vehicle accidents
    - location of emergency services personnel.
  - The use and availability of first aid equipment and resources
  - Infection control
  - Legal and social responsibilities of first aider
- Resources and equipment are used appropriate to the risk to be met and may include:*
- AED
  - First aid kit
  - Auto-injector
  - Puffer/inhaler
  - Resuscitation mask or barrier
  - Spacer device
- Communication media and equipment may include but are not limited to:*
- Telephones, including landline, mobile and satellite phones
  - HF/VHF radio
  - Flags
  - Flares
  - Two way radio
  - Email
  - Electronic equipment
  - Hand signals
- Appropriate clinical expert may*
- Supervisor/manager
  - Ambulance officer/paramedic

**RANGE STATEMENT**

*include:*

- Other medical/health worker

*Documentation may include:*

- Injury report forms
- Workplace documents as per organisation requirements

*Documentation may include recording:*

- Time
- Location
- Description of injury
- First aid management
- Fluid intake/output, including fluid loss via:
  - blood
  - vomit
  - faeces
  - urine
- Administration of medication including:
  - time
  - date
  - person administering
  - dose
- Vital signs

**Unit Sector(s)**

Not Applicable

## HLTFA302C Provide first aid in remote situation

### Modification History

HLT07 Version 4	HLT07 Version 5	Comments
HLTFA302B Provide first aid in remote situation	HLTFA302C Provide first aid in remote situation	ISC upgrade changes to remove references to old OHS legislation and replace with references to new WHS legislation. Updated unit codes to First Aid references.

### Unit Descriptor

#### Descriptor

This unit of competency describes the skills and knowledge required to provide first aid to a casualty in a remote and/or isolated situation

### Application of the Unit

#### Application

This unit is appropriate for those undertaking first aid work in remote or isolated workplace situations

Application of these skills and knowledge should be contextualised as required to address specific industry, enterprise or workplace requirements and to address specific risks and hazards and associated injuries

### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

Not Applicable

## Employability Skills Information

### Employability Skills

This unit contains Employability Skills

## Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. Prepare to respond to emergency in a remote situation

1.1 *Prepare for isolated travel* or work, accounting for expected contingencies

1.2 Assess casualty's condition and determine appropriate response in order to minimise hazards and determine need for medical assistance

1.3 Evaluate options for transporting casualty or waiting for medical assistance in relation to environmental issues, transport availability and casualty's condition

2. Provide first aid in a remote situation

2.1 Determine and explain the nature of casualty's injury/condition and relevant first aid procedures to provide comfort

2.2 Seek consent from casualty prior to applying first aid management

2.3 Provide first aid response to address casualty's condition and in accordance with effective first aid principles

2.4 Respond to the casualty in a culturally aware, sensitive and respectful manner

2.5 Monitor casualty's condition and undertake ongoing first aid procedures as required



**ELEMENT****PERFORMANCE CRITERIA**

- 2.6 Calmly provide information to reassure casualty during the wait for medical assistance, adopting a communication style to match the casualty's level of consciousness
- 2.7 Provide shelter from elements in accordance with environmental conditions
- 2.8 Document condition of casualty over time to assist in on-going management
3. Work in conjunction with medical and emergency services support
- 3.1 Establish communication links to medical services, using relevant communication equipment to ensure prompt control action is undertaken
- 3.2 Request ambulance support or appropriate medical assistance according to relevant circumstances
- 3.3 Administer medication under direct instruction from an *authorised health worker* as required
- 3.4 Assist in the evacuation of the casualty by following directions given by emergency services as required
4. Evaluate the incident
- 4.1 Evaluate management of the incident and where required develop an action plan in consultation with relevant parties
- 4.2 Participate in debriefing/evaluation in order to improve future operations and address individual's needs
- 4.3 Formulate and review contingency planning to identify and select improved or alternative management principles and procedures as required

**Required Skills and Knowledge****REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

## REQUIRED SKILLS AND KNOWLEDGE

### *Essential knowledge:*

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Awareness of stress management techniques and available support
- Infection control principles and procedures, including use of standard precautions
- Principles for evaluating management options relating to transporting casualty and/or waiting for assistance
- Principles of identifying and preparing area for safe evacuation (including aero-medical evacuation)
- Principles of preparing for providing first aid in an area remote from ready assistance, including identifying and preparing supplies to address contingencies specific to different types of situation
- Understanding of WHS principles
- Working knowledge of communication systems, equipment and methods as available in the remote situation

### *Essential skills:*

It is critical that the candidate demonstrate the ability to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Accurately listen to, clarify and apply medical instructions
- Administer medication under direct instruction from an authorised health worker and in accordance with State/Territory regulations, legislation and policies
- Communicate effectively and assertively and show leadership in an incident
- Conduct an initial casualty assessment in a remote situation
- Demonstrate:
  - adequate infection control procedures, including standard precautions
  - identification and preparation of area for safe evacuation (including aero-medical evacuation)
  - safe manual handling
- Evaluate available options for transporting or maintaining condition of casualty
- Improvise treatment and associated resources
- Interpret and use listed documents
- Make prompt and appropriate decisions relating to managing an incident in a remote

## REQUIRED SKILLS AND KNOWLEDGE

situation

- Plan an appropriate first aid response in line with established first aid principles, policies and procedures, ARC Guidelines and/or state/territory regulations, legislation and policies and industry requirements and respond appropriately to contingencies in line with own level of skills and knowledge
- Prepare a written incident report or provide information to enable preparation of an incident report
- Transport casualty safely using available methods
- Undertake contingency planning in relation to providing a first aid response in a remote situation
- Use available communication methods and equipment to access medical assistance
- Use available resources effectively to manage pain
- Use literacy and numeracy skills as required to read, interpret and apply guidelines and protocols

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

*Critical aspects of assessment:*

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Competence should be demonstrated working individually and, where appropriate, as part of a first aid team
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace or community setting
- Currency of first aid knowledge and skills is to be demonstrated in line with State/Territory regulations, legislation and policies, Australian Resuscitation Council and industry guidelines
- Assessment should utilise aspects of actual or simulated remote situation relevant to work or community context

*Method of assessment may*

- Skills in performing first aid procedures are to be

## EVIDENCE GUIDE

*include:*

assessed through demonstration, with questioning to confirm essential knowledge

- Skills may be assessed through simulations, using anatomical models, manikins or in a high fidelity simulation centre

*Access and equity considerations:*

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

*Related unit:*

This unit should be assessed either after or in conjunction with achievement of the following related competency unit:

- HLTFA311A Apply first aid

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

*Contextualisation to address*

- Focus on first aid management of specific types of

## RANGE STATEMENT

*specific requirements may include:*

injury

- First aid provision under specific constraints or circumstances (e.g. in confined spaces, in maritime work environment or in work environment involving identified risks/hazards)

*Preparation for isolated/remote travel may include:*

- Selection of relevant communication equipment
- Accessing relevant first aid supplies and resources to cater for environmental conditions
- Considering access/egress opportunities
- Notifying relevant authorities of travel plans

*In remote/isolated situations consideration to travel or wait would depend upon:*

- Severity of injury
- Time required for medical assistance to arrive
- Whether movement might hinder rescue
- Advice given by authorised health worker
- Whether contact with medical and/or emergency services has been achieved

*Documentation, especially in remote/isolated situations may include recording:*

- Time
- Location
- Description of injury
- First aid management
- Fluid/oral intake/output, including fluid loss via:
  - blood
  - vomit
  - faeces
  - urine
- Administration of medication including time, date, person administering, dose
- Vital signs

*Authorised health worker may include:*

- Paramedic/ambulance officer
- General practitioner
- Nurse practitioner

## Unit Sector(s)

Not Applicable

## **LGACOM502B Devise and conduct community consultations**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

This unit covers devising and conducting community consultations and reporting on results. The vital and unique responsibility councils have to engage and consult with communities in order to respond to the needs of the community in a timely and effective manner is recognised.

### **Application of the Unit**

#### **Application of the Unit**

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

#### **Prerequisite Unit/s**

### **Employability Skills Information**

#### **Employability Skills**

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

#### 1. **Devise consultation strategies**

- 1.1. A range of consultation strategies is identified and assessed for suitability.
- 1.2. Interested and affected parties are identified.
- 1.3. Resources required to conduct consultation are assessed.
- 1.4. Consultation strategies are chosen that enable and encourage relevant groups or individuals to be involved.
- 1.5. Legislative and council requirements are reviewed to ensure strategies meet all criteria.

#### 2. **Conduct consultations**

- 2.1. Information is prepared that is clear, accurate and appropriate to the needs of all parties.
- 2.2. All people involved in conducting the consultations are briefed on the process of consultation and the parties involved.
- 2.3. Information is presented to affected parties at an appropriate time and place.
- 2.4. Access and equity requirements are implemented in the consultations.
- 2.5. Measures to expedite community consultation are taken to ensure consultation occurs within an identified time frame.
- 2.6. Consultation is undertaken in an orderly manner to ensure all viewpoints are canvassed.

#### 3. **Record, analyse and report on results**

- 3.1. Public consultation responses and processes are formatted to enable informed decision making to proceed.
- 3.2. Appropriate suggestions for improvement are



## ELEMENT

## PERFORMANCE CRITERIA

incorporated into design parameters.

3.3. Summaries of responses and adopted amendments are provided to interested parties to ensure public consultation is recognised.

3.4. Other issues raised during consultation are directed to relevant department or person to respond to community concern.

3.5. An accurate report on community consultation that includes recommendations is prepared to enable informed decision making to occur.

3.6. The overall effectiveness of the consultation process is reviewed and evaluated and action is taken where necessary.

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## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit

#### Required Skills

- consultation, presentation, negotiation and report writing
- research
- planning and organising
- information gathering and analysis.

#### Required Knowledge

- relevant council policies and procedures
- relevant legislation, including planning and anti-discrimination
- relevant sections of local government act
- access and equity issues
- strategies for consultation
- codes of conduct and ethics.

Hidden text

## Evidence Guide

### EVIDENCE GUIDE

<b>Overview of assessment requirements</b>	A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.
<b>Critical aspects of evidence to be considered</b>	The demonstrated ability to devise and conduct community consultations where: <ul style="list-style-type: none"> <li>• consultation ensures council's image or reputation is maintained or enhanced</li> <li>• community consultation produces valid and useful information.</li> </ul>
<b>Context of assessment</b>	Assessment of performance requirements in this unit should be undertaken within the context of the local government framework. Competency is demonstrated by performance of all stated criteria, including the Range of Variables applicable to the workplace environment.
<b>Relationship to other units(prerequisite or co-requisite units)</b>	Prerequisite units: nil. Co-requisite units: nil.
<b>Method of assessment</b>	The following assessment methods are suggested: <ul style="list-style-type: none"> <li>• observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies</li> <li>• written and/or oral questioning to assess knowledge and understanding</li> <li>• completion of workplace documentation</li> <li>• third-party reports from experienced practitioners</li> <li>• completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor.</li> </ul>
<b>Evidence required for demonstration of consistent performance</b>	Evidence should be gathered over a period of time in a range of actual or simulated management environments.
<b>Resource implications</b>	Access to a range of real or simulated consultation processes including:

## EVIDENCE GUIDE

- public and community meetings and forums
- surveys and door knocks
- appropriate communications equipment and aids such as overhead projectors and computer-based presentations.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

#### Access and equity may include:

- subject matter
- manner in which consultations are conducted
- physical accessibility
- community profile.

#### Enabling and encouraging relevant groups to be involved may include:

- physical accessibility
- diverse language needs
- culture, including Indigenous, youth and non-English speaking background
- physical environment
- number of people.

#### Information may include:

- written and oral records
- anecdotes
- reports
- instructions
- directions from supervisor or management
- interviews
- formal and informal team meetings.

#### Interested and affected parties may include:

- community groups
- other authorities
- individuals
- emergency authorities (police, fire and ambulance)
- private sector business interests
- special interest groups
- experts.

#### Resources may include:

- human
- financial
- locations.

## RANGE STATEMENT

**Consultation strategies may include:**

- public meetings
- phone-ins
- questionnaires
- informal gatherings
- door knocks
- council meetings.

**Legislation may include:**

- local government
- anti-discrimination
- planning.

**Presentation of information may include:**

- graphics
- models
- computer animations
- video displays
- overhead transparencies
- handouts
- display plans
- interpreter service.

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## Unit Sector(s)

**Unit Sector**

Common Units

Hidden text

## Competency field

**Competency Field**

## co-requisite unit/s

**Co-requisite Unit/s**

# LGALAND504A Undertake effective consultation with Indigenous people on matters of cultural heritage

## Modification History

LGALAND504A Release 2: Layout adjusted.

LGAGLAND504A Release 1: Primary release.

## Unit Descriptor

This unit covers undertaking effective consultation with Aboriginal or Torres Strait Islander people on matters relating to their cultural heritage.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where **bold italicised** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 <b>Conduct background research</b>	<p>1.1 Previous Indigenous cultural heritage and resource surveys are identified and reviewed.</p> <p>1.2 Relevant commonwealth and state or territory legislation and peak local government associations and council policies are researched and documented.</p> <p>1.3 Extent to which cultural heritage of other non-Indigenous cultures should be acknowledged is identified and taken into consideration.</p>
2 <b>Identify the correct Indigenous people that are authorised to speak for a place</b>	<p>2.1 <i>Indigenous people with rights and interests in a place</i> are identified through the traditional owners, especially those authorised to speak for a place.</p> <p>2.2 Both men and women with rights and interests in an area or place are identified because men and women may be responsible for different heritage places and values and may need to be consulted separately.</p> <p>2.3 Other Indigenous people are identified who may not necessarily be traditional owners but who have interests in a place.</p> <p>2.4 Indigenous people from surrounding areas who may be affected by a project or activity are identified and consulted.</p> <p>2.5 <i>Protocols</i> that Indigenous people have established for consultation are identified and adhered to throughout the process.</p> <p>2.6 Consultation on each new project is undertaken, unless traditional owners and other Indigenous people agree that this is not necessary.</p> <p>2.7 Non-Indigenous people with rights or interests in the place are identified and consulted.</p>
3 <b>Consult with relevant Indigenous people to discuss the project or activity</b>	<p>3.1 <i>Potential implications of the project or activity</i> are outlined factually and clearly.</p> <p>3.2 All <i>relevant documentation and information</i> are provided to the traditional owners and all other Indigenous people with rights and interests in a place.</p> <p>3.3 Sufficient time is allowed for all Indigenous people to decide whether they wish to become involved in the activity or project and to provide informed consent.</p> <p>3.4 All Indigenous groups with an interest in a place are provided with the same information and given sufficient time to provide informed consent.</p> <p>3.5 Where groups are in dispute, a process for developing</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	separate but consistent and similar agreements is established.
<b>4 Establish a process for addressing Indigenous cultural heritage matters</b>	<p>4.1 Manner, timing and level of consultation and involvement with the project or activity are agreed.</p> <p>4.2 The copyright holders of any work undertaken with Indigenous people and the management regime for Indigenous heritage places are identified.</p> <p>4.3 Need for separate reports for male and female traditional owners and a further report that is publicly available is established.</p> <p>4.4 Dissemination of reports is carried out effectively.</p> <p>4.5 The process for obtaining informed consent for displaying any gathered information is identified and agreed.</p> <p>4.6 Protocols and agreements are formalised and documented.</p> <p>4.7 Indigenous people are involved in the development of any terms of reference for, and selection of, consultants.</p> <p>4.8 Resources required to maintain community involvement are identified and secured.</p> <p>4.9 Relevant documentation for council is prepared, including presentation of alternative options.</p>
<b>5 Consult with relevant Indigenous people in identifying their cultural heritage places and values</b>	<p>5.1 Commonwealth and state or territory laws relating to Aboriginal and Torres Strait heritage are complied with by obtaining necessary permits for surveys and other activities required to identify Indigenous heritage values.</p> <p>5.2 Sensitive information collected in the course of identifying Indigenous heritage places and values is protected from further unnecessary disclosure.</p> <p>5.3 Details relating to custodians of information are recorded and protected from further unnecessary disclosure.</p>
<b>6 Implement project or activity</b>	<p>6.1 Meetings are held with identified stakeholders that enable Indigenous people to explain issues relating to Indigenous heritage to non-Indigenous stakeholders.</p> <p>6.2 Processes for mediation and dispute resolution are identified and established.</p> <p>6.3 A precautionary approach is identified in cases where Indigenous people refuse to be involved in a project.</p> <p>6.4 A process to prevent damage or desecration to any Indigenous heritage place is identified and established.</p> <p>6.5 Proposal or activity is revised or rejected in light of Indigenous people not agreeing because of unacceptable impact on their cultural heritage.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

### Required Skills

- oral and written communication
- cross-cultural competence
- gender and disability
- evaluation
- decision making
- research
- networking
- negotiation and dispute resolution

### Required Knowledge

- cultural context
- community controls
- location and resources
- organisational processes
- equity and diversity principles
- legal requirements

## Evidence Guide

**Overview of assessment requirements** A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

**Critical aspects of evidence to be considered** The demonstrated ability to:

- conduct research into cultural heritage and protect any sensitive information collected in the course of the research process
- identify Indigenous people with rights and interests in a place
- meet with Indigenous people to discuss a project or activity



and reach agreement about involvement and consent to their involvement in the project or activity

- establish a process for addressing Indigenous cultural heritage matters in relation to a project or activity.

### **Context of assessment**

Competency is demonstrated by performance of all stated criteria, with particular attention to the critical aspects of evidence and the knowledge and skills elaborated in the Evidence Guide, and within the scope of the Range Statement.

Assessment must take account of the endorsed Assessment Guidelines in the Local Government Training Package.

Assessment of performance requirements in this unit should be undertaken in an actual workplace or simulated environment.

Assessment should reinforce the integration of the key competencies for the particular AQF level. Refer to the key competency levels at the end of this unit.

### **Relationship to other units (prerequisite or co-requisite units)**

To enable holistic assessment this unit may be assessed with other units that form part of the job role.

### **Method of assessment**

The following assessment methods are suggested:

- observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies
- written and/or oral questioning to assess knowledge and understanding
- completion of workplace documentation
- third-party reports from experienced practitioners
- completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor.

### **Evidence required for demonstration of consistent performance**

Evidence should be collected over a set period of time that is sufficient to include dealings with an appropriate range and variety of situations.

### **Resource implications**

The learner and trainer should have access to appropriate documentation and resources normally used in the workplace.

## **Range Statement**

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in

the Performance Criteria is detailed below.

- Indigenous people with rights and interests in a place*** may include:
- traditional owners
  - men
  - women
  - Indigenous people authorised to speak for a place
- Protocols*** may include:
- use of interpreters
  - talking to the appropriate people
  - laws and customs relating to places
  - respecting family, kinship and clan relationships
- Non-Indigenous people with rights or interests in a place*** may include:
- landholders
  - lessees
  - tourists and recreational users
  - state or territory government agencies
  - commonwealth departments and agencies
- Potential implications of the project or activity*** may include:
- economic or financial
  - cultural
  - social
  - environmental
  - educational
  - others
- Relevant documentation and information*** may include:
- maps
  - reports

## **Unit Sector(s)**

Land Management

# **LGAPLEM508A Manipulate and analyse data within geographic information systems**

## **Modification History**

Not applicable.

## **Unit Descriptor**

**Unit Descriptor** This unit relates to extracting, comparing and manipulating data in response to customer requests.

## **Application of the Unit**

**Application of the Unit** This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

**Prerequisite Unit/s**

## **Employability Skills Information**

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. **Develop procedures for manipulation and analysis of data**

- 1.1.Desired data format is specified and based on job requirements.
- 1.2.Parameters are specified for manipulation of the data sets.
- 1.3.New procedures are documented clearly explaining the procedure and rationale for development.

2. **Establish models required to provide outcome**

- 2.1.Applicability of existing tools, models, theories, applications and solutions is evaluated.
- 2.2.Feasible parameters, equations and assumptions are specified.
- 2.3.Models required to provide specified outcome are established.

3. **Analyse data**

- 3.1.Steps to be undertaken to analyse and manipulate data are specified.
- 3.2.Source data limitations and other restricting factors are taken into account when selecting techniques for analysis.
- 3.3.Data is isolated and retrieved from its source.
- 3.4.Data is interrogated to ensure reliability.
- 3.5.Data is prepared for presentation media.

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## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit

## REQUIRED SKILLS AND KNOWLEDGE

### Required Skills

- analysing options
- using tools within software to manipulate data
- reading external data sets into data model.

### Required Knowledge

- database structures
- scripting and commands
- line instructions and programming
- operating systems:
- range of tools, models, theories, applications and solutions
- data analysis and manipulation techniques.
- UNIX
- DOS
- Windows
- NT

Hidden text

## Evidence Guide

### EVIDENCE GUIDE

#### Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

#### Critical aspects of evidence to be considered

Suitable procedures are developed.  
New procedures are documented.  
Appropriate models are used and/or created.

#### Context of assessment

On the job or in a simulated work environment.

#### Relationship to other units (prerequisite or

Prerequisite units: nil.  
Co-requisite units: nil.

**EVIDENCE GUIDE**

co-requisite units)

**Method of assessment**

The following assessment methods are suggested:

- observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies
- written and/or oral questioning to assess knowledge and understanding
- completion of workplace documentation
- third-party reports from experienced practitioners
- completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor.

**Evidence required for demonstration of consistent performance**

Evidence will need to be gathered over time across a range of variables.

**Resource implications**

Access to geographic information systems databases and operating systems.

**Range Statement****RANGE STATEMENT**

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

**Customer may include:**

- internal
- external.

**Factors may include:**

- time
- command line operation
- menu drivers options.

**Source data limitations may include:**

- currency
- structure
- accuracy
- source of data.

Hidden text

## **Unit Sector(s)**

**Unit Sector**

Planning Units

Hidden text

## **Competency field**

**Competency Field**

## **co-requisite unit/s**

**Co-requisite Unit/s**

# LGAREGS305A Undertake animal or reptile control duties

## Modification History

Not applicable.

## Unit Descriptor

**Unit Descriptor** This unit covers the capture, assessment of transport and care needs, impounding, monitoring, release and reporting of animals and/or reptiles.

## Application of the Unit

**Application of the Unit** This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of varying size and locations. Knowledge of the legislation and regulations within which councils must operate is essential. The role of councils, as the third tier of government, in managing the application of a broad range of by-laws and regulations must be appropriately reflected.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

**Prerequisite Unit/s**

## Employability Skills Information

**Employability Skills** This unit contains employability skills.



## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. **Capture animals or reptiles**
2. **Assess transport or care needs**
3. **Impound animals or reptiles**
4. **Monitor or care for animals or reptiles**
5. **Release animals or reptiles to owners/carers or**

- 1.1. Response to request for assistance is timely and efficient use of resources is observed.
- 1.2. Traffic control precautions are used and access to incident site is controlled to ensure safety of public.
- 1.3. Safe and humane methods of handling animals or reptiles are observed.
- 1.4. Where appropriate, animals or reptiles are disposed of in accordance with legislative and council requirements and relevant statutes.
- 2.1. Transport or intermediate care is provided according to protocols or legislation.
- 2.2. Containment and loading are secure and safe.
- 2.3. Temporary holding facilities are arranged or negotiated with landowners where necessary.
- 3.1. Impounding decision is consistent with legislative and council requirements.
- 3.2. Ownership of animals is determined using council records or stock brands.
- 3.3. Advisory/penalty notices are issued according to council regulations.
- 4.1. Feeding and handling of animals during care is undertaken in accordance with pound procedures and legislative and council requirements.
- 4.2. Safe work practices, procedures and environmental conditions are observed during handling, monitoring and care duties.
- 5.1. Decision to release or restore animal to environment is in accordance with relevant legislation and procedures.
- 5.2. Auction of unclaimed stock is performed according to

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
<p><b>return to environment</b></p> <p>6. <b>Report on animals or reptiles that are captured, impounded or disposed of</b></p>	<p>council procedures.</p> <p>5.3.Recovery of costs and revenue is assessed and enforced according to relevant legislation and procedures.</p> <p>6.1.Reports containing accurate information drawn from council registers are forwarded to relevant officers or authorities.</p>

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## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit

#### Required Skills

- computers
- video, voice recorders and radio communication
- preparing and issuing instructions and/or explanations to the public
- reporting to council.

#### Required Knowledge

- animal and reptile behaviour
- predators
- dominance
- fear
- aggression
- applicable impounding techniques
- animal and reptile handling and disabling techniques
- animal and reptile dietary and impounding needs
- routine medicinal, chemical and dipping application
- animal health treatment
- humane disposal techniques
- safe and effective use of firearms
- stock brands
- identification tags
- microchip reading
- local area geography
- terrain

## REQUIRED SKILLS AND KNOWLEDGE

- urban and rural navigation
- relevant statutes
- notice-serving process
- court evidence
- traffic control licensing requirements and direction.

Hidden text

## Evidence Guide

### EVIDENCE GUIDE

#### Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

#### Critical aspects of evidence to be considered

Impounding techniques used are appropriate to animal or reptile species and the condition of the animal or reptile.

Assessments of animal or reptile health and condition, and the appropriate disposal of animals or reptiles, are in accordance with council policies and procedures.

Traffic control is in accordance with relevant licensing requirements.

Use of firearms is in accordance with relevant licensing requirements.

Notices are served in accordance with council regulations.

Safe work practices and concern for public safety are displayed by care and control staff.

#### Context of assessment

On the job or in a simulated work environment.

Written or oral testing.

#### Relationship to other units (prerequisite or co-requisite units)

Prerequisite units: nil.

Co-requisite units: nil.

## EVIDENCE GUIDE

### Method of assessment

The following assessment methods are suggested:

- observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies
- written and/or oral questioning to assess knowledge and understanding
- completion of workplace documentation
- third-party reports from experienced practitioners
- completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor.

### Evidence required for demonstration of consistent performance

Competency in duties may be displayed with domestic animals, livestock, wildlife or reptiles.

### Resource implications

Access to a workplace or simulated environment that encompasses impounding processes, techniques and equipment.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

### Animals or reptiles may include:

- domestic pets
- livestock
- feral animals
- native animals
- reptiles.

### Capture or control may include:

- traps
- poles and ropes
- tongs
- tranquilliser guns
- firearms
- vehicles
- loading and yarding
- health, condition and behaviour of animal or reptile from

## RANGE STATEMENT

**Transport may include:**

**Ownership issues may include:**

- observation or reports
- supervision of, or communication to, other staff or agency personnel
- disposal of deceased animals or reptiles
- dedicated or contracted transport
- appropriate for care and human safety.
- verification of claims to ownership by such things as tags or microchips
- recovery of costs relating to transport, sustenance and penalties.

Hidden text

## Unit Sector(s)

**Unit Sector**

Regulatory Services Units

Hidden text

## Competency field

**Competency Field**

## co-requisite unit/s

**Co-requisite Unit/s**

## MEM05004C Perform routine oxy acetylene welding

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers preparing materials and performing routine oxy acetylene welding.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies in a maintenance or manufacturing environment where the welding is not required to meet an Australian standard or equivalent. Fillet and butt welds would typically be performed on low carbon/mild steels.</p> <p>Where welding is required to meet Australian Standard 1554 General Purpose or equivalent codes, OHS regulations and/or licensing requirements, Unit MEM05022C (Perform advanced welding using oxy acetylene process) should be selected.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 2</b></p>
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. Location of welds is identified in accordance with standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Settings and consumables are selected.
4. Perform routine welding using <i>oxy acetylene</i>	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned in accordance with standard operating procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- preparing materials
- setting up welding equipment
- welding with oxy acetylene fuel gas
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- following oral instructions
- using measurement skills for joint preparation and routine oxy acetylene welding

#### Required knowledge

Look for evidence that confirms knowledge of:

- preparatory requirements
- materials and consumables properties and characteristics
- equipment and equipment settings
- fuel gas properties and applications
- post welding treatments
- weld characteristics
- any applicable industry standards, NOHSC guides, State/Territory regulatory codes of practice/standards
- safe work practices and procedures
- safe welding practices
- use and application of personal protective equipment for routine oxy acetylene welding

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment



<b>EVIDENCE GUIDE</b>	
Guidelines for the Training Package.	
<b>Overview of assessment</b>	A person who demonstrates competency in this unit must be able to prepare materials and carry out routine oxy acetylene welding.
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
<b>Context of and specific resources for assessment</b>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with performing routine oxy acetylene welding or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<b>Method of assessment</b>	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
<b>Guidance information for assessment</b>	

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>Materials</b>	Mild and low carbon steel and cast iron
<b>Prepared</b>	Preheating, setting up jigs, fixtures, clamps, joint preparation
<b>Equipment</b>	Hoses, blowpipes, regulators
<b>Consumables</b>	Filler rods, fluxes
<b>Oxy acetylene</b>	The term 'oxy-acetylene' is used here to describe a range of fuel gases, including acetylene, LPG, hydrogen etc.
<b>Cleaned</b>	Fluxes

## Unit Sector(s)

<b>Unit sector</b>	
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	Fabrication
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## MEM05007C Perform manual heating and thermal cutting

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers performing manual heating, thermal cutting and gouging including the assembly and disassembly and operation of the equipment on a range of materials (ferrous, non-ferrous and non-metallic) using a variety of methods.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to manual, straight line cutting standards. Manual or automatic processes are used to cut and heat to specifications. Cutting may include flame gouging by hand. All work is carried out to legislative and regulatory requirements. Predetermined standards of quality and safety are observed and work is carried out following standard operating procedures.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 2</b></p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Assemble/disassemble plant and equipment	1.1. Accessories and equipment are correctly selected and assembled for manual heating and thermal cutting.
2. Operate heating and thermal cutting equipment	2.1. Cutting process and/or procedure appropriate for material is selected. 2.2. All safety procedures are observed. 2.3. Equipment start-up procedures are followed correctly to standard operating procedures. 2.4. Equipment adjustments are made correctly using standard operating procedures. 2.5. Appropriate cutting allowances are made. 2.6. Material is used in the most economical way. 2.7. Defects are identified and corrective action is taken to standard operating procedures. 2.8. Material is heated and cut to specification.

ELEMENT	PERFORMANCE CRITERIA
	2.9.Shape/size/length is to accepted workplace standards.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- performing pre-start checks
- safely starting equipment
- following standard operating procedures
- adjusting equipment to operating specifications
- making cutting allowances
- economising material and minimising wastage
- identifying cutting defects and taking corrective action
- heating and cutting materials to specifications
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures. May include drawings
- following oral instructions
- performing measurements needed to meet the requirements of this unit
- entering routine and familiar information onto proformas and standard workplace forms

#### Required knowledge

Look for evidence that confirms knowledge of:

- cutting processes appropriate to various materials
- heating and cutting specifications
- procedures for heating and cutting
- the tools, equipment and techniques for heating and cutting
- assembling procedures for equipment and accessories
- hazards and control measures associated with manual heating and thermal cutting
- use and application of personal protective clothing and equipment
- equipment pre-checks and operation
- procedures for adjusting heating and cutting equipment

## REQUIRED SKILLS AND KNOWLEDGE

- cutting allowances and reasons for applying them
- procedures for minimising waste material
- reasons for minimising waste material
- cutting defects and their causes
- procedures for correcting cutting defects
- tools, equipment and techniques required to correct cutting defects
- use and application of personal protective equipment
- safe work practices and procedures

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to perform manual heating and thermal cutting.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

#### Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with manual heating/thermal cutting or other units requiring the exercise of the skills and knowledge covered by this unit.

<b>EVIDENCE GUIDE</b>	
<b>Method of assessment</b>	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questions should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
<b>Guidance information for assessment</b>	

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Cutting</b>	Use of hand held and self-propelled straight line cutters
<b>Process</b>	Fuel gas, oxy fuel gas and air fuel gas
<b>Material</b>	Various thicknesses and types including ferrous, non-ferrous and non-metallic materials



**Unit Sector(s)**

<b>Unit sector</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	Fabrication
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## MEM05012C Perform routine manual metal arc welding

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers preparing the materials and carrying out routine manual metal arc welding (MMAW).
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies in a maintenance or manufacturing environment where the welding is not required to meet an Australian standard or equivalent. Fillet and butt welds would typically be performed on low carbon/mild steels.</p> <p>Where welding is required to AS 1554 General Purpose or equivalent codes, occupational health and safety regulations and/or licensing requirements, Unit MEM05015D (Weld using manual metal arc welding process) should be selected.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 2</b></p>
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>	

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. Location of welds is identified in accordance with standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Correct electrodes are selected to suit application and settings.
4. Perform routine welding using MMAW	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned in accordance with standard operating procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- preparing materials and electrodes
- setting up welding equipment
- welding with MMAW
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- performing measurements for joint preparation and routine MMAW

#### Required knowledge

Look for evidence that confirms knowledge of:

- material and equipment preparation
- properties and characteristics of materials and consumables
- weld characteristics
- equipment set-up and settings
- MMAW processes and properties
- post-welding treatments
- safe welding practices
- use and application of personal protective equipment

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to prepare materials and carry out routine manual metal arc welding (MMAW).

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
<b>Context of and specific resources for assessment</b>	<p>This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, i.e. the candidate is not in productive work, then appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with performing routine manual metal arc welding or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<b>Method of assessment</b>	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
<b>Guidance information for assessment</b>	

## Range Statement

**RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>Materials</b>	Low and mild carbon steel or similar
<b>Prepared</b>	Cleaning, setting up jigs, fixtures, clamps, joint preparation
<b>Welding equipment</b>	Welding leads, welding machines, electrode holder etc.
<b>Cleaned</b>	Slag and spatter, cleaning, using files and grinders

**Unit Sector(s)**

<b>Unit sector</b>	
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	Fabrication
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## MEM05015D Weld using manual metal arc welding process

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit of competency covers the preparation, positioning, fixing, and manual welding techniques associated with general trade level welding using manual metal arc welding (MMAW) equipment including the selection and set up of the equipment appropriate to both the material and the weld to be performed, carrying out the MMAW to prescribed standards, and examining for and correcting defects, in a range of welded fabrications.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit of competency applies to welds associated with heavy or light metal fabrications. Welds are fillet and butt welds in all positions on a range of ferrous and non-ferrous materials that may include carbon steel or stainless steel. Weld quality would conform to Australian Standard 1554 General Purpose, American Bureau of Shipping (ABS) or equivalent.</p> <p>This unit has been primarily developed for Engineering Tradesperson - Fabrication apprenticeship training and the recognition of trade level skills in MMAW. It may also apply to other trade occupations requiring higher level MMAW welding skills.</p> <p>Where manual thermal processes associated with preparation, pre-heat and/or post-heat are required, MEM05007C Perform manual heating and thermal cutting and/or MEM05008C Perform advanced manual thermal cutting, gouging and shaping should be considered for selection.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 4</b></p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

Prerequisite units		
<b>Path 1</b>	MEM05012C	Perform routine manual metal arc welding
	MEM05051A	Select welding processes
	MEM05052A	Apply safe welding practices
	MEM12023A	Perform engineering measurements
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare materials for manual metal arc welding (MMAW)	1.1. Weld requirements are identified from specifications and/or drawings 1.2. Materials are correctly prepared 1.3. Materials are assembled/aligned to specification, where required
2. Select welding equipment and consumables	2.1. Welding equipment and electrodes appropriate to the material and the weld are identified and selected
3. Assemble and set up welding equipment	3.1. Welding equipment is assembled and set up
4. Minimise and rectify distortion	4.1. Appropriate distortion prevention measures are selected and applied 4.2. Distortion is rectified
5. Weld to job specification using MMAW	5.1. Weld deposit is to specification 5.2. Joints are cleaned to specifications
6. Ensure weld conformance	6.1. Defects are rectified with minimum loss of sound metal using correct techniques and tools 6.2. Weld joints are visually inspected for conformance to specifications
7. Where required, maintain weld records	7.1. Where required, weld records are completed correctly

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- identifying and interpreting welding specifications including appropriate standards e.g. Australian Standard 1554 General Purpose, American Bureau of Shipping (ABS) or equivalent
- selecting and using appropriate tools and equipment

## REQUIRED SKILLS AND KNOWLEDGE

- using a variety of welding machines and electrodes
- identifying and rectifying weld defects
- applying techniques for distortion prevention and rectification
- cleaning welds
- reading and interpreting information on sketches, written job instructions, specifications, standard operating procedures and engineering drawings
- recording routine information including routine weld records related to MMAW onto proformas and standard workplace forms
- following oral instructions
- measurement skills relating to joint preparation and MMAW

### Required knowledge

Required knowledge includes:

- material preparation
- joint preparations
- electrode classification
- causes of distortion for materials within the scope of this unit
- causes of defects and methods of rectification
- the relationships between amperage, electrode and material
- safe welding practices
- use and application of personal protective equipment for MMAW

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to prepare materials, select and set up the welding equipment, carry out MMAW and examine for and correct defects, in a range of welding activities associated with MMAW. Competency in this unit cannot be awarded until all prerequisites have been satisfied.

#### Critical aspects for assessment and evidence required to demonstrate

Assessors must be satisfied that the candidate can competently and consistently apply the skills covered in

<b>EVIDENCE GUIDE</b>	
<b>competency in this unit</b>	<p>this unit of competency in new and different workplace situations and contexts. Critical aspects of assessment and evidence include:</p> <ul style="list-style-type: none"> <li>• following all safety procedures to protect self, other workers and members of the public</li> <li>• identifying and interpreting specifications for MMA welding including Australian Standard 1554 General Purpose</li> <li>• interpreting welding specifications including standard welding symbols used to show weld procedure</li> <li>• selecting appropriate weld preparation methods for material and position of welds.</li> <li>• preparing materials, setting up of jigs, fixtures, clamps, etc. and joint preparation including bevelling</li> <li>• consistently welding different ferrous and non-ferrous materials to AS 1554 General Purpose or equivalent</li> <li>• identifying defects as described in the range statement across a range of welded materials</li> <li>• rectifying defects.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Welding to AS 1554 General Purpose or equivalent requires both theoretical knowledge and high level practical skills. The assessment process must be designed to identify consistent performance to the standard and the specifications across a range of materials and positions. The assessment must also identify a level of workplace performance in terms of defect rates and weld failure rates. It is recommended that assessment involve demonstrations of competency under both workshop and site conditions. This means that the ideal assessment environment is either on the job or a combination of both on and off the job.</p> <p>The competencies covered by this unit may be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p>
<b>Method of assessment</b>	<p>Typically an Engineering Tradesperson - Fabrication and other tradespersons engaged in welding are required to exercise MMAW skills and techniques across a range of jobs and specifications.</p> <p>A single assessment event is not appropriate. On the job assessment should be included as part of the assessment</p>

<b>EVIDENCE GUIDE</b>	
	<p>process wherever possible. Where assessment occurs off the job, judgement must consider evidence of the candidate's performance in a productive work environment that includes a sufficient range of appropriate tasks and materials to cover the scope of application for this unit.</p> <p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.</p> <p>The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
<b>Guidance information for assessment</b>	<p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with welding using MMAW process or other units requiring the exercise of the skills and knowledge covered by this unit.</p> <p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>

## Range Statement

<b>RANGE STATEMENT</b>
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>

<b>RANGE STATEMENT</b>	
<b>Welds</b>	Welds include fillet and butt welds carried out in all positions
<b>Materials</b>	Materials may include ferrous materials including carbon or stainless steel, as well as non-ferrous metals and alloys suitable for MMA welding
<b>Prepared</b>	Preparation of materials may include: <ul style="list-style-type: none"> <li>• pre-heating</li> <li>• setting up of jigs, fixtures and clamps</li> <li>• joint preparation (e.g. bevelling)</li> </ul>
<b>Equipment</b>	Equipment may include AC or DC welding machines
<b>Distortion prevention measures</b>	Distortion prevention measures may include: <ul style="list-style-type: none"> <li>• pre heating</li> <li>• setting up of jigs, fixtures and clamps</li> </ul>
<b>Rectified</b>	Rectified refers to oxy acetylene, air arc equipment and grinding devices
<b>Defects</b>	Defects may include: <ul style="list-style-type: none"> <li>• porosity</li> <li>• slag inclusions</li> <li>• discontinuities</li> <li>• lack of penetration</li> <li>• undercut</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	
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### Co-requisite units

<b>Co-requisite units</b>	
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<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	Fabrication
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## MEM05017D Weld using gas metal arc welding process

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the preparation, positioning, fixing, and manual welding techniques associated with general trade level welding using gas metal arc welding (GMAW) equipment including the selection and set up of the equipment appropriate to both the material and the weld to be performed, carrying out the GMAW to prescribed standards, and examining for and correcting defects, in a range of welded fabrications.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency applies to welds associated with heavy or light metal fabrications. Welds are fillet and butt welds in all positions on a range of ferrous and non-ferrous materials that may include carbon steel or stainless steel. Weld quality would conform to Australian Standard 1554 General Purpose, American Bureau of Shipping (ABS) or equivalent.</p> <p>This unit has been primarily developed for Engineering Tradesperson - Fabrication apprenticeship training and the recognition of trade level skills in GMAW. It may also apply to other trade occupations requiring higher level GMAW welding skills.</p> <p>Where manual thermal processes associated with preparation, pre-heat and/or post-heat are required, MEM05007C Perform manual heating and thermal cutting and/or MEM05008C Perform advanced manual thermal cutting, gouging and shaping should be considered for selection.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 4</b></p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

Prerequisite units		
<b>Path 1</b>	MEM05050B	Perform routine gas metal arc welding
	MEM05051A	Select welding processes
	MEM05052A	Apply safe welding practices
	MEM12023A	Perform engineering measurements
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare materials for gas metal arc welding (GMAW)	1.1. Weld requirements are identified from specifications and/or drawings 1.2. Material is correctly prepared 1.3. Materials are assembled/aligned to specification where required
2. Select welding components and consumables	2.1. Welding machine settings, accessories and consumables are identified and selected
3. Assemble and set up welding equipment	3.1. Welding equipment is assembled and set up
4. Minimise and rectify distortion	4.1. Appropriate distortion prevention measures are selected and applied 4.2. Distortion is rectified
5. Weld to job specification using GMAW	5.1. Weld deposit is to specifications 5.2. Joints are cleaned to specifications
6. Ensure weld conformance	6.1. Weld joints are visually inspected for conformance to specifications 6.2. Defects are removed with minimum loss of sound metal using correct and appropriate techniques and tools
7. Maintain weld records as required	7.1. Weld records are completed correctly

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- identifying and interpreting welding specifications including appropriate standards e.g. Australian Standard 1554 General Purpose, American Bureau of Shipping (ABS) or equivalent
- selecting and using appropriate tools and equipment

## REQUIRED SKILLS AND KNOWLEDGE

- using a variety of welding machines and electrodes
- identifying and rectifying weld defects
- applying techniques for distortion prevention and rectification
- cleaning welds
- reading and interpreting information on sketches, written job instructions, specifications, standard operating procedures and engineering drawings
- recording routine information including routine weld records related to GMAW onto proformas and standard workplace forms
- following oral instructions
- measurement skills relating to joint preparation and GMAW

### Required knowledge

Required knowledge includes:

- types of gases and their uses
- the relationships between amperage/wire feed, voltage, gas flow, electrode and material
- the application of weld metal transfer (short arc, spray etc.)
- correct welding machine, leads, hand pieces and electrodes
- material preparation
- joint preparations
- electrode classification
- causes of distortion for materials within the scope of this unit
- safe welding practices
- use and application of personal protective equipment for GMAW

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to prepare materials, select and set up the welding equipment, carry out GMAW and examine for and correct defects, in a range of welding activities associated with GMAW. Competency in this unit cannot be awarded until all prerequisites have been satisfied.

<b>EVIDENCE GUIDE</b>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>Assessors must be satisfied that the candidate can competently and consistently apply the skills covered in this unit of competency in new and different workplace situations and contexts. Critical aspects of assessment and evidence include:</p> <ul style="list-style-type: none"> <li>• following all safety procedures to protect self, other workers and members of the public</li> <li>• identifying and interpreting specifications for GMAW including Australian Standard 1554 General Purpose</li> <li>• interpreting welding specifications including standard welding symbols used to show weld procedure</li> <li>• selecting appropriate weld preparation methods for material and position of welds.</li> <li>• preparing materials, setting up of jigs, fixtures, clamps, etc. and joint preparation including bevelling</li> <li>• consistently welding different ferrous and non-ferrous materials to AS 1554 General Purpose or equivalent</li> <li>• identifying defects as described in the range statement across a range of welded materials</li> <li>• rectifying defects.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Welding to AS 1554 General Purpose or equivalent requires both theoretical knowledge and high level practical skills. The assessment process must be designed to identify consistent performance to the standard and the specifications across a range of materials and positions. The assessment must also identify a level of workplace performance in terms of defect rates and weld failure rates. It is recommended that assessment involve demonstrations of competency under both workshop and site conditions. This means that the ideal assessment environment is either on the job or a combination of both on and off the job.</p> <p>The competencies covered by this unit may be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p>
<p><b>Method of assessment</b></p>	<p>Typically an Engineering Tradesperson - Fabrication and other tradespersons engaged in welding are required to exercise GMAW skills and techniques across a range of jobs and specifications.</p>

<b>EVIDENCE GUIDE</b>	
	<p>A single assessment event is not appropriate. On the job assessment should be included as part of the assessment process wherever possible. Where assessment occurs off the job, judgement must consider evidence of the candidate's performance in a productive work environment that includes a sufficient range of appropriate tasks and materials to cover the scope of application for this unit.</p> <p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.</p> <p>The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
<b>Guidance information for assessment</b>	<p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with welding using GMAW process or other units requiring the exercise of the skills and knowledge covered by this unit.</p> <p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>

## Range Statement

<b>RANGE STATEMENT</b>
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work</p>

<b>RANGE STATEMENT</b>	
situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Weld</b>	Welds include fillet and butt welds carried out in all positions
<b>Materials</b>	Materials may include ferrous materials including carbon or stainless steel, as well as non-ferrous metals and alloys suitable for GMAW
<b>Prepared</b>	Preparation of materials may include: <ul style="list-style-type: none"> <li>• pre-heating</li> <li>• setting up of jigs, fixtures and clamps</li> <li>• joint preparation (e.g. bevelling)</li> </ul>
<b>Equipment</b>	Equipment may include AC or DC welding machines
<b>Distortion prevention measures</b>	Distortion prevention measures may include: <ul style="list-style-type: none"> <li>• pre-heating</li> <li>• setting up of jigs, fixtures and clamps</li> </ul>
<b>Rectified</b>	Rectified refers to oxy acetylene, air arc equipment and grinding devices
<b>Defects</b>	Defects may include: <ul style="list-style-type: none"> <li>• porosity</li> <li>• slag inclusions</li> <li>• discontinuities</li> <li>• lack of penetration</li> <li>• undercut</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	Fabrication
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## MEM05019D Weld using gas tungsten arc welding process

### Modification History

Not Applicable

### Unit Descriptor

<p><b>Unit descriptor</b></p>	<p>This unit of competency covers the preparation, positioning, fixing, and welding techniques associated with general trade level welding using gas tungsten arc welding (GTAW) equipment including the selection and set up of the equipment appropriate to both the material and the weld to be performed, carrying out the GTAW to prescribed standards, and examining for and correcting defects, in a range of welded fabrications.</p>
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### Application of the Unit

<p><b>Application of the unit</b></p>	<p>This unit of competency applies to welds associated with heavy or light metal fabrications. Welds are fillet and butt welds in all positions on a range of ferrous and non-ferrous materials that may include carbon steel or stainless steel and aluminium. Weld quality would conform to Australian Standard 1554 General Purpose, American Bureau of Shipping (ABS), or equivalent.</p> <p>This unit has been primarily developed to support Engineering Tradesperson - Fabrication apprenticeship training and the recognition of trade level skills in GTAW. It may also apply to other trade occupations requiring higher level GTAW welding skills.</p> <p>Where manual thermal processes associated with preparation, pre-heat and/or post-heat are required, MEM05007C Perform manual heating and thermal cutting and/or MEM05008C Perform advanced manual thermal cutting, gouging and shaping should be considered for selection.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 4</b></p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

Prerequisite units		
<b>Path 1</b>	MEM05049B	Perform routine gas tungsten arc welding
	MEM05051A	Select welding processes
	MEM05052A	Apply safe welding practices
	MEM12023A	Perform engineering measurements
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare materials for gas tungsten arc welding (GTAW)	1.1. Weld requirements are identified from specifications and/or drawings 1.2. Material is correctly prepared 1.3. Materials are assembled/aligned to specification, where required
2. Select welding equipment and consumables	2.1. Welding equipment and electrodes, accessories and consumables appropriate to the material are identified and selected
3. Assemble and set up welding equipment	3.1. Welding equipment is assembled and set up
4. Minimise and rectify distortion	4.1. Appropriate distortion prevention measures for weld and material type are selected and applied 4.2. Distortion is rectified
5. Weld to job specification using GTAW	5.1. Weld deposit is to specifications 5.2. Joints are cleaned to specifications
6. Ensure weld conformance	6.1. Defects are removed with minimum loss of sound metal using techniques and tools appropriate to the defect, material and process 6.2. Weld joints are visually inspected for conformance to specifications
7. Maintain weld records as required	7.1. Weld records are completed correctly

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- identifying and interpreting welding specifications including appropriate standards e.g. Australian Standard 1554 General Purpose, American Bureau of Shipping (ABS) or equivalent
- selecting and using appropriate tools and equipment

## REQUIRED SKILLS AND KNOWLEDGE

- using a variety of welding machines and electrodes
- identifying and rectifying weld defects
- applying techniques for distortion prevention and rectification
- cleaning welds
- reading and interpreting information on sketches, written job instructions, specifications, standard operating procedures and engineering drawings
- recording routine information including routine weld records related to GTAW onto proformas and standard workplace forms
- following oral instructions
- measurement skills relating to joint preparation and GTAW

### Required knowledge

Required knowledge includes:

- correct welding machine, leads, hand pieces and electrodes
- material preparation
- joint preparations
- electrode classification
- causes of distortion for materials within the scope of this unit
- causes of defects and methods of rectification
- the relationships between amperage, electrode and material
- types of gases and their uses
- types of electrodes, current settings and high frequency voltage
- filler materials and consumables
- safe welding practices
- use and application of personal protective equipment for GTAW

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to prepare materials, select and set up the welding equipment, carry out the GTAW welding and examine for and correct defects, in a range of welding activities associated with GTAW. Competency in this unit cannot

<b>EVIDENCE GUIDE</b>	
	be awarded until all prerequisites have been satisfied.
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Assessors must be satisfied that the candidate can competently and consistently apply the skills covered in this unit of competency in new and different workplace situations and contexts. Critical aspects of assessment and evidence include:</p> <ul style="list-style-type: none"> <li>• following all safety procedures to protect self, other workers and members of the public</li> <li>• identifying and interpreting specifications for GTAW including Australian Standard 1554 General Purpose</li> <li>• interpreting welding specifications including standard welding symbols used to show weld procedure</li> <li>• selecting appropriate weld preparation methods for material and position of welds.</li> <li>• preparing materials, setting up of jigs, fixtures, clamps, etc. and joint preparation including bevelling</li> <li>• consistently welding different ferrous and non-ferrous materials to AS 1554 General Purpose or equivalent</li> <li>• identifying defects as described in the range statement across a range of welded materials</li> <li>• rectifying defects.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Welding to AS 1554 General Purpose or equivalent requires both theoretical knowledge and high practical skills. The assessment process must be designed to identify consistent performance to standard and specification across a range of materials and positions. The assessment must also identify a level of workplace performance in terms of defect rate and weld failure rates. It is recommended that assessment involve demonstrations of competency under both workshop and site conditions. This means that the ideal assessment environment is either on the job or a combination of both on and off the job.</p> <p>The competencies covered by this unit may be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p>
<b>Method of assessment</b>	Typically an Engineering Tradesperson - Fabrication and other tradespersons engaged in welding are required to exercise GTAW skills and techniques across a range of

<b>EVIDENCE GUIDE</b>	
	<p>jobs and specifications.</p> <p>A single assessment event is not appropriate. On the job assessment should be included as part of the assessment process wherever possible. Where assessment occurs off the job, judgement must consider evidence of the candidate's performance in a productive work environment that includes a sufficient range of appropriate tasks and materials to cover the scope of application for this unit.</p> <p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.</p> <p>The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
<b>Guidance information for assessment</b>	<p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with welding using GTAW process or other units requiring the exercise of the skills and knowledge covered by this unit.</p> <p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>

## Range Statement

<b>RANGE STATEMENT</b>
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating</p>

<b>RANGE STATEMENT</b>	
conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Prepared</b>	Prepared may include: <ul style="list-style-type: none"> <li>• pre-heating</li> <li>• setting up of jigs, fixtures and clamps</li> <li>• joint preparation (e.g. bevelling)</li> </ul>
<b>Welds</b>	Welds include fillet and butt welds carried out in all positions
<b>Materials</b>	Materials may include ferrous and non-ferrous materials including carbon steel, stainless steel, aluminium and other materials suitable for GTAW welding
<b>Welding equipment</b>	Welding equipment may include AC or DC welding machines
<b>Distortion prevention measures</b>	Distortion prevention measures may include: <ul style="list-style-type: none"> <li>• pre-heating</li> <li>• setting up of jigs, fixtures and clamps</li> </ul>
<b>Rectified</b>	Rectified may include: <ul style="list-style-type: none"> <li>• oxy acetylene and air arc equipment</li> <li>• grinding devices</li> </ul>
<b>Defects</b>	Defects may include: <ul style="list-style-type: none"> <li>• porosity</li> <li>• slag inclusions</li> <li>• discontinuities</li> <li>• lack of penetration</li> <li>• undercut</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	Fabrication
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## MEM05049B Perform routine gas tungsten arc welding

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers preparing the materials and carrying out routine gas tungsten arc welding (GTAW).
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies in a maintenance or manufacturing environment where the weld quality is not required to meet an Australian Standard. Fillet and butt welds would typically be performed on low carbon/mild steels and aluminium.</p> <p>Where welding is required to meet Australian Standard 1554 General Purpose or equivalent codes, occupational health and safety regulations and/or licensing requirements, Unit MEM05019D (Weld using gas tungsten arc welding process) should be selected.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 2</b></p>
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. The locations of welds are identified in accordance with standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Settings and consumables are selected to suit application.
4. Perform routine welding using GTAW	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned to standard operating procedures.



## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- preparing materials
- setting up welding equipment
- welding with GTAW
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- using measurement skills for joint preparation and routine GTAW

#### Required knowledge

Look for evidence that confirms knowledge of:

- preparatory requirements
- properties and characteristics of materials and consumables
- equipment and equipment settings
- fuel gas properties and applications
- post welding treatments
- weld characteristics
- safe welding practices
- use and application of personal protective equipment for routine GTAW

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to perform routine gas tungsten arc welding (GTAW).

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
<b>Context of and specific resources for assessment</b>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with carrying out routine gas tungsten arc welding or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<b>Method of assessment</b>	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
<b>Guidance information for assessment</b>	

## Range Statement

**RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>Materials</b>	Mild and low carbon steel
<b>Prepared</b>	Preheating, setting up jigs, fixtures, clamps, joint preparation
<b>Equipment</b>	Hoses, welding leads and gas shrouds, electrodes, gas regulator, liners, contact tips
<b>Consumables</b>	Tungsten electrodes, filler wire, shielding gas
<b>Cleaned</b>	Slag, spatter

**Unit Sector(s)**

<b>Unit sector</b>	
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**Co-requisite units**

<b>Co-requisite units</b>	

**Competency field**

<b>Competency field</b>	Fabrication
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## MEM05050B Perform routine gas metal arc welding

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers preparing materials and routine gas metal arc welding (GMAW).
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies in a maintenance or manufacturing environment where the weld quality is not required to meet an Australian Standard or equivalent. Fillet and butt welds would typically be performed on low carbon/mild steels.</p> <p>Where welding is required to meet Australian Standard 1554 General Purpose or equivalent codes, occupational health and safety regulations and/or licensing requirements, Unit MEM05017D (Weld using gas metal arc welding process) should be selected.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 2</b></p>
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### Licensing/Regulatory Information

Refer to Application of the Unit

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. Locations of welds are identified in according to standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Settings and consumables are selected to suit application.
4. Perform routine welding using GMAW	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned to standard operating procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- preparing materials
- setting up welding equipment
- welding with GMAW
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- following oral instruction
- using measurement skills relating to joint preparation and routine GMAW

#### Required knowledge

Look for evidence that confirms knowledge of:

- different current and voltage settings, gas flow rates wire diameters, wire feed speed and other variables to suit typical situations.
- material and equipment preparation
- properties and characteristics of materials and consumables
- equipment and equipment settings
- fuel gas properties and applications
- post-welding treatments
- weld characteristics
- safe welding practices
- use and application of personal protective equipment for routine GMAW

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must

<b>EVIDENCE GUIDE</b>	
	be able to perform routine gas metal arc welding (GMAW).
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
<b>Context of and specific resources for assessment</b>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with preparing the materials and carrying out routine gas metal arc welding or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<b>Method of assessment</b>	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
<b>Guidance information for assessment</b>	



## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>Materials</b>	Mild and low carbon steel
<b>Prepared</b>	Preheating, setting up jigs, fixtures, clamps, joint preparation
<b>Equipment</b>	Hoses, welding leads, gas shrouds, gas regulators, liners, contact tips
<b>Consumables</b>	Filler wire, shielding gas
<b>Cleaned</b>	Slag and spatter

## Unit Sector(s)

<b>Unit sector</b>	
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

Competency field	Fabrication
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## MEM05051A Select welding processes

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers identifying material properties and selecting appropriate welding processes to achieve safe and effective welding outcomes.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to all types of welding. It includes the identification of properties and characteristics of all commonly used metals, and selection of appropriate welding techniques to ensure integrity of materials is maintained during welding processes.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 2</b></p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify properties of commonly used metals	1.1. Materials to be welded are identified. 1.2. Characteristics and properties of commonly used materials are identified. 1.3. Uses and purposes of commonly used materials are identified. 1.4. Basic metallurgical characteristics are considered.
2. Identify and provide for welding contingencies	2.1. Information relevant to welding processes is sourced as required. 2.2. Potential contingencies are identified and solutions are considered.
3. Identify appropriate welding processes	3.1. Welding processes are identified and selected to achieve specified outcomes with selected metals. 3.2. Effects of welding processes on materials are identified. 3.3. Distortion prevention measures are identified. 3.4. Alternative joining methods for job are identified and assessed for relevancy.
4. Identify cleaning and preparation requirements	4.1. Processes for cleaning and preparing metals are identified. 4.2. Role of contaminants in welding flaws is explained. 4.3. Safety requirements for chemicals and other

ELEMENT	PERFORMANCE CRITERIA
	materials are identified and utilised in accordance with manufacturers' specifications and legislative requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- reading, interpreting and following information on written job instructions, specifications, standard operating procedures, charts, lists, drawings and other applicable reference documents
- planning and sequencing operations
- checking and clarifying task-related information

#### Required knowledge

Look for evidence that confirms knowledge of:

- hazards and control measures associated with welding practices, including housekeeping
- safe work practices and procedures
- properties and characteristics of commonly used metals and materials
- basic metallurgy principles
- information resources
- chemical content of fumes emitted by welding processes
- uses and purposes of various metals
- distortion prevention measures for various metals

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the

<b>EVIDENCE GUIDE</b>	
performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	A person who demonstrates competency in this unit must be able to select welding processes.
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
<b>Context of and specific resources for assessment</b>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with selecting welding processes or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<b>Method of assessment</b>	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
<b>Guidance information for assessment</b>	

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Characteristics</b>	Tensile strength, grade, heat resistance, density
<b>Properties</b>	Physical properties, flammable limits, melting point
<b>Basic metallurgical characteristics</b>	Alloys and grades of metals and different types of electrodes
<b>Information</b>	Steel suppliers handbooks, welding company materials, standard operating procedures, safety documentation
<b>Welding processes</b>	<ul style="list-style-type: none"> <li>• Fusion:               <ul style="list-style-type: none"> <li>• electric arc welding</li> <li>• gas (oxy-fuel) welding</li> <li>• thermit welding</li> </ul> </li> <li>• Pressure welding processes:               <ul style="list-style-type: none"> <li>• resistance welding</li> <li>• fire or forge welding</li> <li>• friction welding</li> <li>• explosive welding</li> </ul> </li> <li>• Low temperature processes:               <ul style="list-style-type: none"> <li>• soldering</li> <li>• brazing</li> </ul> </li> <li>• Other:               <ul style="list-style-type: none"> <li>• ultrasonic welding</li> <li>• electron beam welding</li> </ul> </li> </ul>
<b>Effects</b>	Thermal expansion, heat affected zones, fume emissions, altered density, distortion
<b>Distortion prevention measures</b>	Heat treatments, consolidations
<b>Processes for cleaning and weld preparation</b>	Etching, grinding, arc gouging, thermal cutting, chemical additives, anti-corrosion treatments

**RANGE STATEMENT****Safety requirements**

- Dry and ventilated areas
- In accordance with workplace procedures
- Location away from heat risks
- Location away from incompatible substances
- Requirements for hazardous substances
- Adequate signage and labelling
- Appropriate sealing
- Routine inspections
- Emergency procedures
- Regulatory notification requirements

**Unit Sector(s)**

<b>Unit sector</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	Fabrication
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## MEM05052A Apply safe welding practices

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers identifying risks associated with welding operations and implementing hazard reduction practices.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to gas and electric arc welding. It includes the identification of risks associated with welding all commonly used metals and implementation of techniques used to reduce or eliminate welding hazards.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 4</b></p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Access and interpret OH&S information	1.1.OH&S information is obtained and interpreted. 1.2.Relevant OH&S legislation is identified. 1.3.Work related safety information is obtained and interpreted.
2. Identify risks associated with welding	2.1.Pollutants formed by welding processes are identified. 2.2.Occupational diseases and injuries which may be associated with welding are identified. 2.3.Factors associated with increased risk are identified. 2.4.Exposure levels for pollutants are identified. 2.5.Risks and potential health effects associated with specific metals are identified. 2.6.Risks and potential health effects associated with gases in welding are identified. 2.7.Other hazards of welding are identified.
3. Reduce risks associated with welding	3.1.Manual handling techniques are used. 3.2.Personal protective equipment is used correctly. 3.3.Procedures to control hazards are implemented. 3.4.Workplace safety procedures are implemented. 3.5.Workplace safety non-compliances are reported in accordance with workplace procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- sourcing and interpreting safety-related information and Material Safety Data Sheets (MSDS)
- planning and sequencing operations
- identifying workplace risks and nonconformances
- reporting workplace risks and nonconformances
- checking and clarifying task-related information

#### Required knowledge

Look for evidence that confirms knowledge of:

- characteristics and properties of common metals and welding materials
- effect of gas and electrical welding operations on metals
- hazards and control measures associated with gas and electrical welding, including housekeeping
- welding safety practices and procedures
- effect of various treatments on a range of commonly used metals
- use and application of personal protective equipment

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to apply safe welding practices.

#### Critical aspects for assessment and

Assessors must be satisfied that the candidate can

<b>EVIDENCE GUIDE</b>	
<b>evidence required to demonstrate competency in this unit</b>	competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
<b>Context of and specific resources for assessment</b>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with applying safe welding practices or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<b>Method of assessment</b>	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
<b>Guidance information for assessment</b>	

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different

**RANGE STATEMENT**

work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**OH&S information**

- National Occupational Health and Safety Commission guidelines
- Organisational OH&S practices and procedures manuals
- Australian/New Zealand and ISO standards
- Company risk management policy
- Codes of practice
- Australian dangerous goods legislation
- Trade practices
- Occupational Health and Safety reporting requirements
- Weld procedures

**Work related safety information**

- Standard operating procedures
- Material safety data sheets (MSDSs)
- Job sheets
- Emergency procedures
- Safety standards and procedures

**Pollutants**

- Nitrogen oxides
- Ozone
- Metal fumes etc.
- Lead oxide
- Silicon oxide
- Calcium fluoride
- Calcium oxide
- Magnesium oxide
- Sodium oxide
- Potassium oxides
- Carbon dioxide
- Organics
- Iron
- Manganese
- Calcium carbonate
- Zirconium oxide
- Titanium oxide
- Hexavalent chromium

<b>RANGE STATEMENT</b>	
<b>Occupational diseases and injuries</b>	<ul style="list-style-type: none"> <li>• Eye injuries</li> <li>• Skin damage</li> <li>• Respiratory irritations</li> <li>• Chronic effects</li> <li>• Allergies</li> </ul>
<b>Factors</b>	<ul style="list-style-type: none"> <li>• Gas leakage from cylinders</li> <li>• Type of consumable and metals used</li> <li>• Type of welding processes</li> <li>• Type of electrodes</li> <li>• Welding current</li> <li>• Voltage and amperage</li> <li>• Ventilation</li> <li>• Contamination</li> <li>• Interaction of chemicals</li> <li>• Exposure levels</li> <li>• Flammability</li> </ul>
<b>Exposure levels</b>	<ul style="list-style-type: none"> <li>• Time Weighted Average</li> <li>• Short Term Exposure Limit (STEL)</li> <li>• Maximum Allowable Concentration (MAC) or Threshold Limit Value - Ceiling (TLV-C)</li> <li>• Skin Notation</li> </ul>
<b>Specific metals</b>	<ul style="list-style-type: none"> <li>• Aluminium</li> <li>• Antimony</li> <li>• Arsenic</li> <li>• Beryllium</li> <li>• Boron</li> <li>• Cadmium</li> <li>• Chromium</li> <li>• Copper</li> <li>• Cobalt</li> <li>• Iron</li> <li>• Lead</li> <li>• Lithium</li> <li>• Magnesium</li> <li>• Manganese</li> <li>• Mercury</li> <li>• Molybdenum</li> <li>• Nickel</li> <li>• Platinum</li> <li>• Selenium</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• Silver</li> <li>• Thorium</li> <li>• Tin</li> <li>• Titanium</li> <li>• Tungsten</li> <li>• Vanadium</li> <li>• Zinc</li> <li>• Zirconium</li> </ul>
<b>Gases</b>	<ul style="list-style-type: none"> <li>• Acetylene</li> <li>• Argon</li> <li>• Carbon dioxide</li> <li>• Carbon monoxide</li> <li>• Helium</li> <li>• Nitrogen oxides</li> <li>• Ozone</li> <li>• Phosgene</li> <li>• Phosphine</li> <li>• Stibine</li> </ul>
<b>Other hazards</b>	<ul style="list-style-type: none"> <li>• Fluxes</li> <li>• Electro-magnetic radiation</li> <li>• Electric shock</li> <li>• Sparks</li> <li>• Spatter</li> <li>• Contaminated and coated metals</li> <li>• Gas cylinder and electrical hazards</li> <li>• Confined spaces</li> <li>• Noise</li> <li>• Chemical exposure</li> <li>• Solvents</li> <li>• Musculoskeletal, back and overuse injuries</li> <li>• Vibration</li> <li>• Dusts</li> <li>• Heat stress</li> <li>• Ultraviolet radiation</li> <li>• Airborne pollutants</li> <li>• Flammable gases</li> <li>• Infrared radiation</li> <li>• Thermal damage</li> </ul>
<b>Manual handling techniques</b>	<ul style="list-style-type: none"> <li>• Housekeeping practices</li> <li>• Lifting weight limits</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• Appropriate storage</li> <li>• Use of lifting devices</li> <li>• Appropriate training</li> <li>• Hazardous materials storage standards and procedures</li> </ul>
<b>Personal protective equipment</b>	<ul style="list-style-type: none"> <li>• Respirators</li> <li>• Ear muffs</li> <li>• Protective clothing</li> <li>• Gloves</li> <li>• Boots</li> <li>• Helmets</li> <li>• Eye protection</li> <li>• Face shields</li> </ul>
<b>Procedures to control hazards</b>	<ul style="list-style-type: none"> <li>• Substituting hazardous materials with safer materials</li> <li>• Changing workplace design to eliminate hazards</li> <li>• Modifying work practices to reduce exposure</li> <li>• Using personal protective equipment</li> <li>• Using adequate and appropriate ventilation</li> </ul>
<b>Workplace safety measures</b>	<ul style="list-style-type: none"> <li>• Shielding requirements</li> <li>• Ventilation</li> <li>• General and diluted</li> <li>• Local exhaustion</li> <li>• Use of personal protective equipment</li> <li>• Checking equipment condition</li> <li>• Equipment maintenance</li> <li>• Correct operation of equipment</li> <li>• Correct voltage and electrical connections</li> <li>• Good posture</li> <li>• Fire safety, plant and equipment isolation</li> <li>• Communications with appropriate personnel</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	Fabrication
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## MEM12023A Perform engineering measurements

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers performing measurement skills requiring straightforward use of mechanical measuring devices and associated calculations.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit covers straightforward measurement using devices which incorporate visual indications representing units of measurement.</p> <p>It applies to the use of measuring devices in a range of manufacturing, engineering and related environments. It includes, where required, adjustment of measuring devices through simple means and typically includes zeroing or scale adjustment.</p> <p>Measurements may be expressed in metric or imperial units. All measurements are undertaken to standard operating procedures. Electrical/electronic devices used are those not requiring the connection or disconnection of circuitry.</p> <p>Work is undertaken autonomously or part of team environment, in the field, work station or workshops.</p> <p>For straightforward use of comparison or pre-set measuring devices, Unit MEM12001B (Use comparison and basic measuring devices) should be accessed.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 5</b></p>
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Select appropriate device or equipment	1.1.Measurement requirements are determined from specifications. 1.2.Appropriate device or equipment is selected according to standard operating procedures, to achieve required outcome.
2. Obtain measurements using a range of measuring devices	2.1.Correct and appropriate measuring technique is used. 2.2.Measurements are accurately obtained .

ELEMENT	PERFORMANCE CRITERIA
	2.3. Dimensions are determined or verified using basic calculations, where required.
3. Maintain measuring devices	3.1. Routine care and storage of devices is undertaken to manufacturers' specifications or standard operating procedures. 3.2. Routine adjustments to devices are made and checked.
4. Communicate measurements as required	4.1. Measurements are accurately recorded, where required. 4.2. Freehand sketch which depicts required information is prepared, as required.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- selecting the appropriate measuring device for given measuring tasks
- using appropriate measuring technique
- reading all measurements taken accurately to the finest graduation of the selected measuring device
- handling and storing measuring devices in accordance with manufacturers' specifications or standard operating procedures
- verifying all measuring devices before use
- making, where appropriate, routine adjustments to measuring devices
- reading, interpreting and following information on written job instructions, specifications, standard operating procedures, charts, lists, drawings and other applicable reference documents
- planning and sequencing operations
- checking and clarifying task related information
- checking for conformance to specifications
- undertaking numerical operations involving addition, subtraction, multiplication, division, fractions and decimals within the scope of this unit
- preparing drawings as required

## REQUIRED SKILLS AND KNOWLEDGE

### Required knowledge

Look for evidence that confirms knowledge of:

- correct application of a range of measuring devices
- correct and appropriate measuring technique for a range of measuring devices
- addition, subtraction, multiplication, division, fractions, decimals to the scope required by this unit
- procedures for handling and storing a range of measuring devices
- procedures for adjusting and zeroing a range of measuring devices
- methods of communicating measurements by drawings, as required
- safe work practices and procedures

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to perform engineering measurements.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

#### Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication,

<b>EVIDENCE GUIDE</b>	
	materials handling, recording and reporting associated with performing engineering measurements or other units requiring the exercise of the skills and knowledge covered by this unit.
<b>Method of assessment</b>	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
<b>Guidance information for assessment</b>	

## Range Statement

<b>RANGE STATEMENT</b>	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Specifications</b>	Drawings, sketches, job instructions, schematics, diagrams, technical manuals
<b>Range of measuring devices</b>	Protractors, combination squares, set squares, dial indicators, thermometers, tapes, rules, micrometers, vernier-scaled measuring equipment
<b>Basic calculations</b>	Calculations needed to assist in determining measurements where a reading of the graduated device is not sufficient, for example subtracting one measurement from another to give a third

<b>RANGE STATEMENT</b>	
	measurement. Examples of calculations needed are addition, subtraction, multiplication, division, fractions and decimals. Calculations may be made using a calculator
<b>Routine adjustments</b>	Validating the device using simple zeroing or scale adjustment
<b>Measurements</b>	Measuring length, squareness, flatness, angle, roundness, clearances or any other measurements that can be read off analog, digital or other measuring device
<b>Information</b>	Dimensions, instructions, base line or datum points

### Unit Sector(s)

<b>Unit sector</b>	
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### Co-requisite units

<b>Co-requisite units</b>	

### Competency field

<b>Competency field</b>	Measurement
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## MEM18001C Use hand tools

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers using a range of hand tools for a variety of general engineering applications.
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### Application of the Unit

<b>Application of the unit</b>	<p>Applications may include hand tools used for adjusting, dismantling, assembling and finishing of items or components, and the finishing, cutting, scraping of metallic and non-metallic material to size and shape. This includes simple tapping and threading and routine maintenance of hand tools.</p> <p>This unit should not be selected if the hand tool is dedicated to a single operation or machine and if only a machine specific/customised tool is used.</p> <p>When using hand held power tools or power tools used for hand held operations, refer to Unit MEM18002B (Use power tools/hand held operations).</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 2</b></p>
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### Licensing/Regulatory Information

Not Applicable



## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Use hand tools	1.1. Hand tools are selected appropriate to the task requirements. 1.2. Hand tools are used to produce desired outcomes to job specifications which may include finish, tension, size or shape. 1.3. All safety requirements are adhered to before, during and after use. 1.4. Unsafe or faulty tools are identified and marked for repair according to designated procedures before, during and after use. 1.5. Routine maintenance of tools, including hand sharpening is undertaken according to standard

ELEMENT	PERFORMANCE CRITERIA
	<p>operational procedures, principles and techniques.</p> <p>1.6. Hand tools are stored safely in appropriate location according to standard operational procedures and manufacturers' recommendations.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- reading and following information on standard operating procedures
- following verbal instructions
- selecting hand tools appropriate to the task
- using hand tools safely
- identifying hand tool defects and marking for repair
- maintaining/sharpening hand tools using appropriate techniques
- storing hand tools in accordance with manufacturers'/standard operating procedures

#### Required knowledge

Look for evidence that confirms knowledge of:

- applications of different hand tools in a general engineering context
- common faults and/or defects in hand tools
- procedures for marking unsafe or faulty tools for repair
- routine maintenance requirements for a range of hand tools
- storage location and procedures for a range of hand tools
- hazards and control measures associated with using hand tools
- use and application of personal protective equipment
- safe work practices and procedures

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	<p>A person who demonstrates competency in this unit must be able to use hand tools for a range of general engineering applications.</p>
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
<b>Context of and specific resources for assessment</b>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with using hand tools or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<b>Method of assessment</b>	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
<b>Guidance information for assessment</b>	

## Range Statement

<b>RANGE STATEMENT</b>	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Hand tools</b>	Hacksaws, hammers, punches, screwdrivers, sockets, wrenches, scrapers, chisels, gouges, wood planes and files of all cross-sectional shapes and types
<b>Job specifications</b>	Finish, tension, size or shape etc.
<b>Routine maintenance</b>	Cleaning, lubricating, tightening, simple tool repairs, hand sharpening and adjustments using engineering principles, tools, equipment and procedures

## Unit Sector(s)

<b>Unit sector</b>	
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## Co-requisite units

<b>Co-requisite units</b>	

## Competency field

<b>Competency field</b>	Maintenance and diagnostics
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## MEM18002B Use power tools/hand held operations

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers using a range of hand held power tools and fixed power tools for hand held operations for a variety of general engineering applications.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to loosening and fastening items or components and shaping, finishing, cutting, grinding metallic and non-metallic materials and/or tool bits to size and shape.</p> <p>This unit should not be selected if the power tools used are dedicated to an operation or machine, e.g. nut-runner, air drill, power driver, etc.</p> <p>For using hand tools, see Unit MEM18001C (Use hand tools).</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 2</b></p>
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Use power tools	<p>1.1. Power tools are selected appropriate to the task requirements.</p> <p>1.2. Power tools are used for a determined sequence of operations - which may include clamping, alignment and adjustment to produce desired outcomes - to job specifications which may include finish, size or shape.</p> <p>1.3. All safety requirements are adhered to before, during and after use.</p> <p>1.4. Unsafe or faulty tools are identified and marked for repair before, during and after use according to designated procedures.</p> <p>1.5. Operational maintenance of tools, including hand sharpening, is undertaken according to standard</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>workplace procedures, principles and techniques.</p> <p>1.6. Power tools are stored safely in appropriate location according to standard workshop procedures and manufacturers' recommendations.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

- reading and following information on standard operating procedures
- following verbal instructions
- selecting power tools appropriate to the task
- using power tools safely
- using clamping/securing devices
- identifying power tool defects
- maintaining power tools using appropriate techniques
- sharpening tools/tool bits within the scope of this unit
- storing power tools according to manufacturers'/ standard operating procedures.

#### Required knowledge

Look for evidence that confirms knowledge of:

- application of different power tools
- clamping/securing methods
- adjustments/alignments to a range of power tools
- common faults and/or defects in power tools
- procedures for marking unsafe or faulty power tools for repair
- routine maintenance requirements of a range of power tools
- tool sharpening techniques for a range of power tools
- storage location and procedures of a range of power tools
- hazards/control measures associated with power tools
- use and application of personal protective equipment
- safe work practices and procedures



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	<p>A person who demonstrates competency in this unit must be able to use power tools/hand held operations.</p>
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
<b>Context of and specific resources for assessment</b>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with using power tools/hand held operations or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<b>Method of assessment</b>	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>

**EVIDENCE GUIDE**

<b>Guidance information for assessment</b>	
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Power tools**

Electric or pneumatic/hydraulic drills, grinders, jigsaws, nibblers, cutting saws, sanders, planers, routers, pedestal drills and pedestal grinders

**Clamping**

Multigrips, vices, jigs and fixtures, clamps etc.

**Job specifications**

Finish, size or shape etc.

**Operational maintenance**

Hand sharpening, cleaning, lubricating, tightening  
Simple tool repairs and adjustments using engineering principles, tools, equipment and procedures to statutory and regulatory requirements

**Unit Sector(s)**

<b>Unit sector</b>	
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## Co-requisite units

Co-requisite units		

## Competency field

Competency field	Maintenance and diagnostics
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## MSL904001A Perform standard calibrations

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit of competency covers the ability to calibrate test and measurement equipment in accordance with standard calibration procedures and documented test methods. These procedures/methods specify all associated reference standards, materials, equipment and methods to be used and the required parameters or quantities and ranges to be tested, including the criteria for rejection or approval.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to laboratory and calibration technicians who carry out tests and/or calibrations using standard calibration methods in first, second and third party laboratories, and laboratories where testing and/or calibration forms part of inspection or product certification. Personnel are not permitted to deviate from explicit instructions in any manner, modify the procedure, nor substitute alternative equipment. They work under limited supervision and results of their work are interpreted and checked by the laboratory supervisor, quality inspector or designated signatory.</p> <p>Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These are found at the end of this unit of competency under the section 'This competency in practice'.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare items for calibration	1.1. Select the authorised calibration procedure in accordance with enterprise procedures 1.2. Identify hazards and use appropriate personal protective equipment, safety equipment and procedures 1.3. Confirm all measuring equipment meets the laboratory's specification requirements and complies fully with the calibration procedure 1.4. Assemble and set up specified reference standards and associated equipment prior to testing

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	<p>1.5. Verify performance of reference standards and measuring equipment prior to use and adjust or calibrate as necessary</p> <p>1.6. Identify and minimise potential sources of measurement error</p>
2. Perform calibration	<p>2.1. Perform individual tests without variance according to the documented procedure to ensure repeatability of measurement</p> <p>2.2. Confirm readings are the result of a valid measurement and record data as required (as-found or before adjustment)</p> <p>2.3. Adjust device under test to bring readings within specification and record data (as-left or after adjustment) if required</p> <p>2.4. Analyse resulting test data to detect trends or inconsistencies that would significantly affect the accuracy or validity of test results</p> <p>2.5. Seek appropriate advice when interpretation of results is outside authorised scope of approval</p>
3. Document results	<p>3.1. Document compliance/non-compliance with requirements of test and/or specifications</p> <p>3.2. Estimate and document uncertainty of measurement in accordance with enterprise procedures, if required</p> <p>3.3. Record the results of each test/calibration accurately, unambiguously and objectively</p> <p>3.4. Ensure confidentiality of enterprise information</p>
4. Finalise calibration	<p>4.1. Prepare and issue a final report on the job/item detailing testing carried out, traceability, statement of compliance and relevant information as required</p> <p>4.2. Report any non-compliance and verify next course of action with supervisor</p> <p>4.3. Attach calibration labels, equipment stickers, quality control tags and tamper resistant seals as required in enterprise procedures</p> <p>4.4. Store test equipment/measurement standards and results in accordance with enterprise procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- selecting and applying appropriate test methods and calibration procedures
- maintaining close attention to procedures, accuracy and precision of measurement to ensure the integrity of test/calibration results
- using calibration and correction charts
- calculating to give results in appropriate accuracy, precision and units
- preparing test/calibration documentation that is accurate and complies with requirements
- operating equipment correctly and safely
- recognising problems or departures in systems and documentation and initiating actions to prevent or minimise them
- recognising and report opportunities for improvements to procedures

#### Required knowledge

Required knowledge includes:

- purpose of metrology and calibration, including common terminology, concepts, principles, procedures, and applications
- National Association of Testing Authority's (NATA) and National Measurements Institute's (NMI) role in the measurement and testing system in Australia
- traceability, including legal requirements for traceability
- requirements for the competence of testing and calibration laboratories (e.g. AS ISO/IEC 17025) as they affect job role and responsibilities
- hierarchy and appropriate selection of reference materials and instruments
- non-conformance/non-compliance procedures and protocols associated with equipment, reference material and calibration procedures
- troubleshooting procedures for equipment and test methods
- methods for statistical analysis (means, ranges and standard deviations) and estimation of uncertainty of measurement (may include the use of software)
- reporting procedures and legislative requirements
- handling, transport, storage and operation of reference and working standards
- laboratory environmental control requirements
- relevant health, safety and environmental requirements
- layout of the enterprise, divisions and laboratory
- organisational structure of the enterprise
- lines of communication
- role of laboratory services for the enterprise and customers

## REQUIRED SKILLS AND KNOWLEDGE

### Specific calibration fields

Additional knowledge requirements may apply for different calibration fields. For example, testing and calibrations conducted in the following:

- acoustic and vibration measurement
- chemical testing
- construction materials testing
- electrical testing
- heat and temperature measurement
- mechanical testing
- metrology
- non-destructive testing
- optics and radiometry
- pressure measurements

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors should ensure that candidates can:

- maintain very close attention to procedures, accuracy and precision of measurement to ensure integrity of test/calibration results (especially during lengthy tests)
- critically examine each calibration step to ensure repeatability and validity of data
- apply all relevant procedures and regulatory requirements to ensure the quality and integrity of the services or data provided
- prepare test/calibration documentation that is accurate and complies with requirements
- operate equipment correctly and safely
- recognise problems or departures in systems and documentation and initiate actions to prevent or minimise them



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>recognise and report opportunities for improvements to procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>This unit of competency is to be assessed in the workplace or simulated workplace environment.</p> <p>This unit of competency may be assessed with:</p> <ul style="list-style-type: none"> <li><i>MSL924001 Process and interpret data</i></li> <li><i>relevant MSL974000 series unit of competency</i></li> <li><i>relevant MSL975000 series unit of competency.</i></li> </ul> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>specialised calibration/test equipment, reference standards and laboratory facilities</li> <li>access to a library of calibration methods, procedures and equipment specifications</li> <li>enterprise quality manual and procedures.</li> </ul>
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>review of calibration results, uncertainty calculations and workplace documentation completed by the candidate</li> <li>feedback from supervisors and/or customers regarding quality of calibration services provided by the candidate</li> <li>observation of the candidate performing standard calibrations</li> <li>oral or written questioning to check underpinning knowledge of standard calibration procedures.</li> </ul> <p>In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like environment.</p>

**EVIDENCE GUIDE****This competency in practice**

Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting.

**Background**

Calibration work may be simple or highly complex depending upon the type of equipment being calibrated and the accuracy or uncertainties required. Manual calibrations may involve interconnecting equipment and setting the stimulus devices to the settings listed in the procedure. At each setting, the technician must verify that the response or output of the unit under test (UUT) is within the tolerances specified in the procedure. In addition, many procedures require that 'as-found' (before adjustment) and 'as-left' (after adjustment) results are recorded for maintaining the UUT documentation history.

Often calibration technicians must assess and document the total uncertainties for a given measurement by analysing equipment specifications and methodology during calibration. They have to interpret specifications and technical information and demonstrate initiative when adjusting and repairing instruments.

The calibration technician's workload can be routine and repetitive. A perpetual backlog of work and the constant need to reduce turn-around-time to meet client demands, coupled with enterprise productivity goals, can induce stress and mental fatigue if not carefully managed. However, it is essential that all personnel are able to perform tests and associated work tasks without undue pressure that might influence technical judgement if 'integrity of measurement' is to be retained. Errors arising from items incorrectly calibrated will, at best, have to be recalled which wastes time, resources and destabilises enterprise credibility. At worst, if undetected, they may have severe safety implications to personnel or equipment, depending on the nature of the item.

**Calibration (1)**

A customer delivers a test pressure gauge and requires certification that the gauge conforms to manufacturer's specifications. Personnel in the item reception area log the job and the laboratory supervisor assigns it to a calibration technician. He/she reads the work order and

**EVIDENCE GUIDE**

retrieves the approved calibration procedure. The procedure requires the customer's gauge to be tested to 1000 kPa using a hydraulic test station. The technician assembles the required apparatus and personal protective equipment. The gauge is visually inspected for defects and contamination. The temperature of the environment is checked and the hydraulic test station confirmed as fully operational. The required pressures are applied to the gauge and the indicated readings are transcribed onto the test report. The technician notes that some readings are outside the allowable tolerance and adjustments will have to be made. He/she takes another set of readings after making the necessary adjustments and records them on the report. The technician applies the required labels to the gauge, updates the database, produces a test report and places the item on the quality assurance bench for inspection by the supervisor. The supervisor visually inspects the item and checks the readings on the report. The job has taken two hours to complete.

**Calibration (2)**

A client has asked the laboratory to calibrate a spectrum analyser to manufacturer's specification. The supervisor assigns the job to a calibration technician who reads the job sheet and locates the appropriate calibration procedure. Although this spectrum analyser will be calibrated partly with the aid of automated technology, the technician estimates that the calibration will still take about nine hours to complete. The technician reads the procedure and assembles the equipment and allows for the required warm-up time for instrument stabilisation. Possible sources of error are minimised by cleaning connectors and tensioning them with the torque spanner. The technician performs the manual phase of the test and manually records 12 pages of results. The equipment is reconnected for the automated part of the procedure the test recommenced. The technician produces a further six pages of results. These are assessed for errors and non-conformances and all calculations are carefully checked. A final report is produced which accompanies the spectrum analyser to the quality assurance bench for checking by the supervisor. All cables and equipment used for the calibration are returned to the store.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

#### Codes of practice

Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used

#### Standards, codes, procedures and/or enterprise requirements

Standards, codes, procedures and/or enterprise procedures may include:

- Australian and international standards, such as:
  - AS ISO 17025-2005 General requirements for the competence of testing and calibration laboratories
  - AS/NZS ISO 9001:2008 Quality management systems - Requirements
  - AS/NZS ISO 10005:2006 Quality management systems - Guidelines for quality plans
  - AS/NZS ISO 10012:2004 Quality assurance requirements for measurement equipment
  - ISO 5725 Accuracy (trueness and precision) of measurement methods and results
  - ISO/IEC Guide 98-3:2008 Uncertainty of measurement - Part 3 Guide to the expression of uncertainty in measurement (GUM)
- Eurachem/CITAC Guide CG4 Quantifying uncertainty in analytical measurement
- material safety data sheets (MSDS)
- enterprise recording and reporting procedures and standard operating procedures (SOPs)
- quality manuals, equipment and operating/technical manuals
- test methods and calibration procedures (validated and authorised)
- test methods and calibration procedures

<b>RANGE STATEMENT</b>	
	<p>published by international, national or regional standards, reputable technical organisations, scientific texts or journals and equipment manufacturers</p> <ul style="list-style-type: none"> <li>• incident and accident/injury reports</li> <li>• schematics, work flows, laboratory layouts and production and laboratory schedules</li> </ul>
<b>Standard calibrations</b>	<p>Standard calibrations may include testing and/or calibrating the following equipment and reference materials using standard methods and procedures:</p> <ul style="list-style-type: none"> <li>• test equipment, such as anemometers, balances, barometers, calipers, environmental chambers, hygrometers, manometers, masses, micrometers, pressure equipment, spectrophotometers, tape measures, rules, temperature (digital) indicating systems, thermometers, thermocouples, timing devices, vibration analysis equipment and weighing instruments</li> <li>• electrical reference standards, such as air-lines, analogue meters, attenuators, bridges-manual balance, capacitors, DC voltage references, digital instruments (calibrators, DMMs, electronic transfer standards), inductors, instrument and ratio transformers, instrument transformer test sets, potentiometers, resistors, radio frequency (RF) power meters, RF thermistor mounts and thermal converters, shunts, time interval and frequency standards, transfer standards AC-DC, voltage dividers, volt ratio boxes and watt-hour references</li> <li>• working standards, instruments and testing equipment, such as electromagnetic compatibility (EMC) test equipment, field strength meters, flammability test equipment, gauges/test fingers/test pins, hipot testers, impact hammers, impulse testers, instrument calibrators, network analysers, signal generators and spectrum and harmonic analysers</li> </ul>
<b>Hazards</b>	<p>Hazards may include:</p> <ul style="list-style-type: none"> <li>• electric shock</li> <li>• disturbance or interruption of services</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• manual handling of heavy equipment boxes</li> <li>• sources of electromagnetic radiation (lasers and RF generators/transmitters)</li> <li>• fluids under pressure</li> <li>• heat sources, such as ovens</li> </ul>
<b>Safety procedures</b>	<p>Safety procedures may include:</p> <ul style="list-style-type: none"> <li>• use of personal protective equipment, such as hearing protection, gloves, safety glasses and coveralls</li> <li>• ensuring access to service shut-off points</li> <li>• handling and storing hazardous materials and equipment in accordance with labels, MSDS, manufacturer's instructions, and enterprise procedures and regulations</li> <li>• regular cleaning of equipment and work areas</li> </ul>
<b>Reference materials</b>	<p>Reference materials may include:</p> <ul style="list-style-type: none"> <li>• colour standards</li> <li>• graded granular materials</li> <li>• hardness blocks</li> </ul>
<b>Communication</b>	<p>Communication may be with:</p> <ul style="list-style-type: none"> <li>• supervisors and managers (laboratory, quality and customer service)</li> <li>• peers and other laboratory or relevant technical personnel</li> <li>• clients and end users of equipment</li> <li>• external auditors, or accreditation agency for example, NATA</li> <li>• manufacturers of equipment and suppliers of spare parts and materials</li> </ul>
<b>Working environment</b>	<p>The working environment will have a controlled environment but may include:</p> <ul style="list-style-type: none"> <li>• purpose-built designed facility</li> <li>• mobile facility in the field</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	<p>OHS and environmental management requirements:</p> <ul style="list-style-type: none"> <li>• all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these</li> </ul>

**RANGE STATEMENT**

	<p>requirements must not be compromised at any time</p> <ul style="list-style-type: none"> <li>• all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>• where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Calibration
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**Competency field**

<b>Competency field</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

## MSL913002A Plan and conduct laboratory/field work

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the ability to plan and complete tasks individually or in a team context. The tasks involve established routines and procedures using allocated resources with access to readily available guidelines and advice. Work plans may need to be modified with supervisor agreement to suit changing conditions and priorities.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to instrument operators, laboratory assistants and technical assistants working in all industry sectors.</p> <p>Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These are found at the end of this unit of competency under the section 'This competency in practice'.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and organise daily work activities	1.1. Clarify allocated work activities and required resources if necessary 1.2. Prioritise work activities as directed 1.3. Break down work activities into small achievable components and efficient sequences 1.4. Review work plan in response to new information, urgent requests, changed situations or instructions from appropriate personnel 1.5. Update work plan and communicate changes to appropriate personnel
2. Complete allocated work	2.1. Locate relevant workplace procedures for required tasks 2.2. Undertake tasks following prescribed and routine work related sequences 2.3. Seek assistance from relevant personnel when difficulties cannot be handled 2.4. Record completion of activities to confirm outputs in accordance with plan
3. Identify and resolve work problems	3.1. Recognise problems or opportunities for improved work performance

ELEMENT	PERFORMANCE CRITERIA
	3.2. Apply agreed problem solving strategies to consider possible causes and solutions 3.3. Identify and access appropriate sources of help 3.4. Consider available alternatives and keep them open before agreeing on the most appropriate action
4. Work in a team environment	4.1. Cooperate with team members to negotiate and achieve agreed outcomes, timelines and priorities 4.2. Recognise personal abilities and limitations when undertaking team tasks 4.3. Confirm personal role and responsibility within the team for particular outputs 4.4. Demonstrate sensitivity to the diversity of other team members' backgrounds and beliefs
5. Update knowledge and skills as required	5.1. Recognise own strengths and weaknesses and take advantage of skill development opportunities

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- conducting work based on ethical values and principles
- clarifying tasks and recognising resource needs
- following relevant procedures consistently
- recognising potential disruptions or changed circumstances and modifying work plan in conjunction with relevant personnel
- ability to adjust to a variety of working environments (indoor, outdoor and night)
- seeking assistance from relevant personnel when difficulties arise
- achieving quality outcomes within timelines
- working effectively with team members who may have diverse work styles, cultures and perspectives
- promoting cooperation and good relations in the team
- assisting team members to organise and manage its workload

#### Required knowledge

## REQUIRED SKILLS AND KNOWLEDGE

Required knowledge includes:

- enterprise procedures:
  - customer service
  - quality
  - occupational health and safety (OHS) and environmental legislative requirements
  - technical work that the candidate routinely performs
- workplace agreements and employment conditions:
  - workers compensation
  - industrial awards enterprise agreements
  - equal employment opportunity
  - anti-discrimination and anti-harassment
- ethical background relevant to the nature of the work:
  - use of animals for research
  - genetic modification, gene therapy, cloning and stem cells
  - invitro fertilisation
  - forensic testing of populations
  - importance of commercial confidentiality
- problem solving strategies
- interpersonal communication and conflict resolution techniques
- relevant health, safety and environment requirements

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors should ensure that candidates can:

- follow workplace procedures to achieve quality outcomes within timelines
- identify and resolve work problems
- work effectively with team members and promote cooperation and good relations

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• prioritise activities and recognise potential disruptions or changed circumstances and modify the work plan in conjunction with relevant personnel.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>This unit of competency is to be assessed in the workplace or simulated workplace environment.</p> <p>This unit of competency may be assessed with:</p> <ul style="list-style-type: none"> <li>• <i>MSL913001A Communicate with other people</i></li> <li>• <i>MSL943002A Participate in laboratory/field workplace safety</i></li> <li>• technical units related to the tasks undertaken.</li> </ul> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>• enterprise procedures, equipment and materials for relevant technical tasks.</li> </ul>
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• review of a flowchart prepared by the candidate to show efficient sequencing of tasks</li> <li>• observation of the candidate performing a range of technical tasks over sufficient time to demonstrate their handling of a variety of contingencies</li> <li>• review of documents detailing completed tasks, such as completed job cards, a report or suggestions for quality improvement</li> <li>• feedback from peers and team members</li> <li>• feedback from supervisors</li> <li>• written or oral questions to partly assess the candidate's ability to handle a range of contingencies and work in a team environment.</li> </ul> <p>In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like</p>

<b>EVIDENCE GUIDE</b>	
	environment.
<b>This competency in practice</b>	<p>Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and show its relevance in a workplace setting.</p> <p><b>Manufacturing</b></p> <p>A plastic processing plant had to halt production because of a suspect raw material. The plant manager immediately requested the polymer testing laboratory to test and identify all batches of polypropylene additives and colouring agents. The laboratory team of three assistants and one technical officer allocated the workload amongst themselves to conduct the twelve different tests within a period of four hours to identify the 'out of specification' materials and report them to the production supervisor. All laboratory assistants had to reschedule their workplan, perform the required tests and assist each other to solve the production problem.</p> <p><b>Biomedical</b></p> <p>As part of a routine sequence, a technical officer is required to perform a series of tasks, including the calibration of instruments required for testing of blood samples. These tasks are to be completed within a specified timeframe to meet the output requirements of the enterprise. During the calibration of one of the instruments, the technician experiences difficulties that require expert technical assistance. The problem is referred to the appropriate person and is quickly resolved. Consequently, the officer is able to complete all necessary tasks within the prescribed timeframe and the required output is maintained.</p> <p><b>Food processing</b></p> <p>Each of the technical assistants working in the laboratory of a food processing company was dedicated to performing specific analyses. As a result, they often alternated between periods of inactivity and excessive workload (the latter case had the potential to compromise their health and safety and the accuracy of their food analyses). One of the contributing factors to the periods of intense activity was the need to quickly prepare standard solutions and reagents. The team discussed this problem and agreed that while it was not appropriate for each assistant to become competent to perform every</p>

**EVIDENCE GUIDE**

	<p>analytical procedure, it was feasible for each person to be able to prepare solutions and reagents used by others. The team developed a central register in which impending shortages of these materials was noted. Each assistant referred to this register when no other work was due and prepared the materials on a 'first in, first out' basis unless a task was given a priority rating. The team found that this strategy more evenly distributed the workload over their shift, improved safety in the laboratory and reduced the risk of error.</p>
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Codes of practice**

Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used

**Standards, codes, procedures and/or enterprise requirements**

Standards, codes, procedures and/or enterprise requirements may include:

- Australian and international standards such as:
  - AS/NZS 2243 Set:2006 Safety in laboratories set
  - AS/NZS ISO 14000 Set:2005 Environmental management standards set
  - AS/NZS ISO 9000 Set:2008 Quality management systems set
- OHS national standards and codes of practice

**Ethical and professional work performance**

Ethical and professional work performance includes:

- following enterprise policy and procedures, regulations and legislation
- behaving honestly and openly

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• respecting others and treating them with courtesy and impartiality</li> <li>• working diligently and responsibly</li> <li>• ensuring confidentiality of information, including client identification and test results</li> <li>• ensuring proprietary rights, intellectual property and copyright are protected</li> <li>• clarifying personal values and ethics and analysing how they impinge on actions in the workplace</li> </ul>
<b>Workplace activities</b>	<p>Workplace activities may include:</p> <ul style="list-style-type: none"> <li>• setup and pre-use checks of laboratory equipment</li> <li>• calibration status checks</li> <li>• sampling and testing following standard procedures</li> <li>• maintenance and cleaning tasks</li> </ul>
<b>Workplace procedures</b>	<p>Workplace procedures may include:</p> <ul style="list-style-type: none"> <li>• standard operating procedures (SOPs)</li> <li>• job cards, batch cards and production schedules</li> <li>• job descriptions</li> <li>• methods, recipes, procedures and protocols</li> </ul>
<b>Problem solving</b>	<p>Problem solving may include:</p> <ul style="list-style-type: none"> <li>• accessing relevant documentation</li> <li>• identifying inputs and outputs</li> <li>• sequencing a process</li> <li>• identifying and rectifying a problem step</li> <li>• obtaining timely help</li> <li>• implementing preventative strategies wherever possible</li> </ul>
<b>Teams</b>	<p>Teams may:</p> <ul style="list-style-type: none"> <li>• be ongoing with responsibility for particular services or functions</li> <li>• be project based</li> <li>• have a mixture of full and part-time employees and contractors, laboratory, construction and production personnel</li> <li>• be separated by distance and work at sites</li> </ul>

<b>RANGE STATEMENT</b>	
	outside laboratory facilities
<b>Team operation</b>	<p>Team operation may occur within:</p> <ul style="list-style-type: none"> <li>• small, medium and large contexts</li> <li>• internal and external environments</li> <li>• enterprise guidelines covering access and equity principles and practices, licensing requirements, industrial awards, enterprise bargaining agreements and codes of practice</li> <li>• agreed responsibility and accountability requirements</li> <li>• appropriate goals, objectives</li> <li>• given resource parameters</li> </ul>
<b>Team tasks</b>	<p>Team tasks may vary according to:</p> <ul style="list-style-type: none"> <li>• the size of enterprise</li> <li>• the scope of the laboratory</li> <li>• their level of responsibility</li> </ul>
<b>Strategies to maintain work flow</b>	<p>Strategies to maintain work flow may include:</p> <ul style="list-style-type: none"> <li>• communicating critical events on shift</li> <li>• recognising shortages in reagents and problems with equipment</li> <li>• communicating quality breakdowns</li> <li>• recognising urgent and abnormal results to be processed</li> <li>• communicating and behaving in a courteous manner</li> <li>• being punctual</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	<p>OHS and environmental management requirements:</p> <ul style="list-style-type: none"> <li>• all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time</li> <li>• all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>• where relevant, users should access and apply current industry understanding of infection control issued by the National Health and</li> </ul>



**RANGE STATEMENT**

	Medical Research Council (NHMRC) and State and Territory Departments of Health
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**Unit Sector(s)**

<b>Unit sector</b>	Communication/organisation
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**Competency field**

<b>Competency field</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

## MSL922001A Record and present data

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the ability to record and store data, perform simple calculations of scientific quantities and present information in tables and graphs. The unit of competency requires personnel to solve predictable problems using clear information or known solutions. Where alternatives exist, they are limited or apparent.
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### Application of the Unit

<b>Application of the unit</b>	This unit of competency is applicable to production operators, field assistants and laboratory assistants working in all industry sectors.  Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These are found at the end of this unit of competency under the section 'This competency in practice'.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Record and check data	1.1. Enter data into laboratory information system or record sheets as directed 1.2. Check data to identify transcription errors or atypical entries 1.3. Rectify errors in data using enterprise procedures
2. Calculate simple scientific quantities	2.1. Calculate simple scientific quantities using given formulae and data 2.2. Ensure calculated quantities are consistent with estimations and expectations 2.3. Report all calculated quantities with appropriate precision and units
3. Present data in tables, charts and graphs	3.1. Present data accurately in tables and charts using given formats and scales 3.2. Recognise and report obvious features and trends in data
4. Store and retrieve	4.1. File and store data in accordance with enterprise

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
data	procedures 4.2.Maintain enterprise confidentiality standards

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- performing simple calculations
- preparing and interpreting straightforward tables, graphs and charts
- applying calculations in the workplace
- coding, recording and checking data accurately
- presenting accurate results in the required format
- recognising obvious trends in data
- maintaining the confidentiality of data in accordance with workplace and regulatory requirements

#### Required knowledge

Required knowledge includes:

- concepts of metrology
- the international system of units (SI)
- relevant scientific and technical terminology
- procedures for coding, entering, storing, retrieving and communicating data
- procedures for verifying data and rectifying mistakes
- conversion of units involving multiples and submultiples
- significant figures, estimation, approximation, rounding off
- substitution of data in formulae
- calculations involving fractions, decimals, proportions and percentages
- procedures for maintaining and filing records, security of data

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Assessors should ensure that candidates can:</p> <ul style="list-style-type: none"> <li>• accurately code, check and record data in the required format</li> <li>• calculate simple scientific quantities</li> <li>• recognise obvious trends in data</li> <li>• maintain the confidentiality of data.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>This unit of competency is to be assessed in the workplace or simulated workplace environment.</p> <p>This unit may be assessed with technical units, such as:</p> <ul style="list-style-type: none"> <li>• <i>MSL973001A Perform basic tests</i></li> <li>• <i>MSL973002A Prepare working solutions</i></li> <li>• <i>MSL973007A Perform microscopic examination.</i></li> </ul> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>• data sets and records</li> <li>• computer and relevant software or laboratory information system</li> <li>• relevant enterprise procedures.</li> </ul>
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• review of data worksheets, calculations, graphs and tables prepared by the candidate</li> <li>• review of records transcribed, maintained or stored by the candidate</li> <li>• feedback from supervisors and peers</li> <li>• observation of the candidate as they record data and perform calculations</li> <li>• questions to assess understanding of relevant procedures and trends in data.</li> </ul> <p>In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and</p>

<b>EVIDENCE GUIDE</b>	
	<p>disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like environment.</p>
<b>This competency in practice</b>	<p>Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and show its relevance in a workplace setting.</p> <p><b>Construction materials</b></p> <p>A laboratory assistant is given 20 soil samples and asked to test their moisture content by weighing each sample, placing them in an oven for 24 hours and then reweighing them. The assistant performs the tests in accordance with the standard method and then calculates the % water content by dividing the weight loss by the wet weight and multiplying by 100. He/she checks the results. After entering them into the laboratory information management system (LIMS), they notice that they are consistently less than the previous results recorded for soils at the same site. The assistant reports the discrepancy to the supervisor who checks whether the oven was operated at the required temperature. The supervisor then discovers that the assistant has calculated the moisture content by dividing the weight loss by the wet weight instead of the dry weight. The assistant recalculates the moisture content for the 20 samples and notes that the results are now consistent with previous results.</p> <p><b>Manufacturing</b></p> <p>On Friday, a laboratory assistant performs the routine set of temperature, pressure and humidity measurements at 10 sites in a refinery. They enter the data on a pre-prepared data sheet that also contains the data recorded for the previous days of that week. The assistant checks the data for any significant variations to that recorded previously. They notice that for site #5, the temperature reading is 250(C which is 100(C below the expected value. The assistant repeats the measurement and gets the same result. After returning to the laboratory, the assistant enters the data into the LIMS</p>

**EVIDENCE GUIDE**

	and reports the odd result to their supervisor. The supervisor contacts the site manager and finds out that the pipeline at site #5 has been isolated as part of unscheduled maintenance in that part of the site.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Codes of practice**

Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used

**Standards, codes, procedures and/or enterprise requirements**

Standards, codes, procedures and/or enterprise requirements may include:

- Australian and international standards such as:
  - AS ISO 1000-1998 The international system of units (SI) and its application
- national measurement regulations and guidelines

**Concepts of metrology**

Concepts of metrology may include:

- that all measurements are estimates
- measurements belong to a population of measurements of the measured parameters
- repeatability
- precision
- accuracy
- significant figures
- sources of error
- uncertainty
- traceability

**Data**

Data may be recorded on:

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• worksheets</li> <li>• spreadsheets or databases linked to information management systems</li> </ul> <p>Data may include results of:</p> <ul style="list-style-type: none"> <li>• observations</li> <li>• tests and measurements</li> <li>• surveys</li> </ul> <p>Data may be presented in the form of:</p> <ul style="list-style-type: none"> <li>• graphs</li> <li>• tables</li> <li>• control charts</li> <li>• semi-quantitative observations expressed on a scale (for example, 1 to 4 or + to +++)</li> </ul>
<b>Simple calculations</b>	<p>Simple calculations may be performed with or without a calculator or computer software and may include scientific quantities such as:</p> <ul style="list-style-type: none"> <li>• decimals, fractions, ratios, proportions and percentages</li> <li>• perimeters, areas, volumes and angles</li> <li>• concentration</li> <li>• unit conversion, multiples and submultiples</li> <li>• use of significant figures, rounding off, estimation and approximation</li> <li>• substitution of data in formulae</li> <li>• conversions between SI units</li> <li>• areas (m<sup>2</sup>) and volumes (mL, L, m<sup>3</sup>) of regular shapes (e.g. packaging and moulds)</li> <li>• average mass, mass %, density, specific gravity, moisture, relative and absolute humidity</li> <li>• ratios, such as mass to mass, mass to volume and volume to volume percentages</li> <li>• industry specific ratios, such as g/cm<sup>2</sup>, kg/m<sup>2</sup></li> <li>• concentration (for example, g/100mL, mg/L, mg/(L, dilution mL/L)</li> <li>• statistical values such as mean, median, mode and standard deviation</li> <li>• average count, colonies per swab surface and cell counts (live and dead/total)</li> <li>• process variables, such as pressure, velocity</li> </ul>



<b>RANGE STATEMENT</b>	
	<p>and flow rates</p> <ul style="list-style-type: none"> <li>• % content of moisture, ash, fat, protein, alcohol, sulphur dioxide and trace metals, such as calcium or zinc</li> <li>• food properties, such as % concentration (dry), friability, bitterness, brix, free amino nitrogen, diastatic power, calorific content and yeast viability</li> </ul>
<b>Obvious features and trends in data</b>	<p>Obvious features and trends in data could include:</p> <ul style="list-style-type: none"> <li>• maximum and minimum values</li> <li>• spread of data</li> <li>• increasing/decreasing data, rate of change</li> <li>• outliers, data beyond control limits or normal range</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	<p>OHS and environmental management requirements:</p> <ul style="list-style-type: none"> <li>• all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time</li> <li>• all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>• where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	<b>Data</b>

## Competency field

Competency field	
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## Co-requisite units

Co-requisite units		

## MSL924001A Process and interpret data

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the ability to retrieve data, evaluate formulae and perform scientific calculations, present and interpret information in tables and graphs and keep accurate records. The unit requires personnel to solve problems of limited complexity where the information may be less obvious, but not contradictory, and can be determined by direct reasoning.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to laboratory assistants, field/laboratory technicians and instrument operators in all industry sectors.</p> <p>Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These are found at the end of this unit of competency under the section 'This competency in practice'.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Retrieve and check data	1.1.Store and retrieve data using appropriate files and/or application software 1.2.Verify the quality of data using enterprise procedures 1.3.Rectify errors in data using enterprise procedures
2. Calculate scientific quantities	2.1.Calculate statistical values for given data 2.2.Calculate scientific quantities using given formulae and data and estimate uncertainties 2.3.Ensure calculated quantities are consistent with estimations and expectations 2.4.Report all calculated quantities using the appropriate units and correct number of significant figures
3. Present data in tables, charts and graphs	3.1.Present data in clearly labelled tables and charts 3.2.Graph data using appropriate scales to span the range of data or display trends 3.3.Report all data using the appropriate units and

ELEMENT	PERFORMANCE CRITERIA
	number of significant figures
4. Interpret data in tables, charts and graphs	4.1. Interpret significant features of graphs, such as gradients, intercepts, maximum and minimum values, and limit lines 4.2. Recognise and report trends in data
5. Keep accurate records and maintain confidentiality	5.1. Transcribe information accurately 5.2. Verify the accuracy of records following enterprise procedures 5.3. File and store workplace records in accordance with enterprise procedures 5.4. File all reference documents logically and keep them up-to-date and secured 5.5. Observe enterprise confidentiality standards

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- performing calculations of scientific quantities
- using scientific notation
- applying the concepts of metrology
- applying calculations to the workplace
- coding, recording and checking of data accurately
- presenting accurate results in the required format
- preparing graphs, tables and charts (pie, bar, histogram) and interpreting trends
- preparing and interpreting process control charts
- maintaining the confidentiality of data in accordance with workplace and regulatory requirements

#### Required knowledge

Required knowledge includes:

- concepts of metrology
- the international system of units (SI)
- relevant scientific and technical terminology

**REQUIRED SKILLS AND KNOWLEDGE**

- uncertainty associated with measurement steps
- procedures for coding, entering, storing, retrieving and communicating data
- procedures for verifying data and rectifying mistakes
- converting units involving multiples and submultiples
- significant figures, rounding off, estimating, approximating
- transposing and evaluating formulae
- calculations involving fractions, decimals, proportions and percent
- determining statistical values of data such as mean, median, mode and standard deviation
- procedures for maintaining and filing records, and maintaining security of data

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Assessors should ensure that candidates can:

- code, record and check the documentation of data
- calculate scientific and statistical quantities relevant to the workplace and present accurate results in the required format
- recognise anomalies and trends in data
- maintain the confidentiality of data in accordance with workplace and regulatory requirements
- keep records up-to-date and secure.

**Context of and specific resources for assessment**

This unit of competency is to be assessed in the workplace or simulated workplace environment.

This unit of competency may be assessed with:

- *MSL924002A Use laboratory application software*
- technical units, such as:
  - *relevant MSL973000 series units of competency*
  - *relevant MSL974000 series units of competency.*

Resources may include:

- data sets and records

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• computer and relevant software or laboratory information system</li> <li>• relevant workplace procedures.</li> </ul>
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• review of data worksheets, calculations, computer files (such as spreadsheets, databases, statistical analysis), graphs, tables and/or charts prepared by the candidate</li> <li>• review of records transcribed, maintained or stored by the candidate</li> <li>• feedback from supervisors and peers</li> <li>• questions to assess understanding of relevant procedures and trends in data</li> <li>• observation of the candidate as they process data, file and store records.</li> </ul> <p>In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like environment.</p>
<b>This competency in practice</b>	<p>Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting.</p> <p><b>Manufacturing</b></p> <p>A laboratory assistant in a materials testing laboratory was performing routine tensile tests on samples of vinyl sheet. The assistant converted the readings from the machine to appropriate units using a simple calculation and recorded them in the logbook for that test method. After comparing these test results with previous results for the same type of vinyl material, the assistant found</p>

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that the tensile strength was within the required range. However, it was at the lower rather than the upper end of the range as in previous testing. The assistant discussed the results with the laboratory supervisor. The calibration file for that machine showed that it had been calibrated four months previously and had not needed adjustment. Test results for the same period showed that the machine was giving lower than normal tensile strength readings for the few higher strength materials tested over the last two months. The assistant did some more checks and confirmed this trend. The machine was re-calibrated by the instrument company and the frequency of internal calibration checks by the laboratory assistant was increased. This problem would not have been detected or corrected as quickly without the assistant's initiative and competent recording and retrieval of test results and calibration information.

**Biomedical**

A technical assistant works in a team with laboratory scientists and technical officers. Analyses of electrolytes are routine and occur in large volume throughput even in this small diagnostic laboratory. The assistant is assigned tasks that contribute to the overall production of results, their reporting and the quality control evaluation of the results. One task is the daily collection of the electrolyte analyses from the internal quality control area. In this case, the technical assistant plots the results on a Levy-Jennings graph and computes the mean value. The assistant reports immediately to the supervisor if the plots show deviations which indicate out-of-control results.

**Food processing**

Cooking and holding temperatures greatly affect the nutrient composition of processed foods. The CSIRO provides documentation of nutrient losses with temperature variations. For cooked foods, there is the added problem of microbial growth in the so called 'danger zone'. In one laboratory, the technical assistant conducts simple testing of foods using a temperature probe and also measures the temperature of the storage areas, holding trays or bainmaries and individual tray units. Careful documentation of the temperatures of the foods and times of measurement must be kept. The technical assistant supplies the data as tables and a plot



**EVIDENCE GUIDE**

	of temperature versus time. For quality control purposes, the assistant is directed to use a cross reference of mercury thermometer readings versus probe measurements for ambient temperature. The assistant plots the thermometer readings against the probe readings and reports to the supervisor if the plot shows a slope other than the defined value.
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Codes of practice**

Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used

**Standards, codes, procedures and/or enterprise requirements**

Standards, codes, procedures and/or enterprise requirements may include:

- Australian and international standards such as:
  - AS ISO 1000-1998 The international system of units (SI) and its application
  - ISO 5725 Accuracy (trueness and precision) of measurement methods and results
  - ISO/IEC Guide 98-3:2008 Uncertainty of measurement - Part 3 Guide to the expression of uncertainty in measurement (GUM)
- Eurachem/CITAC Guide CG4 Quantifying uncertainty in analytical measurement
- national measurement regulations and guidelines
- National Association of Testing Authorities (NATA) Technical notes
- material safety data sheets (MSDS)

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• equipment manuals and warranty, supplier catalogues and handbooks</li> <li>• sampling and test procedures and standard operating procedures (SOPs)</li> <li>• enterprise quality manual and customer quality plan</li> <li>• validation of the equipment and associated software where applicable</li> <li>• validation of spreadsheets developed in-house for assay and process calculations</li> </ul>
<b>Concepts of metrology</b>	<p>Concepts of metrology may include:</p> <ul style="list-style-type: none"> <li>• that all measurements are estimates</li> <li>• measurements belong to a population of measurements of the measured parameters</li> <li>• repeatability</li> <li>• precision</li> <li>• accuracy</li> <li>• significant figures</li> <li>• sources of error</li> <li>• uncertainty</li> <li>• traceability</li> </ul>
<b>Data</b>	<p>Data may be recorded on:</p> <ul style="list-style-type: none"> <li>• worksheets</li> <li>• spreadsheets</li> <li>• databases linked to information management systems</li> </ul> <p>Data may include results of:</p> <ul style="list-style-type: none"> <li>• observations</li> <li>• tests and measurements</li> <li>• analyses</li> <li>• surveys</li> <li>• quality assurance and control assessments</li> </ul> <p>Data may be presented in the form of:</p> <ul style="list-style-type: none"> <li>• graphs</li> <li>• tables</li> <li>• histograms</li> <li>• pie charts</li> <li>• bar charts</li> <li>• control charts</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• semi-quantitative observations and be expressed on a scale (for example, 1 to 4 or + to +++)</li> </ul>
<b>Calculations</b>	<p>Calculations may be performed:</p> <ul style="list-style-type: none"> <li>• with or without a calculator</li> <li>• using computer software, spreadsheets, databases and statistical packages</li> </ul>
<b>Calculations of scientific quantities</b>	<p>Calculated of scientific quantities may include:</p> <ul style="list-style-type: none"> <li>• converting units involving multiples and submultiples</li> <li>• significant figures, round off, estimate and approximate</li> <li>• transposing and evaluating formulae</li> <li>• fractions, decimals, proportions and percentages</li> <li>• perimeters and angles</li> <li>• percentage and absolute uncertainties in measurements and test results</li> <li>• statistical values of data, such as mean, median, mode and standard deviation</li> <li>• areas (<math>m^2</math>) and volumes (<math>mL</math>, <math>L</math>, <math>m^3</math>) of regular shapes, such as packaging</li> <li>• dose (<math>mg</math>), average mass, mass percentage, density, specific gravity, moisture, relative and absolute humidity, viscosity and permeability</li> <li>• ratios, such as mass to mass, mass to volume and volume to volume percentages</li> <li>• concentration, such as molarity, <math>g/100mL</math>, <math>mg/L</math>, <math>mg/L</math>, ppm, ppb, dilution <math>mL/L</math></li> <li>• average count, colonies per swab surface and cell counts, such as live and dead/total</li> <li>• process variables, such as pressure, gauge pressure, velocity and flow rates</li> <li>• biological oxygen demand (BOD), chemical oxygen demand (COD) and total organic carbons (TOC)</li> <li>• % content of moisture, ash, fat, protein, alcohol, sulphur dioxide and trace metals, such as calcium or zinc</li> <li>• food properties, such as % concentration (dry), friability, bitterness, brix, free amino nitrogen, diastatic power, calorific content and yeast</li> </ul>

<b>RANGE STATEMENT</b>	
	viability <ul style="list-style-type: none"> <li>• stress, strain, moduli and force</li> </ul>
<b>Records</b>	Records could include information associated with: <ul style="list-style-type: none"> <li>• purchase of equipment and materials, service records</li> <li>• safety procedures</li> <li>• history of calibration and test results</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	OHS and environmental management requirements: <ul style="list-style-type: none"> <li>• all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time</li> <li>• all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>• where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Data
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### Competency field

<b>Competency field</b>	
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## Co-requisite units

Co-requisite units		

## MSL924002A Use laboratory application software

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the ability to use and apply computer application software in the laboratory, field and production plants for analysis and reporting.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to technical officers and laboratory technicians in all industry sectors. It describes the application and use of software packages in the context of laboratory or field work. Typically this software would be for the storage, retrieval, analysis and display of information. There is no expectation that candidates would be able to customise the software to meet specific needs.</p> <p>Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These can be found at the end of this unit of competency under the section 'This competency in practice'.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	
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<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Access application software	1.1. Identify software required for the task 1.2. Open software from a personal computer or network terminal
2. Use software for specified purposes	2.1. Input a range of scientific data into a computing system 2.2. Conduct searches for the retrieval of required data 2.3. Use application features for efficient computation 2.4. Construct data sets and databases for numerical and graphical analyses
3. Produce reports of retrieved data and/or processed data	3.1. Analyse data using features of the software package 3.2. Select options for constructing data reports 3.3. Print the results of data analyses using features of the software package 3.4. Integrate data from diverse application software

ELEMENT	PERFORMANCE CRITERIA
	units in a report 3.5. Report the outcomes and rationale for computerised database searches where appropriate 3.6. Reference computerised data sources according to the style requirements of the enterprise
4. Perform simple record housekeeping	4.1. Backup worked data according to enterprise standard procedures 4.2. Maintain archive data according to enterprise standard procedures 4.3. Maintain hard copy data according to standard enterprise operating procedures 4.4. Apply approved antivirus software and general standard quarantine procedures

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- using software application features and instructions to input, save, analyse, sort, retrieve and display the records or data
- using software for the analysis, reporting and management of laboratory and field data and information
- using in-house software manuals to augment skills and solve operational problems
- selecting the most appropriate software package for the task
- backing up electronic storage
- using scanning software to protect in-house software and data

#### Required knowledge

Required knowledge includes:

- applications of the software package
- terminology associated with the software packages
- basic knowledge of the types of spreadsheet, database, data analysis packages that are available
- application of specific software package features to relevant laboratory tasks



**REQUIRED SKILLS AND KNOWLEDGE**

- relationship between the protocol for data input and file storage of the data
- general file and record maintenance
- relevant health, safety and environment requirements

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Assessors should ensure that candidates can:

- select the most appropriate software package for the task from the suite of software applications available
- use routine instruction sets of the software package to complete the task
- use software to analyse data such as quality control and instrument performance characteristics
- back up electronic storage
- use scanning software to protect in-house software and data.

**Context of and specific resources for assessment**

This unit of competency is to be assessed in the workplace or simulated workplace environment.

This unit of competency may be assessed with:

- *MSL925001A Analyse data and report results*
- *relevant MSL974000 series units of competency*
- *relevant MSL975000 series units of competency.*

Resources may include:

- access to a computer network or a personal computer
- software packages that include a database package, spreadsheet, statistical analysis and simple graphics output
- input and output data.

**Method of assessment**

The following assessment methods are suggested:

- review of analysis tasks linking test results to the

**EVIDENCE GUIDE**

	<p>generation of meaningful reports by the candidate</p> <ul style="list-style-type: none"> <li>• review of simple statistical and/or graphical analysis of quality control data completed by the candidate</li> <li>• oral and written exercises in preparation for keyboard activities.</li> </ul> <p>In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like environment.</p>
<b>This competency in practice</b>	<p>Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting.</p> <p><b>Manufacturing</b></p> <p>A laboratory technician performs tests on starting materials, such as appearance, identity, melting point, moisture content, trace elements, sulfated ash and assay. The results are entered in a computer database that allows trend analysis to be carried out on the test results for materials from each supplier. As a result, the technician may recognise when a supplier is experiencing potential problems with their production process. The technician would then notify the supervisor and/or supplier that there is a high probability that future supplies may be out of specification and that constant monitoring of starting materials will be required.</p> <p><b>Biomedical</b></p> <p>An important task of the technical officer in a pathology laboratory is to perform statistical analysis for quality control purposes. The software package provides for the input of data, analysis of mean value and variance as well</p>

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	<p>as graphical reporting. The technical officer uses a dedicated software package or a package within the customised pathology data management system in order to assess the validity of the results produced from the analytical instrument.</p> <p><b>Food processing</b></p> <p>A technical officer is required to perform a nutrient analysis of a food product, the results of which will be displayed on the food container. The output from the nutrient analysis is fed into a software program that calculates the levels of these components 'per portion' and 'per 100g' and displays the information in the correct tabular format. The software package is designed so that the technical officer can input new data or access existing data and manipulate that data to provide a full and accurate nutrient display or report.</p>
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b>Codes of practice</b>	Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used
<b>Information sources</b>	<p>Information sources may include:</p> <ul style="list-style-type: none"> <li>• manuals of enterprise standard instructions</li> <li>• hardware manuals</li> <li>• software manuals</li> <li>• training materials to orient software to enterprise needs</li> <li>• on-screen instructions embedded in the software</li> </ul>
<b>Software packages</b>	Software packages may include:

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• word processing</li> <li>• spreadsheets</li> <li>• databases</li> <li>• graphical and statistical analysis</li> <li>• laboratory information systems</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	<p>OHS and environmental management requirements:</p> <ul style="list-style-type: none"> <li>• all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time</li> <li>• all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>• where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Data
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### Competency field

<b>Competency field</b>	
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### Co-requisite units

<b>Co-requisite units</b>	

<b>Co-requisite units</b>		

## MSL933001A Maintain the laboratory/field workplace fit for purpose

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the general cleaning of work surfaces, cleaning and storage of equipment and the monitoring of laboratory stocks under direct supervision.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to laboratory assistants and instrument operators working in all industry sectors.</p> <p>This unit of competency forms a major part of the work of laboratory assistants. They work in accordance with work instructions and standard operating procedures which incorporate all relevant aspects of occupational health and safety (OHS) legislation and the codes, guidelines, regulations and Australian standards applying to environmental hazards and dangerous goods.</p> <p>Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These are found at the end of this unit of competency under the section 'This competency in practice'.</p>
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### Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Clean work preparation areas	1.1.Clean preparation areas using appropriate cleaning agents and equipment according to enterprise procedures 1.2.Remove spillages, if they occur, using appropriate agents, personal protective equipment and enterprise procedures 1.3.Collect and segregate wastes in accordance with enterprise procedures, relevant codes and regulations
2. Clean and store equipment	2.1.Collect used equipment, inspect for faults and, where necessary, remove from service 2.2.Use appropriate agents, apparatus and techniques to clean equipment 2.3.Store clean equipment in the designated locations and manner

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
3. Monitor stocks of materials and equipment	3.1. Perform stock checks and maintain records of usage as directed 3.2. Store labelled stocks for safe and efficient retrieval 3.3. Inform appropriate personnel of impending stock shortages to maintain continuity of supply
4. Maintain a safe work environment	4.1. Use established safe work practices and personal protective equipment to ensure personal safety and that of other personnel 4.2. Report potential hazards and/or maintenance issues in own work area to designated personnel 4.3. Minimise the generation of wastes and environmental impacts 4.4. Dispose of wastes in accordance with enterprise procedures, relevant codes and regulations

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- safely cleaning work preparation areas and equipment using appropriate cleaning agents, equipment and techniques
- safely removing spillages and disposing of wastes
- minimising the exposure to hazards of self, others and the laboratory
- safely storing equipment and materials using enterprise procedures, relevant codes and guidelines
- monitoring and reporting stock levels and the condition of laboratory materials and equipment
- keeping accurate, up-to-date records
- reporting potential hazards and maintenance issues using enterprise procedures

#### Required knowledge

Required knowledge includes:

- enterprise procedures for the cleaning of work preparation areas, materials and equipment



**REQUIRED SKILLS AND KNOWLEDGE**

- storage requirements for specific materials and equipment
- enterprise procedures for minimisation and disposal of waste
- enterprise procedures for monitoring of laboratory stocks
- information contained in material safety data sheets (MSDS) for materials handled regularly during the performance of maintenance tasks
- relevant health, safety and environment requirements

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment****Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Assessors should ensure that candidates can:

- follow enterprise procedures, relevant codes and guidelines when maintaining the laboratory/field workplace
- work safely and minimise exposure of hazards to self, others and the laboratory
- keep accurate up-to-date records and report potential hazards and maintenance issues.

**Context of and specific resources for assessment**

This unit of competency is to be assessed in the workplace or simulated workplace environment.

This unit of competency may be assessed with:

- *MSL943002A Participate in laboratory/field workplace safety.*

Resources may include:

- access to work preparation areas, stocks, materials and equipment
- cleaning, decontamination and/or disinfection agents and equipment
- personal protective equipment
- stock order forms, labels and records/forms.

**Method of assessment**

The following assessment methods are suggested:

- observation of the candidate's techniques for cleaning

<b>EVIDENCE GUIDE</b>	
	<p>and/or removal of spillages and waste disposal</p> <ul style="list-style-type: none"> <li>• review of stock records completed by the candidate</li> <li>• feedback from supervisors and peers</li> <li>• questioning to assess underpinning knowledge of regulations and procedures where direct observation is difficult (such as dealing with hazards) and choice of materials and equipment.</li> </ul> <p>In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like environment.</p>
<b>This competency in practice</b>	<p>Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and show its relevance in a workplace setting.</p> <p><b>Manufacturing</b></p> <p>On receipt of a bulk container of cleaning or sanitising agent, a laboratory assistant always attached to the container a description of its method of use. The assistant also attached a list of the surfaces, apparatus, utensils and machines that could be safely treated with that chemical agent as outlined in the company's quality manual. This practice reduced the likelihood of misuse of the chemical, wastage, damage to equipment and inadequate cleaning and sanitation.</p> <p><b>Biomedical and environmental</b></p> <p>Laboratory assistants and technical officers routinely examine fluids for micro-organisms using a microscope. They examine fluids, such as urine, seawater, chlorinated pool water, water from catchment areas and bottled water. To maintain microscopes in working order, they</p>

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	<p>thoroughly clean the stage, oculars and each objective after use and sometimes between samples. The 100X objective requires particular care since this is the oil immersion objective. The oil is slightly acidic and will slowly corrode the objective if it is not cleaned thoroughly and regularly. After using the 100X objective they also take care not to drag the other objectives through the oil.</p> <p><b>Food processing</b></p> <p>A laboratory assistant regularly uses standard pH solutions to calibrate the laboratory's pH meters. The assistant is aware from the label that the shelf life of these solutions after opening is two months and records the opening and disposal dates on the container. The assistant is also aware that the shelf life of unopened buffer solutions is twelve months from the date of manufacture and monitors this by noting the production date on the bottle. Requests for stock replacement take into account the normal rate of use of these buffer solutions so that unopened bottles have not reached their expiry date before use.</p>
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Codes of practice**

Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used

**Standards, codes, procedures and/or enterprise requirements**

Standards, codes, procedures and/or enterprise requirements may include:

- Australian and international standards such as:
  - AS 1678 Emergency procedure guide - Transport

**RANGE STATEMENT**

- AS 1940-2004 Storage and handling of flammable and combustible liquids
- AS 2252 Biological safety cabinets
- AS 3780-2008 The storage and handling of corrosive substances
- AS 4332-2004 The storage and handling of gases in cylinders
- AS ISO 17025-2005 General requirements for the competence of testing and calibration laboratories
- AS/NZS 1269 Set:2005 Occupational noise management set
- AS/NZS 1337 Eye protection
- AS/NZS 2161 Set:2008 Occupational protective gloves set
- AS/NZS 2210:1994 Occupational protective footwear
- AS/NZS 2243 Set:2006 Safety in laboratories set
  - AS/NZS 2243.8:2006 Safety in laboratories - Fume cupboards
  - AS/NZS 2865 Set:2005 Safe working in a confined space set
  - AS/NZS 2982.1:1997 Laboratory design and construction - General requirements
  - AS/NZS 4187:2003 Cleaning, disinfecting and sterilising reusable medical and surgical instruments and equipment, and maintenance of associated environments in health care facilities
  - AS/NZS 4452:1997 The storage and handling of toxic substances
- AS/NZS 4501 Set:2008 Occupational clothing set
  - AS/NZS ISO 14000 Set:2005 Environmental management standards set
- animal welfare legislation and codes of practice
- Australian code of good manufacturing practice for medicinal products (GMP)
- Australian Dangerous Goods Code
- Australian Quarantine and Inspection Service (AQIS) Export Control (Orders) Regulations

**RANGE STATEMENT**

	<p>1982</p> <ul style="list-style-type: none"> <li>• Australian Quarantine and Inspection Service (AQIS) Import Guidelines</li> <li>• Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Codes of Practice</li> <li>• enterprise or standard operating procedures (SOPs)</li> <li>• equipment manuals and warranties, supplier catalogues and handbooks</li> <li>• gene technology regulations</li> <li>• guide to physical containment levels and facility types</li> <li>• HB 9-1994 Occupational personal protection</li> <li>• material safety data sheets (MSDS)</li> <li>• National Code of Practice for the labelling of workplace substances (NOHSC:2012 (1994))</li> <li>• national environment protection measures</li> <li>• National Health and Medical Research Council (NHMRC) Guidelines</li> <li>• national measurement regulations and guidelines</li> <li>• occupational health and safety (OHS) national standards and codes of practice</li> <li>• principles of good laboratory practice (GLP)</li> <li>• Therapeutic Goods Regulations 1009</li> </ul>
<p><b>Equipment, material procedures and facilities</b></p>	<p>Equipment, material procedures and facilities may include:</p> <ul style="list-style-type: none"> <li>• animal cages</li> <li>• autoclaves</li> <li>• balances</li> <li>• blenders, centrifuges and separating equipment</li> <li>• brushes</li> <li>• cell counters and staining machines</li> <li>• colorimeters/spectrometers and polarimeters</li> <li>• compaction rammers and soil classification equipment</li> <li>• conductivity meters and pH meters</li> <li>• dishwashers, refrigerators, freezers, ovens, microwave ovens, incubators and water baths</li> <li>• disintegration apparatus, thermometers and incubators</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• fume hoods, biohazard containers and biological safety cabinets</li> <li>• gas cylinders</li> <li>• glassware, plastic ware; glass, plastic and quartz cuvettes</li> <li>• hotplates, mantles, burners and muffle furnaces</li> <li>• instrument chart recorders, penetrometers, force measuring equipment and tensiometers</li> <li>• light and fluorescence microscopes</li> <li>• melting point apparatus, viscometers and hardness testing equipment</li> <li>• microtomes and tissue processors</li> <li>• mixing and separating equipment such as centrifuges, riffers and splitters and mixers</li> <li>• noise meters and blasting meters</li> <li>• optical microscopes</li> <li>• pipettes, burettes and volumetric glassware</li> <li>• shovels, scoops, plates, rods, cylinder moulds and buckets</li> <li>• steel ruler/tapes and spirit levels</li> <li>• thermometers, thermohygrographs, instrument chart recorders, hydrometers, pH meters and ion-selective electrodes</li> <li>• ultrasonic cleaners</li> <li>• vehicles</li> </ul>
<b>Typical materials</b>	<p>Typical materials may include:</p> <ul style="list-style-type: none"> <li>• consumable items, such as syringes, pipette tips, weigh boats</li> <li>• disposable clothing and personal protective equipment</li> <li>• distilled water, reagents, chemicals, disinfectants, detergents, agar media and plates</li> <li>• equipment spares, such as fuses, bulbs and batteries</li> <li>• oils/lubricants, fuels, industrial gases and cryogenics, such as dry ice and liquid nitrogen</li> <li>• paper and stationery</li> <li>• reference samples and standards</li> </ul>
<b>Maintenance</b>	<p>Maintenance may include:</p> <ul style="list-style-type: none"> <li>• checking serviceability before storage</li> <li>• cleaning</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• prevention of contamination</li> <li>• storing</li> </ul>
<b>Cleaning requirements</b>	<p>Cleaning requirements may include:</p> <ul style="list-style-type: none"> <li>• decontamination and/or disinfection</li> <li>• hygiene monitoring</li> <li>• minimising environmental impacts</li> <li>• operation of automatic cleaning apparatus, such as pipette washer, ultrasonic cleaners and dishwashers</li> <li>• sterilisation and disposal of wastes using boiling, high pressure air or steam, microwaves, chemicals, gas, filtration, ultraviolet radiation and autoclaving</li> <li>• use of specialised techniques, such as chromic acid baths and soaking in hypochlorite</li> </ul>
<b>Preparation areas</b>	<p>Preparation areas may include:</p> <ul style="list-style-type: none"> <li>• benches</li> <li>• fume cupboards</li> <li>• sheds</li> <li>• sinks</li> </ul>
<b>Agents for cleaning</b>	<p>Agents for cleaning may include:</p> <ul style="list-style-type: none"> <li>• cleaning solutions</li> <li>• decontaminants</li> <li>• organic solvents</li> </ul>
<b>Spillages</b>	<p>Spillages may include:</p> <ul style="list-style-type: none"> <li>• chemicals</li> <li>• radioactive materials</li> <li>• biologically active materials</li> </ul>
<b>Wastes</b>	<p>Wastes may include:</p> <ul style="list-style-type: none"> <li>• broken glass</li> <li>• batteries</li> <li>• disposable personal protective equipment</li> <li>• excess test samples</li> <li>• micro-organisms</li> <li>• plastic and metals</li> <li>• sharps</li> <li>• solvents</li> <li>• spent reagents</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• spent samples and test pieces</li> <li>• used containers, boxes, bags and palettes</li> </ul>
<b>Stock records</b>	<p>Stock records may include:</p> <ul style="list-style-type: none"> <li>• calibration and maintenance history</li> <li>• data sheets</li> <li>• handbooks, warranty documents, catalogues, manuals and MSDS</li> <li>• records of usage, loans and breakages</li> </ul>
<b>Communication</b>	<p>Communication could involve other people, such as:</p> <ul style="list-style-type: none"> <li>• laboratory, production, administration and cleaning staff</li> <li>• internal/external contractors</li> <li>• emergency personnel</li> </ul>
<b>Maintenance issues</b>	<p>Maintenance issues could involve:</p> <ul style="list-style-type: none"> <li>• checking materials and equipment are fit for purpose</li> <li>• equipment malfunction</li> <li>• hygiene issues</li> <li>• potential hazards, incidents and emergencies</li> <li>• recycling and waste disposal</li> <li>• spillages, leakages, breakages and contamination</li> <li>• stock requirements and shortages</li> </ul>
<b>Hazards</b>	<p>Hazards may include:</p> <ul style="list-style-type: none"> <li>• aerosols from broken centrifuge tubes and pipetting</li> <li>• chemicals, such as acids, heavy metals, pesticides and hydrocarbons</li> <li>• crushing, entanglement and cuts associated with moving machinery or falling objects</li> <li>• cryogenics, such as dry ice and liquid nitrogen</li> <li>• electric shock</li> <li>• fluids under pressure, such as steam and industrial gas cylinders</li> <li>• manual handling, working at heights and working in confined spaces</li> <li>• microbiological organisms and agents associated with soil, air, water, blood and blood</li> </ul>



<b>RANGE STATEMENT</b>	
	<p>products, and human or animal tissue and fluids</p> <ul style="list-style-type: none"> <li>• occupational overuse syndrome, slips, trips and falls</li> <li>• pedestrian and vehicular traffic</li> <li>• sharps, broken glassware and hand tools</li> <li>• solar radiation, dust and noise</li> <li>• sources of ignition, flammable liquids and gases</li> </ul>
<b>Established safe work practices</b>	<p>Established safe work practices may include:</p> <ul style="list-style-type: none"> <li>• applying containment procedures through the use of appropriate equipment, such as biohazard containers, laminar flow cabinets, Class I, II and III biohazard cabinets and Class PCII, PCIII, and PCIV physical containment facilities</li> <li>• ensuring access to service shut-off points</li> <li>• following established manual handling procedures for tasks involving manual handling</li> <li>• handling and storage of all hazardous materials and equipment in accordance with labelling, MSDS and manufacturer's instructions</li> <li>• identifying and reporting operating problems or equipment malfunctions</li> <li>• labelling of samples, reagents, aliquoted samples and hazardous materials</li> <li>• recognising and observing hazard warnings and safety signs</li> <li>• reporting to appropriate personnel of abnormal emissions, discharges and airborne contaminants, such as noise, light, solids, liquids, water/waste water, gases, smoke, vapour, fumes, odour and particulates</li> <li>• use of MSDS</li> <li>• use of personal protective equipment, such as hard hats, hearing protection, gloves, safety glasses, goggles, face guards, coveralls, gown, body suits, respirators and safety boots</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	<p>OHS and environmental management requirements:</p> <ul style="list-style-type: none"> <li>• all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through</li> </ul>

**RANGE STATEMENT**

	<p>state/territory or federal legislation - these requirements must not be compromised at any time</p> <ul style="list-style-type: none"> <li>• all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>• where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Maintenance
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**Competency field**

<b>Competency field</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

## MSL933004A Perform calibration checks on equipment and assist with its maintenance

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the ability to perform setup, pre-use and in-house calibration checks on equipment and assist with its maintenance.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to laboratory assistants working in all industry sectors.</p> <p>Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These are found at the end of this unit of competency under the section 'This competency in practice'.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Perform setup and pre-use checks of laboratory equipment	1.1. Perform laboratory equipment setup and pre-use checks in accordance with enterprise procedures 1.2. Perform safety checks in accordance with relevant enterprise and instrumental procedures 1.3. Identify faulty or unsafe components and equipment and report to appropriate personnel 1.4. Complete instrument log books/records to meet enterprise requirements
2. Perform calibration checks	2.1. Start up equipment according to operating procedures 2.2. Use specified standards for calibration check 2.3. Check equipment as per calibration procedures and schedules 2.4. Record all calibration data accurately and legibly 2.5. Compare data with specifications and/or previous records to identify non-compliant equipment 2.6. Quarantine out of calibration equipment
3. Assist with equipment maintenance	3.1. Ensure all equipment work areas are clean during and after equipment use 3.2. Perform basic maintenance in accordance with enterprise procedures 3.3. Clean and store equipment according to enterprise

ELEMENT	PERFORMANCE CRITERIA
	and/or manufacturer's specifications/procedures 3.4. Identify and replace, repair or dispose of damaged/worn equipment as appropriate
4. Maintain records	4.1. Record and report information on unsafe or faulty equipment according to enterprise procedures

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- performing setup, pre-use checks and shutdown procedures
- performing calibration checks of basic equipment using standard procedures
- obtaining readings of the required accuracy and precision
- identifying non-compliant equipment from specifications and/or previous checks
- recognising non-standard behaviour of instruments
- assisting with maintaining equipment in working order by performing basic maintenance tasks
- following all relevant occupational health and safety (OHS) requirements
- following enterprise recording and reporting procedures

#### Required knowledge

Required knowledge includes:

- operational principles and methods for equipment use
- basic sources of error in equipment operation and their control
- role and importance of correct calibration
- basic equipment maintenance procedures
- enterprise communication and reporting procedures
- relevant OHS and environment requirements

## Evidence Guide

### EVIDENCE GUIDE

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Assessors should ensure that candidates can:</p> <ul style="list-style-type: none"> <li>• perform setup pre-use checks and shutdown procedures</li> <li>• perform calibration checks of basic equipment using standard procedures</li> <li>• obtain readings of the required accuracy and precision</li> <li>• recognise non-standard behaviour of instruments</li> <li>• assist with maintaining equipment in working order by performing basic maintenance tasks</li> <li>• follow all relevant OHS requirements</li> <li>• follow enterprise recording and reporting procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>This unit of competency is to be assessed in the workplace or simulated workplace environment.</p> <p>This unit of competency may be assessed with:</p> <ul style="list-style-type: none"> <li>• <i>MSL973001A Perform basic tests.</i></li> </ul> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>• standard laboratory equipped with appropriate equipment and reference materials</li> <li>• enterprise procedures and standard methods, equipment manuals</li> <li>• calibration check standards and procedures</li> <li>• maintenance procedures.</li> </ul>
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• review of the quality of test data/results achieved by the candidate over time</li> <li>• inspection of records and workplace documentation completed by the candidate</li> <li>• feedback from peers and supervisors</li> <li>• observation of the candidate performing calibration checks and basic maintenance tasks</li> </ul> <p>In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess</p>

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	<p>directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like environment.</p>
<b>This competency in practice</b>	<p>Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting.</p> <p><b>Manufacturing and construction materials testing</b></p> <p>Laboratory assistants perform calibration checks and operate a range of laboratory equipment to ensure the quality of products. For example, the labelling on fertilisers specifies the total percentage of nitrogen [N or N(t)], the total percentage of phosphorus [P or P(t)] in all forms and the total percentage of potassium [K]. A 5-10-5 fertiliser contains 5% N, 10% P and 5% K. During the manufacture of fertiliser, an assistant in a quality control laboratory measures the concentration of nitrogen, phosphorus and potassium using standard analytical methods to ensure that the final products are within prescribed specifications. The assistant must pay particular attention to the equipment calibration check. If the equipment is out of calibration no amount of testing skill will result in accurate results. Selling out of specification fertiliser could result in a product recall or claims from users against the manufacturer.</p> <p><b>Biomedical and environmental services</b></p> <p>Laboratory assistants are quite often involved in routine collections and culturing of cells. Bacterial cells are often cultured and grown to large populations in order to provide material from which to extract biological materials. A quick method of determining when the cell growth has yielded enough cells is to determine the absorbance of the cell culture by measuring absorbance at 600 nm. An absorbance of 1 to 1.5 will give a good</p>

**EVIDENCE GUIDE**

	<p>cell harvest. This method relies on the assistant being able to perform calibration checks on an ultraviolet-visible (UV-VIS) spectrometer.</p> <p><b>Food and beverage processing</b></p> <p>A laboratory assistant in the quality control laboratory of a fruit canning company is required to perform calibration checks and maintain and operate a range of equipment, including a pH meter. Canned pears, for example, are routinely checked for pH to ensure safe heat processing. While checking the calibration of the pH meter with the standard buffer solutions, the laboratory assistant found that stable pH readings could not be obtained. On closer inspection, it was found that the pH probe was damaged. This was reported to the supervisor. The probe was replaced and the meter was re-checked for calibration in readiness for routine testing.</p> <p><b>Construction Materials Testing</b></p> <p>A laboratory assistant has been allocated the task of performing in-house calibration checks on the laboratory's equipment. He/she has previously prepared a wall chart for the year that shows when the required calibration checks fall due in accordance with the NATA Field Application Document (FAD) for construction materials testing. The assistant consults the wall chart and notes that this month's calibration checks include checking the:</p> <ul style="list-style-type: none"> <li>• ice points of the liquid-in-glass thermometers</li> <li>• working sieves against the reference set</li> <li>• compaction hammers for compliance with specifications</li> <li>• repeatability of the balances.</li> </ul> <p>A full calibration of one of the laboratory's nuclear density gauges is also required. He/she then telephones the local calibration authority to book the nuclear gauge in for calibration and prepares to perform the other in-house checks.</p>
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**Range Statement**

**RANGE STATEMENT**



**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Codes of practice**

Where reference is made to Industry codes of practice and Australian/international standards, it is expected the latest version will be used

**Standards, codes, procedures and/or enterprise requirements**

Standards, codes, procedures and/or enterprise requirements may include:

- Australian and international standards such as:
  - AS/NZS 2243 Set:2006 Safety in laboratories set
  - AS ISO 17025-2005 General requirements for the competence of testing and calibration laboratories
- Australian code of good manufacturing practice for medicinal products (GMP)
- National Association of Testing Authorities (NATA) Field Application Documents (FADs)
- calibration check and maintenance schedules
- enterprise recording and reporting procedures
- equipment manuals
- equipment start up, operation and shutdown procedures
- material safety data sheets (MSDS)
- material, production and product specifications
- national measurement regulations and guidelines
- OHS national standards and codes of practice
- principles of good laboratory practice (GLP)
- production and laboratory schedules
- quality manuals
- standard operating procedures (SOPs)

**Typical equipment and instruments**

Typical equipment and instruments may include:

- balances, pipettes, burettes and volumetric glassware
- colorimeters/spectrometers and polarimeters
- compaction rammers and soil classification

<b>RANGE STATEMENT</b>	
	<p>equipment</p> <ul style="list-style-type: none"> <li>• conductivity meters and pH meters</li> <li>• disintegration apparatus, thermometers, incubators and water baths</li> <li>• instrument chart recorders, penetrometers, force measuring equipment and tensiometer</li> <li>• melting point apparatus, viscometers and hardness testing equipment</li> <li>• mixing and separating equipment such as centrifuges, riffers and splitters, and mixers</li> <li>• noise meters and blasting meters</li> <li>• optical microscopes</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	<p>OHS and environmental management requirements:</p> <ul style="list-style-type: none"> <li>• all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time</li> <li>• all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>• where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Maintenance
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## Competency field

<b>Competency field</b>	
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## Co-requisite units

Co-requisite units		

## MSL934002A Apply quality system and continuous improvement processes

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the exercise of good laboratory practice and effective participation in quality improvement teams. Personnel are required to ensure the quality and integrity of their own work, detect non-conformances and work with others to suggest improvements in productivity and quality.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to laboratory technicians working in all industry sectors who contribute to quality improvements in areas or processes associated with their own job function and/or specialisation. This unit of competency is relevant to experienced technical officers who may work individually or as part of a team.</p> <p>Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These are found at the end of this unit of competency under the section 'This competency in practice'.</p>
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### Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Satisfy quality system requirements in daily work	1.1. Access information on quality system requirements for own job function 1.2. Record and report quality control data in accordance with quality system 1.3. Follow quality control procedures to ensure products, or data, are of a defined quality as an aid to acceptance or rejection 1.4. Recognise and report non-conformances or problems 1.5. Conduct work in accordance with sustainable energy work practices 1.6. Promote sustainable energy principles and work practices to other workers
2. Analyse opportunities	2.1. Compare current work practices, procedures and

ELEMENT	PERFORMANCE CRITERIA
for corrective and/or optimisation action	<p>process or equipment performance with requirements and/or historical data or records</p> <p>2.2. Recognise variances that indicate abnormal or sub-optimal performance</p> <p>2.3. Collect and/or evaluate batch and/or historical records to determine possible causes for sub-optimal performance</p> <p>2.4. Use appropriate quality improvement techniques to rank the probabilities of possible causes</p>
3. Recommend corrective and/or optimisation actions	<p>3.1. Analyse causes to predict likely impacts of changes and decide on the appropriate actions</p> <p>3.2. Identify required changes to standards and procedures and training</p> <p>3.3. Report recommendations to designated personnel</p>
4. Participate in the implementation of recommended actions	<p>4.1. Implement approved actions and monitor performance following changes to evaluate results</p> <p>4.2. Implement changes to systems and procedures to eliminate possible causes</p> <p>4.3. Document outcomes of actions and communicate them to relevant personnel</p>
5. Participate in the development of continuous improvement strategies	<p>5.1. Review all relevant features of work practice to identify possible contributing factors leading to sub-optimal performance</p> <p>5.2. Identify options for removing or controlling the risk of sub-optimal performance</p> <p>5.3. Assess the adequacy of current controls, quality methods and systems</p> <p>5.4. Identify opportunities to continuously improve performance</p> <p>5.5. Develop recommendations for continual improvements of work practices, methods, procedures and equipment effectiveness</p> <p>5.6. Consult with appropriate personnel to refine recommendations before implementation of approved improvement strategies</p> <p>5.7. Document outcomes of strategies and communicate them to relevant personnel</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- applying problem solving techniques and strategies
- applying statistical analysis and statistical sampling procedures
- detecting non-conforming products or services in the work area
- documenting and reporting information about quality
- contributing effectively within a team to recognise and recommend improvements in productivity and quality
- implementing and monitoring improved practices and procedures

#### Required knowledge

Required knowledge includes:

- specifications for laboratory products and services in the candidate's work area
- quality requirements associated with the individual's job function and/or work area
- scientific and technical knowledge underpinning the processes, procedures, equipment and instrumentation associated with the candidate's work tasks and duties
- workplace procedures associated with the candidate's regular technical duties
- sustainable energy principles
- relevant health, safety and environment requirements
- layout of the enterprise, divisions and laboratory
- organisational structure of the enterprise
- lines of communication
- role of laboratory services to the enterprise and customers

#### Specific industry

Additional knowledge requirements may apply for different industry sectors. For example:

Biomedical sector:

- ethical requirements dealing with patient confidentiality
- animal welfare legislation and codes of practice
- guidelines for pre-transfusion testing
- gene technology regulations for large scale, small scale and planned release of genetically manipulated organisms

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Assessors should ensure that candidates can:</p> <ul style="list-style-type: none"> <li>• use the enterprise's quality systems and business goals as a basis for decision making and action</li> <li>• apply all relevant procedures and regulatory requirements to ensure the quality and integrity of the products/services or data provided</li> <li>• apply and promote sustainable energy principles and work practices</li> <li>• detect non-conforming products or services in the work area</li> <li>• follow enterprise procedures for documenting and reporting information about quality</li> <li>• contribute effectively within a team to recognise and recommend improvements in productivity and quality</li> <li>• apply effective problem solving strategies</li> <li>• implement and monitor improved practices and procedures.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>This unit of competency is to be assessed in the workplace or simulated workplace environment.</p> <p>This unit of competency may be assessed with:</p> <ul style="list-style-type: none"> <li>• <i>MSL924001A Process and interpret data</i></li> <li>• <i>MSL954001A Obtain representative samples in accordance with sampling plan</i></li> <li>• <i>relevant MSL974000 series units of competency</i></li> <li>• <i>relevant MSL975000 series units of competency.</i></li> </ul> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>• enterprise quality manual and procedures</li> <li>• quality control data/records</li> <li>• customer complaints and rectifications</li> <li>• candidate's supervisors and peers.</li> </ul>
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• review of documentation completed by the candidate</li> </ul>



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	<p>as part of regular quality control</p> <ul style="list-style-type: none"> <li>• feedback from supervisors and/or customers regarding quality of products/services and/or data regularly provided by the candidate</li> <li>• observation of the candidate's performance and participation in quality improvement teams over time in the workplace</li> <li>• review of reports from quality improvement teams where the candidate's role is clearly outlined and verified</li> <li>• verified reports of improvements suggested and implemented by the candidate individually.</li> </ul> <p>Those aspects of competency dealing with improvement processes could be assessed by the use of suitable simulations and/or a pilot plant and/or a range of case studies and scenarios.</p> <p>In all cases, practical assessment should be supported by questions to assess essential knowledge and those aspects of competency which are difficult to assess directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like environment.</p>
<b>This competency in practice</b>	<p>Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting.</p> <p><b>Manufacturing</b></p> <p>A quality improvement team at a chemical manufacturing plant was asked to propose a way of minimising the cost of disposing of chromium rich waste. Using appropriate techniques, the team narrowed the alternatives down to the option of burning the waste stream. An experienced technician agreed that this was feasible, but suggested that because the waste was petroleum high in chromium the team should consider</p>

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the environmental implications. Subsequent research indicated that the permitted chromium levels in the incinerated air waste stream would not exceed 10 ppm, which was less than the air emission standards for the plant. The technician analysed samples of the air waste stream and determined that the chromium levels were below the regulatory standards. He/she then supported the team's suggestion.

**Environmental**

The manager of an environmental testing laboratory believed that the team of laboratory technicians relied too much on external direction. As a result, the manager requested that whenever technicians asked for assistance they should also be ready to suggest a solution to the problem if at all possible. This strategy was implemented in a non-threatening manner and was accepted by the team. In time, the manager noted that many of the suggestions for solving problems and improving work practices that came from the team were effective and reasonable. Their skill in making realistic recommendations came from their familiarity with many of the issues that needed to be considered. It became the norm that the laboratory technicians were given public credit for suggesting successful strategies that improved safety, productivity and staff morale.

**Food processing**

A company that produces apple juice uses 30-35% hydrogen peroxide ( $H_2O_2$ ) to sterilise packaging. A mist of atomised  $H_2O_2$  is sprayed into pre-formed cartons and later removed with a jet of hot sterile air. The laboratory manager was concerned that some batches of product were not sterile after standing at room temperature for several days. The cause of the failure in the sterilisation procedure was not apparent and a technical officer was asked to investigate this problem.

The technical officer examined each unit operation of juice manufacture and determined that the application of  $H_2O_2$  was a critical sterilisation point where failure could occur. The concentration of  $H_2O_2$  in the atomiser and in opened containers was unpredictable and several problems were found to contribute to this.  $H_2O_2$  was left in the atomiser for up to several days between packaging runs. Containers of  $H_2O_2$  were not always used sequentially, some being opened and then not used for a

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	<p>long time. The containers were stored at room temperature after opening and some may have become contaminated with atmospheric particulates that catalyse the breakdown of H<sub>2</sub>O<sub>2</sub>.</p> <p>The recommendations that emerged from the investigation were that:</p> <ul style="list-style-type: none"> <li>• fresh H<sub>2</sub>O<sub>2</sub> should be used at the beginning of each packaging run</li> <li>• only one stock container of H<sub>2</sub>O<sub>2</sub> should be open at any one time and stored chilled, with residuals discarded after 14 days</li> <li>• care should be taken to exclude foreign material from the opened vessels of H<sub>2</sub>O<sub>2</sub> and the atomiser.</li> </ul> <p>In summary, the intolerance of the company to even low incidences of faulty product and the competency of the technical officer to investigate the processing stream resulted in increased product quality without significant cost.</p>
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**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Codes of practice**

Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used

**Standards, codes, procedures and/or enterprise requirements**

Standards, codes, procedures and/or enterprise requirements may include:

- Australian and international standards, such as:
  - AS ISO 17025-2005 General requirements for the competence of testing and calibration laboratories
  - AS/NZS ISO 10005:2006 Quality

<b>RANGE STATEMENT</b>	
	<p>management systems - Guidelines for quality plans</p> <ul style="list-style-type: none"> <li>• AS/NZS ISO 10012:2004 Measurement management systems - Requirements for measurement processes and measuring equipment</li> <li>• AS/NZS ISO 9000 Set:2008 Quality management systems set</li> <li>• AS 1199 Sampling procedures and tables for inspection by attributes</li> <li>• BS 5750 Quality systems</li> <li>• Australia New Zealand Food Standards (ANZFS) Code</li> <li>• Australian code of good manufacturing practice for medicinal products (GMP)</li> <li>• customer specific requirements/standards</li> <li>• enterprise and customer product specifications</li> <li>• National Association of Testing Authorities (NATA) Accreditation programs requirements</li> <li>• National Health and Medical Research Council (NHMRC) Guidelines</li> <li>• national measurement regulations and guidelines</li> <li>• principles of good laboratory practice (GLP)</li> <li>• quality manuals and procedures</li> <li>• Therapeutic Goods Regulations 1009</li> </ul>
<b>Quality control procedures</b>	<p>Quality control procedures may include:</p> <ul style="list-style-type: none"> <li>• standards imposed by regulatory and licensing bodies</li> <li>• enterprise quality procedures</li> <li>• working to a customer brief or batch card and associated quality procedures</li> <li>• checklists to monitor job progress against agreed time, costs and quality standards</li> <li>• preparation of sampling plans</li> <li>• the use of hold points to evaluate conformance</li> <li>• the use of inspection and test plans to check compliance</li> </ul>
<b>Methods for statistical analysis</b>	<p>Methods for statistical analysis may include:</p> <ul style="list-style-type: none"> <li>• means</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• median</li> <li>• mode</li> <li>• ranges</li> <li>• standard deviations</li> <li>• statistical sampling procedures</li> </ul>
<b>Problem solving techniques</b>	<p>Problem solving techniques may include:</p> <ul style="list-style-type: none"> <li>• identifying inputs and outputs</li> <li>• sequencing a process</li> <li>• identifying and rectifying a problem step</li> <li>• root cause analysis</li> <li>• implementing preventative strategies</li> </ul>
<b>Quality improvement tools and techniques</b>	<p>Quality improvement tools and techniques may include:</p> <ul style="list-style-type: none"> <li>• run charts, control charts, histograms and scattergrams to present routine quality control data</li> <li>• plan, do, check, act (PDCA)</li> <li>• Ishikawa fishbone diagrams and cause and effect diagrams</li> <li>• logic tree</li> <li>• similarity/difference analysis</li> <li>• Pareto charts and analysis</li> <li>• force field/strength weakness opportunities threats (SWOT) analysis</li> </ul>
<b>Sustainable energy principles and work practices</b>	<p>Sustainable energy principles and work practices may include:</p> <ul style="list-style-type: none"> <li>• examining work practices that use excessive electricity</li> <li>• switching off equipment when not in use</li> <li>• regularly cleaning filters</li> <li>• insulating rooms and buildings to reduce energy use</li> <li>• recycling and reusing materials wherever practicable</li> <li>• minimising process waste</li> </ul>
<b>Communication</b>	<p>Communication may involve:</p> <ul style="list-style-type: none"> <li>• supervisors, managers and quality managers</li> <li>• administrative, laboratory and production personnel</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• internal/external contractors, customers and suppliers</li> </ul>
<b>Reporting</b>	<p>Reporting may include:</p> <ul style="list-style-type: none"> <li>• verbal responses</li> <li>• data entry into laboratory or enterprise database</li> <li>• brief written reports using enterprise proformas</li> </ul>
<b>Quality improvement opportunities</b>	<p>Quality improvement opportunities could include improved:</p> <ul style="list-style-type: none"> <li>• production processes</li> <li>• hygiene and sanitation procedures</li> <li>• reductions in waste and re-work</li> <li>• laboratory layout and work flow</li> <li>• safety procedures</li> <li>• communication with customers</li> <li>• methods for sampling, testing and recording data</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	<p>OHS and environmental management requirements:</p> <ul style="list-style-type: none"> <li>• all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time</li> <li>• all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>• where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Maintenance
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## Competency field

Competency field	
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## Co-requisite units

Co-requisite units		

## MSL934003A Maintain and control stocks

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the ability to order, maintain and control the use of laboratory materials and/or equipment in the work area.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to technicians and technical officers working in all industry sectors.</p> <p>Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These are found at the end of this unit of competency under the section 'This competency in practice'.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		



## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Maintain and control stocks of materials or equipment	1.1. Label, document and store stocks in accordance with relevant standards and specific safety requirements 1.2. Follow stock rotation procedures to maximise use of stocks within permitted shelf life 1.3. Identify stock discrepancies and replace redundant or outdated stocks to maintain stocks at prescribed level 1.4. Identify and replace damaged/worn equipment or arrange for repairs or disposal as appropriate 1.5. Initiate quality control sampling and testing procedures when appropriate 1.6. Report stock problems outside own knowledge and authority limitations to relevant personnel
2. Order and receive materials and equipment	2.1. Determine requirements of customers and suppliers using appropriate communication and interpersonal skills 2.2. Determine demand for stock, taking into account peak and seasonal variations in stock usage and production conditions 2.3. Place and/or follow up approved orders using enterprise systems and procedures 2.4. Check condition of received goods and take appropriate action
3. Maintain stock	3.1. Record all relevant details accurately using the

ELEMENT	PERFORMANCE CRITERIA
records	specified forms/computer system 3.2.Ensure that written information is legible and indelible 3.3.File all records in the designated place
4. Maintain a safe work environment	4.1.Use established safe work practices and personal protective equipment to ensure personal safety and that of other laboratory personnel 4.2.Minimise the generation of wastes and environmental impacts 4.3.Ensure the safe collection of redundant/outdated stocks for subsequent disposal

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- maintaining and controlling stocks or materials and equipment
- ordering and receiving materials and equipment
- maintaining stock records
- maintaining a safe work environment

#### Required knowledge

Required knowledge includes:

- technical terminology relating to ordering and storage of stocks
- laboratory stock, product and service information
- types of chemical reactions and rationale for recommended storage systems
- enterprise procedures and quality system requirements for stock control
- codes of practice and regulations concerning the handling, storage and transport of the stock involved
- relevant health, safety and environment requirements

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Assessors should ensure that candidates can:</p> <ul style="list-style-type: none"> <li>• confirm customer requirements with senior personnel where there is doubt</li> <li>• access online databases and/or catalogues efficiently</li> <li>• interpret labelling information (lot number, batch and date) and MSDS correctly</li> <li>• apply procedures for safe handling, storage and transport of stocks</li> <li>• use required safety and manual handling equipment and procedures</li> <li>• perform quality control sampling and testing and rotate stock in accordance with SOPs</li> <li>• follow workplace procedures for predicting and/or determining demand for stock</li> <li>• maintain stock at prescribed levels for their work area, through regular inspections, timely ordering of replacement items and followup of late orders</li> <li>• cope with peak and seasonal variations in stock usage and production conditions</li> <li>• follow workplace procedures for researching, ordering and receipt of stock</li> <li>• complete and record all documentation accurately</li> <li>• demonstrate effective and appropriate communication and interpersonal skills when dealing with customers and suppliers.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>This unit of competency is to be assessed in the workplace or simulated workplace environment.</p> <p>This unit of competency may be assessed with:</p> <ul style="list-style-type: none"> <li>• <i>MSL935004A Maintain instruments and equipment.</i></li> </ul> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>• stocks of materials and equipment</li> <li>• stock order forms and documentation</li> <li>• sampling and testing equipment.</li> </ul>

<b>EVIDENCE GUIDE</b>	
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• review of documentation for orders prepared by the candidate</li> <li>• examination of stock records maintained by the candidate</li> <li>• observation of the candidate handling stock and conducting quality control sampling and testing</li> <li>• feedback from the laboratory manager, quality manager, customer service manager, supervisor, customers and peers</li> <li>• explanation by the candidate of the labelling and storage requirements of a selection of stock items.</li> </ul> <p>In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like environment.</p>
<b>This competency in practice</b>	<p>Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting.</p> <p><b>Biotechnology</b></p> <p>A technical officer arrived at work on Monday morning and discovered that the freezer had been turned off over the weekend and the restriction nucleases had thawed. These enzymes were to be used that morning. The technician needed to check the enzyme activity to determine whether the enzymes had been denatured by the rise in temperature. The technician quickly set up a digestion mix of affected enzyme with some viral DNA of known sequence. The digest produced DNA fragments of expected length, showing the enzyme still had activity.</p>

**EVIDENCE GUIDE**

The technician reported the incident along with the results to the supervisor, who decided that the enzymes could be used for that day.

**Manufacturing**

Neglected chemicals may deteriorate on the shelf and turn into a completely different entity. Not only can this change in identity damage a chemical manufacturing process, it can also present an immediate hazard. For example, this occurred in a storeroom where stored ether built up high levels of peroxides. When it was used in an extraction process to make a starting material in a manufacturing process, the peroxides were concentrated and exploded. The company was fortunate that loss of life didn't occur. The company revised enterprise procedures to ensure that in the future, redundant or outdated stocks are identified and removed.

**Food processing**

The staff in a confectionary company laboratory use enzyme based methods to routinely analyse sugars (glucose, fructose, sucrose and lactose) in products. Although the enzymes are stored as directed by the manufacturer, typically at -20(C in the dark, they do not retain their activity indefinitely. To avoid using inactive enzyme in an analytical procedure and obtaining a reduced or false negative result, several features of each enzyme preparation are routinely noted. These include the date of purchase, the number of times the enzyme has been thawed and refrozen and its initial activity. Periodically, the enzyme activity is verified and stock is discarded where its activity has fallen to a less than acceptable value. These practices ensure that the analytical methods that use enzymes are performed with functional reagents and give accurate results.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work

<b>RANGE STATEMENT</b>	
situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b>Codes of practice</b>	Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used
<b>Standards, codes, procedures and/or enterprise requirements</b>	<p>Standards, codes, procedures and/or enterprise requirements may include:</p> <ul style="list-style-type: none"> <li>• Australian and international standards such as: <ul style="list-style-type: none"> <li>• AS 1678 Emergency procedure guide - Transport</li> <li>• AS 1940-2004 Storage and handling of flammable and combustible liquids</li> <li>• AS 3780-2008 The storage and handling of corrosive substances</li> <li>• AS 4332-2004 The storage and handling of gases in cylinders</li> <li>• AS ISO 17025-2005 General requirements for the competence of testing and calibration laboratories</li> <li>• AS/NZS 1269 Set:2005 Occupational noise management set</li> </ul> </li> <li>• AS/NZS 2243 Set:2006 Safety in laboratories set <ul style="list-style-type: none"> <li>• AS/NZS 2982.1:1997 Laboratory design and construction - General requirements</li> <li>• AS/NZS 4452:1997 The storage and handling of toxic substances</li> <li>• AS/NZS ISO 14000 Set:2005 Environmental management standards set</li> </ul> </li> <li>• animal welfare legislation and codes of practice</li> <li>• Australian code of good manufacturing practice for medicinal products (GMP)</li> <li>• Australian Dangerous Goods Code</li> <li>• Australian Quarantine and Inspection Service (AQIS) Export Control (Orders) Regulations 1982</li> <li>• Australian Quarantine and Inspection Service (AQIS) Import Guidelines</li> <li>• Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Codes of Practice</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• customer database and supplier catalogues</li> <li>• enterprise or standard operating procedures (SOPs)</li> <li>• equipment manuals and warranty, supplier catalogues and handbooks</li> <li>• gene technology regulations</li> <li>• internal/external stock orders and overdue actions</li> <li>• material safety data sheets (MSDS)</li> <li>• National Code of Practice for the labelling of workplace substances (NOHSC:2012 (1994))</li> <li>• National Environment Protection Measures</li> <li>• National Health and Medical Research Council (NHMRC) Guidelines</li> <li>• national measurement regulations and guidelines</li> <li>• occupational health and safety (OHS) national standards and codes of practice</li> <li>• principles of good laboratory practice (GLP)</li> <li>• Therapeutic Goods Regulations 1009</li> </ul>
<b>Workplace procedures</b>	<p>Workplace procedures may include:</p> <ul style="list-style-type: none"> <li>• ordering, purchase and receipt of stocks</li> <li>• verification of temperature control for delivered and stored stocks (e.g. reagents containing enzymes)</li> <li>• organisation of compatible batch or lot numbers</li> <li>• storage of stocks, stock control and rotation of stock</li> <li>• quality control testing, monitoring of use by dates of standards and shelf life of reagents (e.g. DNA, enzymes, antibodies, radioisotopes and vitamins)</li> <li>• reporting non-conformances</li> </ul>
<b>Records</b>	<p>Records could include:</p> <ul style="list-style-type: none"> <li>• stock usage</li> <li>• orders and progress of orders</li> <li>• equipment servicing and repairs</li> <li>• current inventories</li> <li>• quality control sampling, testing and stock rotation</li> </ul>

<b>RANGE STATEMENT</b>	
<b>Communication</b>	<p>Communication may require the use of equipment or systems, such as:</p> <ul style="list-style-type: none"> <li>• telephone, fax, email and mail</li> <li>• online information systems, inventories, print records, databases and catalogues</li> <li>• filing systems</li> </ul> <p>Communication may involve::</p> <ul style="list-style-type: none"> <li>• suppliers</li> <li>• freight companies</li> <li>• internal customers</li> <li>• external customers</li> </ul>
<b>Hazards</b>	<p>Hazards may include:</p> <ul style="list-style-type: none"> <li>• electric shock</li> <li>• chemicals, such as acids and hydrocarbons</li> <li>• microbiological organisms associated with blood and blood products</li> <li>• radioisotopes</li> <li>• sharps, such as broken glassware</li> <li>• disturbance or interruption of services</li> <li>• manual handling of heavy boxes</li> <li>• fluids under pressure and industrial gas bottles</li> </ul>
<b>Safety procedures</b>	<p>Safety procedures may include:</p> <ul style="list-style-type: none"> <li>• use of personal protective equipment, such as hearing protection, gloves, safety glasses, coveralls and safety boots</li> <li>• ensuring access to service shut-off points</li> <li>• handling and storing hazardous materials and equipment in accordance with labels, MSDS, manufacturer's instructions, and enterprise procedures and regulations</li> <li>• regular cleaning of equipment and work areas</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	<p>OHS and environmental management requirements:</p> <ul style="list-style-type: none"> <li>• all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time</li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>• where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health</li> </ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Maintenance
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**Competency field**

<b>Competency field</b>	
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**Co-requisite units**

<b>Co-requisite units</b>		

## MSL973007A Perform microscopic examination

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit of competency covers the ability to set up a light microscope for optimum resolution, to prepare routine samples and to observe, identify and report sample characteristics.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit of competency is applicable to laboratory or technical assistants in all industry sectors. The unit of competency covers limited interpretation and analysis of results. Troubleshooting of equipment and procedures is not required.</p> <p>Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting. These are found at the end of this unit of competency under the section 'This competency in practice'.</p>
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Interpret test requirements	<p>1.1. Review test request to identify samples to be tested, test method and equipment involved</p> <p>1.2. Identify hazards associated with the sample, preparation methods and equipment and implement enterprise control measures</p>
2. Set up work area for preparation and examination of samples	<p>2.1. Collect equipment and arrange the workspace so that equipment can be used safely and efficiently</p> <p>2.2. Perform pre-use and safety checks to ensure equipment is fit for purpose and report faulty or unsafe equipment to appropriate personnel</p>
3. Prepare samples for examination	<p>3.1. Log and label samples according to enterprise procedures to ensure traceability</p> <p>3.2. Check suitability of the original and prepared sample for the examination and report unsuitable samples to appropriate personnel</p> <p>3.3. Prepare and store the sample for examination following enterprise methods</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
4. Set up and use a light microscope	4.1. Set up the light path to optimise resolution 4.2. Select the appropriate objectives and filter for the sample being examined 4.3. Ensure that the lenses are clean 4.4. Adjust settings and alignment of the light path to optimise performance 4.5. Place sample correctly on the stage
5. Observe, identify and report sample characteristics	5.1. Recognise and identify significant sample characteristics 5.2. Perform required calculations accurately 5.3. Prepare and view control samples and check that results are consistent with expected values 5.4. Identify and report out of specification or atypical results promptly to appropriate personnel 5.5. Record and report data in accordance with enterprise procedures
6. Maintain a safe work environment	6.1. Ensure safety and minimise cross-contamination through the use of personal protective clothing and safety equipment 6.2. Handle all samples and equipment in accordance with enterprise safety protocols 6.3. Clean up spills using appropriate techniques to protect personnel, work area and environment 6.4. Minimise generation of waste and environmental impacts 6.5. Collect and dispose of all wastes safely 6.6. Report hazards and incidents to designated personnel using enterprise procedures

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- setting up the workbench and microscope ergonomically

## REQUIRED SKILLS AND KNOWLEDGE

- setting up, cleaning and using a light microscope to achieve optimum resolution of the specimen
- using personal protective clothing and other safety equipment correctly
- performing counts on samples
- performing basic measurements using grids
- logging and tracking samples through all steps from receiving a sample through to completion of a procedure and reporting
- interpreting and recording test results, including simple calculations
- correctly handling and storing samples and equipment

### Required knowledge

Required knowledge includes:

- parts and functions of a light microscope
- importance and appropriate use of controls and certified reference materials
- hazards and risks in laboratories associated with performing microscopic examination
- enterprise and/or legal traceability requirements
- relevant health, safety and environment requirements

### Specific industry

Additional knowledge requirements may apply for different industry sectors. For example:

Biological industry:

- basic structure and function of cells and organelles
- basic classes and classification of organisms of organisms, such as prokaryotes, eukaryotes, plants, animals, bacteria, viruses and prions
- cell physiology and processes, such as simple and facilitated diffusion, plasmolysis, osmosis, tonicity, active transport, energy production, mitosis, motility, phagocytosis and pinocytosis
- purposes and mechanisms of staining (e.g. Gram +ve and -ve)

## Evidence Guide

### EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

<b>EVIDENCE GUIDE</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Assessors should ensure that candidates can:</p> <ul style="list-style-type: none"> <li>• follow enterprise standards, procedures and practices</li> <li>• prepare suitable samples</li> <li>• recognise, identify and document significant sample characteristics</li> <li>• set up a light microscope for optimal resolution</li> <li>• maintain personal safety and that of others</li> <li>• minimise cross-contamination and contamination of the laboratory and environment.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>This unit of competency is to be assessed in the workplace or simulated workplace environment.</p> <p>This unit of competency may be assessed with:</p> <ul style="list-style-type: none"> <li>• <i>MSL922001A Record and present data</i></li> <li>• <i>MSL933002A Contribute to the achievement of quality objectives</i></li> <li>• <i>MSL943002A Participate in laboratory/field workplace safety</i></li> <li>• <i>MSL953001A Receive and prepare samples for testing.</i></li> </ul> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>• standard laboratory equipped with appropriate equipment, such as light microscopes and samples</li> <li>• enterprise procedures, standard methods and materials.</li> </ul>
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• observation of the candidate performing microscopic examinations</li> <li>• review of data records prepared by the candidate, such as counts, observations and results</li> <li>• feedback from supervisors and peers about adherence to enterprise/technical procedures</li> <li>• questioning to assess underpinning knowledge.</li> </ul> <p>In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly.</p> <p>Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and</p>

<b>EVIDENCE GUIDE</b>	
	<p>disability.</p> <p>Access must be provided to appropriate learning and/or assessment support when required.</p> <p>The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work like environment.</p>
<b>This competency in practice</b>	<p>Industry representatives have provided the case studies below to illustrate the practical application of this unit of competency and show its relevance in a workplace setting.</p> <p><b>Construction materials testing</b></p> <p>The supply of river sand is running out and quarries are accessing alternative sources of sand for use in concrete mixes in construction. The sand should not be an aggregate that is likely to break down into smaller particles. A technician in a quarry company is required to analyse samples of crushed rock using a light microscope. The technician looks for characteristics of the sample, such as angularities, roundness, sharpness, cracks, presence of organic matter, mineral structure and whether the particles are a conglomerate. If the sample does not meet the characteristics, the company will need to treat it to make it suitable for use in concrete mixes (for example by washing, crushing and sieving).</p> <p><b>Food processing</b></p> <p>A customer complaint is received about the baking properties of a flour delivery. The laboratory assistant at the flour mill is given the task of testing the starch content of the suspect flour. He/she prepares iodine stained samples of the returned flour and a range of baked and partially baked products prepared from it. First, the assistant makes up fresh iodine staining solution and then prepares slides of each sample for microscopic examination. He/she identifies the characteristic starch granules of the flour sample and records the degree of gelatinisation in the starch granules in the baked samples. He/she discusses the results with the supervisor and prepares a report for the customer.</p> <p><b>Biomedical</b></p> <p>A laboratory assistant works in the microbiology laboratory of a public hospital and is responsible for</p>

**EVIDENCE GUIDE**

preparing and staining sputum smears from patients for micro and culture. The assistant puts on a clean gown and gloves before collecting the specimens from the reception area of the laboratory. The assistant prepares cultures of the sputum specimens on simple and selective media before preparing, fixing and staining smears for microscopic examination. The results are checked by the supervisor, entered into the laboratory information management system (LIMS) and sent to the appropriate section of the hospital.

**Environmental**

A laboratory assistant prepares media for plant tissue culture. There has been some contamination of Gram-positive bacteria in the last two batches and the supervisor has initiated an overhaul of the preparation and aliquotting procedure. The laboratory assistant has been asked to follow the new procedure exactly and to remove samples at each stage of ingredient addition for microscopic examination. The laboratory assistant records the exact addition amounts, batch numbers and brands of the reagents, the location of the addition (which biohazard cabinet), the equipment used and the pre-sterilisation records of all equipment.

The laboratory assistant then prepares slides, fixes them and performs a Gram stain on each of the aliquots removed from the new preparation run. Microscopic analysis of each aliquot reveals nil contamination. The supervisor decides that there has been a breach in the old procedure and the laboratory assistant is asked to follow the new procedure and to perform a routine microscopic check on all batches for the next month.

**Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.



<b>RANGE STATEMENT</b>	
<b>Codes of practice</b>	Where reference is made to industry codes of practice, and/or Australian/international standards, it is expected the latest version will be used
<b>Standards, codes, procedures and/or enterprise requirements</b>	Standards, codes, procedures and/or enterprise requirements may include: <ul style="list-style-type: none"> <li>• Australian and international standards, such as: <ul style="list-style-type: none"> <li>• AS ISO 17025-2005 General requirements for the competence of testing and calibration laboratories</li> <li>• AS/NZS ISO 9000 Set:2008 Quality management systems set</li> <li>• AS/NZS 2243 Set:2006 Safety in laboratories set</li> </ul> </li> <li>• principles of good laboratory practice (GLP)</li> <li>• Australian code of good manufacturing practice for medicinal products (GMP)</li> <li>• safety manuals</li> <li>• quality manuals and equipment and procedure manuals</li> <li>• standard operating procedures (SOPs)</li> <li>• material safety data sheets (MSDS)</li> <li>• enterprise recording and reporting procedures</li> <li>• production and laboratory schedules</li> <li>• material, production and product specifications</li> </ul>
<b>Preparation of samples</b>	Preparation of samples may include: <ul style="list-style-type: none"> <li>• aseptic transfer of specimen</li> <li>• centrifugation</li> <li>• cooling</li> <li>• drying</li> <li>• filling a counting chamber in one continuous flow without bubbles or overflow</li> <li>• filtration</li> <li>• fixing of films to minimise cell damage and the production of artefacts</li> <li>• labelling</li> <li>• mounting of stained films, sections and whole mounts to ensure long term preservation</li> <li>• permanent labels for smears, films and sections for presentation, storage and retrieval</li> <li>• physical or chemical separation</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• selection of diluent to preserve or enhance visibility of the cells to be counted</li> <li>• selection, filling and cover slipping of a clean, dry counting chamber to ensure even distribution of cells during filling</li> <li>• serial dilution to enable individual cells to be reliably counted</li> <li>• staining of fixed material to illustrate required characteristics</li> <li>• sub-sampling</li> <li>• thin film or smear on a slide</li> </ul>
<b>Checking sample condition</b>	<p>Checking sample condition may include:</p> <ul style="list-style-type: none"> <li>• labelling</li> <li>• spillage</li> <li>• spoilage due to incorrect storage and transport conditions</li> <li>• temperature control</li> <li>• suitability for the examination</li> </ul>
<b>Pre-use checks</b>	<p>Pre-use checks may include:</p> <ul style="list-style-type: none"> <li>• calibration</li> <li>• cleaning/checking use by dates of reagents</li> <li>• routine maintenance</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• glass slides</li> <li>• counting chambers (e.g. haemocytometer)</li> <li>• optical graticules and stage micrometers</li> <li>• tissue culture flasks</li> </ul>
<b>Light microscopes</b>	<p>Light microscopes may include:</p> <ul style="list-style-type: none"> <li>• bright field illumination microscopic examination up to 1000x magnification</li> <li>• stereomicroscopes and dissection microscopes</li> <li>• compound microscopes</li> <li>• phase contrast microscopes</li> <li>• inverted microscopes</li> </ul>
<b>Biological samples</b>	<p>Biological samples may include:</p> <ul style="list-style-type: none"> <li>• smears, impression smears, sections, squashes, films and whole mounts</li> <li>• a monolayer of cells in smears and films</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• fixed smears for demonstration of bacteria by the methylene blue and Gram staining techniques</li> <li>• blood films stained by a Romanowsky technique to clearly show differentiation of granulocytes</li> <li>• stained sections of animal tissues using regressive haematoxylin and eosin to differentiate cytoplasmic and nuclear detail</li> <li>• differentially stained monocotyledon and dicotyledon stem sections to demonstrate the structure of vascular bundles (xylem, phloem and cambium)</li> <li>• stained whole mounts of helminths</li> <li>• whole mounts, such as liver flukes, planaria and samples of animal faeces to demonstrate ova, cysts and larvae</li> <li>• pond water organisms</li> <li>• onion root tip squash</li> <li>• midstream sample of urine</li> </ul>
<b>Physical samples</b>	<p>Physical samples may include:</p> <ul style="list-style-type: none"> <li>• sand</li> <li>• asbestos fibres</li> <li>• coal samples</li> <li>• construction testing materials</li> <li>• geological specimens</li> </ul>
<b>Checking prepared samples</b>	<p>Checking prepared samples may include looking for:</p> <ul style="list-style-type: none"> <li>• clean and scratch-free microscope slides to reduce artefacts</li> <li>• preparation according to SOPs</li> <li>• a homogeneous suspension of sample</li> <li>• films and smears that have been fixed rapidly</li> <li>• thin films with a monolayer of cells</li> <li>• appropriate whole mounts for intact organisms</li> <li>• correct sample identification during and after processing</li> </ul>
<b>Sample characteristics</b>	<p>Sample characteristics are restricted to what can be viewed by bright light microscopy and may include:</p>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• shape and size of particles</li> <li>• presence of contamination</li> <li>• colour</li> <li>• consistency and variability</li> <li>• number of cells (e.g. cells in blood or other particulate samples, such as a yeast suspension or pollen grains)</li> <li>• type of cells, percentage of atypical cells, presence/absence of cells, size of cells, viable and non-viable cells and trajectory</li> <li>• presence of stained material, such as starch</li> <li>• colour/staining and morphology</li> <li>• motility</li> </ul>
<b>Calculations</b>	<p>Calculations may include:</p> <ul style="list-style-type: none"> <li>• dilutions</li> <li>• percentage viability</li> <li>• number of cells in original sample after dilution</li> <li>• calculation of cells/ml in a number of squares of a counting chamber</li> </ul>
<b>Hazards</b>	<p>Hazards may include:</p> <ul style="list-style-type: none"> <li>• micro-organisms and agents associated with soil, air, water, blood and blood products and human or animal tissue and fluids</li> <li>• chemicals and stains</li> <li>• sharps and broken glassware</li> <li>• aerosols</li> </ul>
<b>Safety practices and personal protective equipment</b>	<p>Safety practices and personal protective equipment may include:</p> <ul style="list-style-type: none"> <li>• use of MSDS</li> <li>• use of personal protective equipment, such as safety glasses, gloves and coveralls</li> <li>• use of biohazard containers and laminar flow cabinet</li> <li>• correct labelling of reagents and hazardous materials</li> <li>• handling and storing hazardous materials and equipment in accordance with labels, MSDS and manufacturer's instructions</li> <li>• ergonomic layout, correct illumination and</li> </ul>

<b>RANGE STATEMENT</b>	
	<p>organisation of workbench</p> <ul style="list-style-type: none"> <li>regular cleaning and/or decontamination of equipment and work areas</li> </ul>
<b>Occupational health and safety (OHS) and environmental management requirements</b>	<p>OHS and environmental management requirements:</p> <ul style="list-style-type: none"> <li>all operations must comply with enterprise OHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time</li> <li>all operations assume the potentially hazardous nature of samples and require standard precautions to be applied</li> <li>where relevant, users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Testing
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### Competency field

<b>Competency field</b>	
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### Co-requisite units

<b>Co-requisite units</b>	



# NWP203B Plan and organise personal work activities

## Modification History

NWP203B Release 2: Layout adjusted. No changes to content.

NWP203B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to plan and organise personal work activities to meet specified outcomes, including identifying and using resources and equipment and applying customer service policies.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for field and operational staff who work under supervision but who are required to exercise responsibility for their own effective work performance.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit of competency contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Plan and conduct assigned work activities.</b>	1.1 Identify work activities and relevant <i>legislation and organisational procedures</i> . 1.2 Organise and <i>plan work activities</i> to achieve agreed outcomes. 1.3 Identify and obtain resources to complete planned work activities.
<b>2 Monitor quality of work.</b>	2.1 Interpret and check instructions against relevant organisational standards of work. 2.2 Seek clarification of work instructions as required. 2.3 Monitor and adjust work according to requirements for job quality, customer service, public responsibility and resource use.
<b>3 Provide and obtain feedback and information on work activities.</b>	3.1 <i>Record and report</i> work activities according to organisational requirements. 3.2 Access appropriate avenues to provide suggestions for improvement to personal work performance.

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- prepare, identify and respond to operational problems
- complete basic reports, records and logs
- follow work instructions
- follow policies, procedures and standards
- work effectively as part of a team
- use literacy skills in regard to verbal and written communication in the workplace
- communicate such things as work requirements effectively
- assertiveness
- time management

### Required knowledge:

- organisational reporting and communication systems
- work planning processes
- legislative and organisational policies, procedures and standards
- administrative procedures
- quality systems
- organisational procedures for contractors
- reporting procedures



## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The candidate should demonstrate the ability to plan and organise personal work activities to meet specified outcomes, including:

- identifying and using resources and equipment
- applying customer service policies
- identifying, prioritising and planning work tasks
- identifying and applying appropriate quality standards
- monitoring work performance and seeking feedback

### Context of and specific resources for assessment

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be

authenticated and show that it represents competency demonstrated over a period of time

- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Legislation and organisational procedures*** include:

- by-laws and organisational policies
- standard operating procedures
- equal employment opportunity
- OHS

***Plan work activities*** will require:

- interpretation of instructions and directions
- assessment and prioritisation of workload
- adherence to timelines
- interaction and communication with team members and individuals
- interpretation of legislation and organisational procedures
- reference to:
  - productivity requirements
  - total quality management principles
  - customer service requirements

***Record and report*** information relating to work activities, including:

- completion of time sheets
- requisitions
- work sheets and job cards
- basic workplace records and verbal or written reports

**Unit Sector(s)**

Not applicable.

**Competency field**

Common

# NWP209B Use maps, plans, drawings and specifications

## Modification History

NWP209B Release 2: Layout adjusted. No changes to content.

NWP209B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to read and interpret maps, plans, drawings and specifications.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for field and operational staff involved in the location, construction and maintenance or repair of assets, such as plants, pump stations and infrastructure.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit of competency contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Interpret maps, plans and drawings.</b>	1.1 Identify main <i>types of maps, plans, drawings and specifications</i> used to support work tasks. 1.2 Identify parts of water systems and their interrelationship on a range of drawing types. 1.3 Interpret commonly used symbols and abbreviations. 1.4 Interpret function of the legend. 1.5 Verify latest version of map, plan or drawing.
<b>2 Use maps and site plans to support work activities.</b>	2.1 Apply organisation's <i>system for managing maps and plans</i> . 2.2 Apply relevant <i>technologies</i> used to gather, record and monitor, map and plan data. 2.3 Identify function and <i>key features of maps and site plans</i> in the planning of work. 2.4 Identify <i>orientation of the site</i> . 2.5 Identify and isolate access from roadways to work site. 2.6 Determine materials and distances from plans and drawings.
<b>3 Read and interpret specifications.</b>	3.1 Relate specifications to particular maps and plans and identify quality standards. 3.2 Identify and determine types of details from works specifications.

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- read and interpret maps, plans, drawings and specifications
- measure accurately
- communicate effectively
- work effectively as part of a team
- use literacy skills in regard to verbal and written communication in the workplace
- use information provided in maps, plans and drawings to complete a job and in different work situations

### Required knowledge:

- measurements and calculations
- contours
- datum points
- planes

- gradients
- sections
- orthographic projection
- symbols
- dimensions
- terminology

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to read and interpret maps, plans, drawings and specifications including:

- locating correct maps, plans, drawings and specifications for work tasks
- interpreting correctly all relevant information in maps, plans, drawings and specifications to enable the work to be performed correctly, effectively and according to organisational quality standards

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the

assessor has complete confidence in the person's competence over time and in various contexts

- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Types of maps, plans, drawings and specifications*** may include:

- urban and rural topographical maps
- site plans and elevations
- process flow sheets
- survey plans
- sectional plans and elevations
- channel drainage plans
- pipe system plans
- location of assets plans
- details and specifications providing illustrations and dimensions

***System for managing maps and plans*** used within organisation may be:

- geographic information systems
- electronic plans management systems
- manual systems
- hard copy systems

***Technologies*** used to gather,

- vary across organisations

record and monitor map and plan data may:

*Key features of maps and site plans* will include combinations of:

- include use of global positioning system (GPS) technology and require the use of portable navigation devices by operators
- shape and orientation of site
- roads
- railways
- easements
- existing buildings and structures
- services, including:
  - drainage
  - sewerage
  - gas
  - water
  - electricity and telecommunications
- dimensions
- grades of pipelines and channels
- tree preservation orders
- geographical features
- power and transmission lines
- heritage and cultural features
- types of structure, including:
  - buildings
  - bridges
  - fabricated towers
  - fences
  - pipelines
  - regulators
  - poles
- environmental barriers
- environmental features, including:
  - fauna and flora habitats
  - cultural features
  - heritage features
  - water catchments
- shape of structure and building
- service requirements
- location of plant and equipment
- vertical and horizontal measurements
- clearance distance
- geological features
- service layouts



***Orientation of the site*** may include:

- bore and casing details
- relationship to north
- currency of plan
- relationship between plan and site

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Common.

# NWP210B Perform basic water quality tests

## Modification History

NWP210B Release 2: Layout adjusted. No changes to content.

NWP210B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to perform basic water quality tests.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for field and operational staff with responsibility for preparing for, conducting and reporting on basic water quality tests in general water industry and water treatment operations.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit of competency contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Prepare for basic water quality tests.</b>	<p>1.1 Receive instructions for conducting and recording <i>basic water quality tests</i> and confirm with appropriate personnel.</p> <p>1.2 Confirm <i>testing details</i> and <i>plan testing work</i> according to <i>legislative and organisational requirements</i>.</p> <p>1.3 Select, fit and use personal protective equipment specified for routine water tests.</p> <p>1.4 Prepare and check <i>testing equipment</i> according to organisational requirements.</p>
<b>2 Conduct basic water quality tests.</b>	<p>2.1 Identify and check correct samples for testing and report <i>abnormal sample characteristics</i>.</p> <p>2.2 Conduct basic water quality tests according to organisational requirements.</p> <p>2.3 <i>Maintain integrity of samples</i> during testing.</p> <p>2.4 Identify <i>atypical data</i> and take appropriate action.</p>
<b>3 Finalise work.</b>	<p>3.1 Record relevant <i>information</i> according to organisational requirements.</p> <p>3.2 Dispose of samples and clean and store test equipment according to organisational procedures.</p> <p>3.3 Clear and restore work area according to organisational requirements.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- conduct basic water quality tests
- calibrate testing equipment
- operate testing equipment
- conduct sub-sampling
- dispose of samples and waste
- communicate effectively
- produce reports and logs
- perform relevant work-related calculations
- work effectively as part of a team
- use literacy skills in regard to verbal and written communication in the workplace
- interpret work requirements

### **Required knowledge:**

- range and purpose of basic water quality testing
- test procedures
- abnormal characteristics of water samples
- atypical test result data
- relevant work-related calculations
- maintenance and storage of reagents
- requirements for maintaining sample integrity
- documentation procedures for test results
- sample and waste disposal procedures
- relevant legislative and organisational requirements

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to perform basic water quality tests by:

- interpreting testing requirements and procedures
- preparing, checking and using equipment correctly
- conducting at least three different types of test safely while maintaining the integrity of samples
- recording all relevant information

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical

- requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
  - a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
  - all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
  - where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
  - assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Basic water quality tests*** include:

- range of tests required for competent performance of work tasks in the organisational context
- should comprise at least three of the following types of test:
  - pH
  - temperature
  - electrical conductivity
  - microscopy
  - turbidity

- colour
  - chlorine residual
  - jar testing
  - hardness
  - dissolved oxygen
- Testing details** may include:
- locations, including:
    - on-site testing
    - field-based testing
    - laboratory
  - range of testing procedures and techniques that apply to organisational, plant or field sites
  - variety of samples to be tested
  - testing equipment to be used
  - test reporting systems
- Plan testing work** may include:
- interpretation of instructions and directions
  - timelines
  - interaction and communication with team members and individuals
  - interpretation of legislative and organisational requirements
- Legislative and organisational requirements** may include:
- relevant federal and state or territory legislation and regulations
  - codes of practice, associated standards and guidance material
  - documented organisational policies, manuals and induction programs
  - relevant community planning and development agreements, such as land care agreements
- Testing equipment** may include:
- portable meters, such as:
    - pH meters
    - electrical conductivity meter
    - thermistors
    - comparators
    - pocket colorimeters
    - dissolved oxygen meters
  - test kits
  - microscopes
  - thermometers
- Abnormal sample characteristics** may include:
- insufficient sample volume
  - odour
  - visible contaminants, such as:

- scum
  - debris
  - discolouration
- Maintaining integrity of samples*** may include:
- application of correct:
    - holding time
    - storage procedures
    - sub-sampling procedures
- Atypical data*** may include:
- results that fall outside organisational range requirements
  - results that fall outside legislated range requirements
- Information*** may include:
- time and logging of sample receipt and testing
  - visual observations
  - equipment identification
  - atypical results
  - test results

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Common.

# NWP215B Install and replace basic volumetric metering equipment

## Modification History

NWP215B Release 2: Layout adjusted. No changes to content.

NWP215B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to install and replace basic volumetric metering equipment for domestic, industrial and commercial premises. The unit also includes the identification of defects and the reporting, replacement and adjustment of metering equipment.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for staff responsible for the effective and accurate operation of water metering equipment as a vital component of service delivery and compliance reporting.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit of competency contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Plan and prepare to install or replace basic volumetric metering equipment.</b>	<p>1.1 Determine work requirements and work site boundaries from specifications or instructions.</p> <p>1.2 Plan work according to job and <i>safety requirements</i> using relevant plans, drawings, standards and technical data.</p> <p>1.3 Select and use electrical safety equipment according to <i>legislative and organisational requirements</i>.</p> <p>1.4 Check coordination issues, including permission to access third-party sites, isolations and permits to work with relevant personnel.</p> <p>1.5 Identify, check and prepare materials, equipment and resources required to satisfy job plan according to organisational requirements.</p> <p>1.6 Identify <i>basic metering equipment</i> and recognise specifications for operation.</p> <p>1.7 Select, fit and use personal protective equipment.</p>
<b>2 Read metering equipment.</b>	<p>2.1 Read meters according to the organisation's operational requirements.</p> <p>2.2 Report readings outside normal parameters and faulty meters and apply organisational procedures for estimating consumption.</p> <p>2.3 Collect and report information on performance metering equipment according to organisational requirements.</p>
<b>3 Finalise work and complete documentation.</b>	<p>3.1 Check, maintain and store equipment, tools and materials according to manufacturer guidelines and organisational requirements.</p> <p>3.2 Restore work site to meet environmental and organisational requirements.</p> <p>3.3 Maintain compliance reports and relevant workplace records as required.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- identify and respond to operational problems
- produce reports and logs

- operate communications equipment
- give and receive instructions
- follow plans, charts and instructions
- perform work-related calculations
- use safety equipment and personal protective equipment
- communicate with customers and other employees
- work effectively as part of a team
- use literacy skills in regard to verbal and written communication in the workplace
- secure metering devices

### **Required knowledge:**

- relevant utilities and service bodies
- organisation's communication systems
- materials handling
- environmental, landscape and ground structure of water and wastewater systems
- risk factors and potential hazards involved with water systems
- equipment operation, capacity and limitations
- effects of weather and conditions on site
- meter types
- equipment placement and operation
- metering measurement procedures
- data collection and recording system
- lock-out procedures for mechanical and electrical installations

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to install and replace basic volumetric metering equipment for domestic, industrial and commercial premises including:

- planning and preparing for installation or replacement of basic volumetric metering equipment
- installing or replacing meters
- reading meters and report faults
- completing reports

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation

- relevant codes, standards and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of

the candidate, accessibility of the item, and local industry and regional contexts.

***Safety requirements*** to be considered in planning work include:

- where relevant, meeting requirements to work in confined spaces and at heights
- use of appropriate personal protective equipment
- organisational electrical safety procedures
- adherence to OHS policies, and statutory and regulatory requirements

***Legislative and organisational requirements*** may include:

- relevant federal and state or territory legislation and regulations
- codes of practice, associated standards and guidance material
- documented organisational policies, manuals and induction programs
- relevant community planning and development agreements, such as land care agreements

***Basic metering equipment*** may include:

- domestic
- industrial
- commercial
- volumetric metering equipment

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Collection and distribution.

# **NWP222A Operate basic flow control and regulating devices in irrigation systems**

## **Modification History**

NWP222A Release 2: Layout adjusted. No changes to content.

NWP222A Release 1: Primary release.

## **Unit Descriptor**

This unit of competency describes the outcomes required to operate basic flow control and regulating devices in irrigation systems.

## **Application of the Unit**

This unit supports the attainment of skills and knowledge required for field and operational staff with responsibility for using flow control and metering devices according to organisational procedures.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This unit of competency contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Monitor required flows in irrigation systems.</b>	<p>1.1 Access and apply operating parameters and requirements for flows in irrigation systems.</p> <p>1.2 Use <i>equipment</i> to support monitoring process in irrigation systems according to OHS, organisational and manufacturer requirements.</p> <p>1.3 <i>Monitor, measure and record</i> flows at <i>designated locations and systems</i> according to agreed schedule and procedures.</p> <p>1.4 Identify potential operational problems in irrigation systems and provide proactive advice to relevant personnel.</p>
<b>2 Regulate flows in irrigation systems.</b>	<p>2.1 Adjust <i>flow regulation</i> and control mechanisms in irrigation systems to increase and decrease flow according to organisational procedures.</p> <p>2.2 Secure flow regulation devices in irrigation systems to maintain a constant flow and meet <i>legislative and organisational requirements</i>.</p>
<b>3 Record and report system adjustments.</b>	<p>3.1 Produce information relating to flow adjustments in irrigation systems according to organisational procedures.</p> <p>3.2 Collect, record and report information on flows and abnormalities in irrigation systems according to organisational requirements.</p>
<b>4 Respond to contingencies.</b>	<p>4.1 Identify and assess potential risks and contingencies in the operation of flow control and regulating devices within irrigation systems.</p> <p>4.2 Identify and apply organisational standards and procedures for responding to potential and actual risks and contingencies.</p> <p>4.3 Apply organisational standards and procedures for informing relevant personnel within organisation of potential risks.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- collect and report system performance information
- adjust and maintain flow system control mechanisms
- secure flow regulation devices
- use literacy skills in regard to verbal and written communication in the workplace
- use personal protective equipment

### **Required knowledge:**

- impact of the principles of hydraulics on the operation of flows
- system layout
- role of relevant utilities and service bodies
- risk factors and potential hazards
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of system and site
- system flow control mechanisms
- relevant lock-out procedures for mechanical and electrical installations

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to operate basic flow control and regulating devices in irrigation systems including:

- identifying flow requirements
- preparing for and conducting flow monitoring
- identifying and reporting operational problems
- adjusting and regulating flows according to organisational requirements
- completing records and reports

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace

- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Equipment*** used includes:

- personal protective equipment
- electronic digital monitoring and metering systems
- basic hand and power tools
- valves, pumps and flow meters
- mechanical meters and flow devices
- hydrants
- recording systems
- communication equipment, including:
  - two-way radio
  - telephone



Processes to ensure flows are ***monitored, measured and recorded*** may require:

- fax
- lifting and winching equipment
- on- and off-road vehicles
- interaction and communication with other employees, other authorities and general public
- visual observation
- implementation of reporting procedures that may also include procedures for implementation of by-laws, organisational policies and statutory requirements

***Designated locations and systems*** may include:

- urban locations
- rural locations
- ground and surface water source systems
- wastewater collection and transfer systems
- trade waste systems

***Flow regulation*** may include operation of:

- valving systems, including:
  - sluice
  - blade
  - gate
  - non-return
  - pressure reducing
- supervisory control and data acquisition (SCADA) systems
- pumping systems, including:
  - centrifugal
  - Archimedes screw type
  - submersible
  - positive displacement
  - electronic and manual controlling systems
  - service reservoirs

***Legislative and organisational requirements*** may include:

- relevant federal and state or territory legislation and regulations
- codes of practice, associated standards and guidance material
- documented organisational policies, manuals and induction programs
- relevant community planning and development agreements, such as land care agreements

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Collection and distribution.

# NWP226B Prepare and restore work site

## Modification History

NWP226B Release 2: Layout adjusted. No changes to content.

NWP226B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to prepare work sites prior to work and restore them on completion of work. The ability to follow work instructions, use a range of equipment and tools to prepare a safe work site and subsequently to restore the site to the required condition is essential to satisfactory performance.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for field and operational staff performing a wide range of functions that support construction, maintenance and operations processes.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where *bold italicised* text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Plan and prepare for work.</b>	<p>1.1 Determine <i>site preparation</i> requirements from specifications, instructions and pre-work inspections.</p> <p>1.2 Identify and report potential risks to public and environment.</p> <p>1.3 Perform a site check according to <i>legislative and organisational requirements</i> to identify risks and prevent damage to other utilities.</p> <p>1.4 Select and check work site <i>equipment, tools and materials</i> as appropriate to meet task and safety specifications.</p> <p>1.5 Select, fit and use personal protective equipment.</p>
<b>2 Prepare work site.</b>	<p>2.1 Position <i>safety equipment and materials</i> as required to prevent potential risks to public and environment.</p> <p>2.2 <i>Store and secure equipment</i> and materials as necessary.</p> <p>2.3 Use work site equipment, tools and materials according to regulatory and legislative requirements.</p> <p>2.4 Use manual or mechanical excavation equipment where required to achieve specifications.</p> <p>2.5 Provide appropriate drainage and diversion of site inflows from work site without <i>damage to environment</i>.</p>
<b>3 Restore work site.</b>	<p>3.1 Use equipment, tools and materials according to regulatory and legislative requirements.</p> <p>3.2 Backfill and compact excavations according to specifications.</p> <p>3.3 Remove excess soil, debris and unwanted materials from site.</p> <p>3.4 <i>Restore work site</i> to meet environmental and organisational requirements.</p>
<b>4 Review, record and report activities.</b>	<p>4.1 Check, maintain and store equipment, tools and materials according to manufacturer guidelines and organisational procedures.</p> <p>4.2 Maintain workplace records as required.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- set up a site
- excavate backfill

- compact and reinstate site
- prepare site for planting and plant vegetation
- interpret plans, instructions and standard operating procedures
- use tools and equipment
- identify and respond to operational problems
- use communication systems
- use safety equipment and personal protective equipment
- identify hazards
- give and receive instructions
- use literacy skills in regard to verbal and written communication in the workplace
- communicate with customers and other employees

**Required knowledge:**

- OHS procedures
- personal work site safety
- public and site safety
- risk factors and potential hazards of site preparation and restoration
- environmental aspects of site preparation and restoration
- trenching, shoring and excavation management
- excavation procedures and site restoration
- relevant utilities and service bodies
- communication systems
- landscape and ground structure of work area
- equipment operation, capacity and limitations
- effects of weather and conditions on construction site or plant

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to prepare work sites prior to work and restore them on completion of work including:

- interpreting work requirements
- planning work site layout
- selecting appropriate work and safety equipment
- storing and securing materials and equipment safely
- clearing and preparing work site according to specifications
- restoring work site according to environmental and

## Context of and specific resources for assessment

organisational procedures

- cleaning, maintaining and storing equipment
- completing relevant workplace documentation

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

Questioning will be appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Site preparation*** may include:

- interpreting plans
- locating public utilities
- setting out site
- battering
- shoring
- scaffolding
- excavating
- directing traffic and the public

***Legislative and organisational requirements*** may include:

- relevant federal and state or territory legislation and regulations
- codes of practice, associated standards and guidance material
- documented organisational policies, manuals and induction programs
- relevant community planning and development agreements, such as land care agreements

***Equipment, tools and materials*** may include:

- hand and power tools
- lifting and winching equipment
- mechanical excavation equipment
- pneumatic and motorised equipment, including:
  - compressors
  - pneumatic spades and attachments
  - motorised cutting equipment
- revegetation and gardening supplies and plants
- communication equipment
- personal protective equipment
- positioning signs
- erecting barricades
- controlling access

***Safety equipment and materials*** may be used to ensure public and site safety when:

- stacking and securing pipes safely
- placing equipment in locked storage during absence from site

***Damage to environment*** is avoided or minimised by

- sediment control devices
- erosion prevention

using a range of techniques, including:

*Restore work site* using techniques, including:

- diversion and collection structures
- backfilling
- compacting
- planting or replanting vegetation
- reinstating site

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Common.



# NWP251B Construct open earthen channels or drains

## Modification History

NWP251B Release 2: Layout adjusted. No changes to content.

NWP251B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to plan and prepare for the construction of open channels or drains and to complete construction operations and subsequent site restoration according to legislative and organisational requirements.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for field and operational staff involved in the construction of earthen channels and drains for stormwater or irrigation systems or the remodelling or reconstruction of unserviceable systems.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where *bold italicised* text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Plan and prepare for construction work.</b>	<p>1.1 Determine <i>work requirements</i> from design plans, specifications, instructions and work orders.</p> <p>1.2 Check site and identify <i>hazards</i> according to <i>legislative and organisational requirements</i>.</p> <p>1.3 Make appropriate <i>drainage and diversion arrangements</i> without damage to environment.</p> <p>1.4 Check <i>equipment</i> and open-cut excavation methods to ensure that safety requirements of task and site are met.</p> <p>1.5 <i>Prepare site</i> according to specifications and organisational requirements.</p>
<b>2 Construct channels or drains.</b>	<p>2.1 Construct earthen channels, drains and batters to planned width, depth and gradient.</p> <p>2.2 Compact soil, apply additives if necessary, and take earth samples to meet organisational requirements.</p> <p>2.3 Check construction works to ensure that specifications are met.</p>
<b>3 Restore work site and equipment.</b>	<p>3.1 Check, maintain and store equipment, tools and materials according to manufacturer guidelines and organisational procedures.</p> <p>3.2 Restore work site and add <i>environmental improvements or controls</i> to complete work according to plans and organisational requirements.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- identify and respond to operational problems
- produce reports and logs
- use safety and personal protective equipment
- use tools and machinery
- interpret plans, charts and instructions
- apply procedures and standards
- apply channel, drain and batter construction techniques
- identify soil types, mechanics and compaction rates
- select and operate appropriate compaction plant, such as tamping foot and smooth drum roller
- operate communication systems

- perform work-related calculations
- communicate with employees and customers
- work effectively as part of a team
- use literacy skills in regard to verbal and written communication in the workplace
- give and receive instructions

### Required knowledge:

- channel and drain system design basics
- channel and drain system layout
- environmental aspects of construction
- channel, drain and batter construction processes
- measures to reduce channel deterioration, infestation of weeds, pests and seepage
- relevant utilities and service providers
- safe use of lasers
- use of automatic levels
- basic levelling techniques
- profiles and boning rods
- survey principles
- soil types, mechanics and compaction rates
- capabilities of plant used for construction, including equipment operation, capacity and limitations
- communication systems
- work-related calculations
- hazardous materials handling
- landscape and ground structure of work area
- risk factors and potential hazards of construction processes
- effects of weather and conditions on construction site or plant
- control systems

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to construct open earthen channels and drains by:

- planning work and preparing work site according to given specifications and instructions
- cutting channels to specification
- compacting soil
- taking soil samples

- checking that work meets specifications
- cleaning and storing equipment
- restoring work site

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Work requirements*** may include:

- confirmation of site availability
- confirmation of statutory approvals, including:
  - vegetation clearing approval
  - riverine protection permits
  - use of borrow approvals
  - preparations for conditions included in statutory approvals for work
- site boundaries
- borrow and spoil areas
- boundary protection
- location, timing and type of work activity
- extent of the work
- access roads
- specifications for depth, width and gradient
- utility location
- safe work methods

***Hazards*** may include:

- damage to other utilities
- soil types and suitability to cut
- those associated with particular plant and equipment
- relevant federal and state or territory legislation and regulations
- codes of practice, associated standards and guidance material

***Legislative and organisational requirements*** may include:

- documented organisational policies, manuals and induction programs
- relevant community planning and development agreements, such as land care agreements

***Drainage and diversion arrangements*** may include:

- statutory approvals and conditions
- environmental

***Equipment*** may include:

- hand and power tools
- on- and off-road vehicles
- off-road plant
- lifting and winching equipment
- compressors

*Site preparation* may include:

*Environmental improvements or controls* may include:

- rotating lasers
- profiles
- automatic level
- pneumatic spaders and attachments
- motorised cutting equipment
- portable pumps
- communication equipment
- breathing apparatus
- gas detection equipment
- rescue equipment
- appropriate personal protective equipment
- installation of temporary erosion control structures
- cultural heritage monitors
- safety barricades
- removal of vegetation, debris, silt and soil
- revegetation processes
- drainage measures
- sedimentation control

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Collection and distribution.

# NWP252B Construct and install irrigation delivery and stormwater drainage assets

## Modification History

NWP252B Release 2: Layout adjusted. No changes to content.

NWP252B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to construct irrigation delivery or stormwater drainage assets on site and to install both constructed assets and prefabricated components.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for field staff with specific responsibility for ensuring that the construction and installation of irrigation or stormwater drainage assets is completed in a safe and timely manner.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Plan and prepare for work.</b>	<p>1.1 Determine <i>work requirements</i> from specifications and instructions.</p> <p>1.2 Select, fit and use personal protective equipment.</p> <p>1.3 Perform site check to identify hazards and prevent damage to other utilities according to <i>legislative and organisational requirements</i>.</p> <p>1.4 Provide appropriate drainage and diversion from work site without damage to environment.</p> <p>1.5 Check <i>equipment</i> and excavation methods to meet safety requirements of task and site.</p>
<b>2 Construct and install drains, channels, pipes and associated fittings.</b>	<p>2.1 Provide bedding and foundations according to <i>structure</i> type, location and specification.</p> <p>2.2 Select, lay and install join <i>pipes</i> and <i>fittings</i> according to manufacturer and organisational requirements.</p> <p>2.3 Select, place and join prefabricated components according to manufacturer and organisational requirements.</p> <p>2.4 Check installed pipes, fittings and prefabricated components to ensure that test specifications are met.</p> <p>2.5 Construct cast in situ components according to specifications and organisational requirements.</p>
<b>3 Finalise work.</b>	<p>3.1 Check constructions and installations to ensure that specifications are met.</p> <p>3.2 Check, maintain and store equipment, tools and materials according to manufacturer guidelines and organisational procedures.</p> <p>3.3 Backfill, compact and restore work site to meet environmental and organisational requirements.</p> <p>3.4 Maintain workplace records as required.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- identify and respond to operational problems



- produce reports and logs
- use safety and personal protective equipment
- use tools and machinery
- interpret plans, charts and instructions
- perform work-related calculations
- apply procedures and standards
- communicate with employees and customers
- work effectively as part of a team
- use communication equipment
- use literacy skills in regard to verbal and written communication in the workplace
- give and receive instructions

**Required knowledge:**

- system hydraulics basics
- system layout
- environmental aspects of construction
- construction processes
- relevant utilities and service providers
- communication systems
- hazardous materials handling
- landscape and ground structure of work area
- risk factors and potential hazards of construction processes
- equipment operation, capacity and limitations
- effects of weather and conditions on construction site or plant
- control systems
- pre-cast components
- pipes and fittings

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to construct and install irrigation delivery or stormwater drainage assets by:

- planning work and preparing work site according to given specifications and instructions
- constructing assets according to specifications
- installing assets according to specifications
- checking that work meets specifications

## Context of and specific resources for assessment

- cleaning and storing equipment
- restoring work site
- completing documentation

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Work requirements*** may include:

- extent and scope of work
- work site boundaries
- utilities location
- risk assessment and prevention measures
- signage
- traffic control

***Legislative and organisational requirements*** may include:

- relevant federal and state or territory legislation and regulations
- codes of practice, associated standards and guidance material
- documented organisational policies, manuals and induction programs
- relevant community planning and development agreements, such as land care agreements

***Equipment*** used may include:

- hand and power tools
- on- and off-road vehicles
- lifting and winching equipment
- mechanical excavation equipment
- compressors
- pneumatic spaders and attachments
- motorised cutting equipment
- chemical spraying apparatus
- small marine craft
- trenching systems
- portable pumps
- communication equipment
- breathing apparatus
- gas detection equipment
- rescue equipment
- appropriate personal protective equipment

***Structures*** may include:

- drop structures
- regulators
- erosion barriers
- head walls

- Pipes*** may include:
- concrete channels
  - vitrified clay
  - polyvinyl chloride (PVC)
  - polyethylene
  - reinforced concrete
- Fittings*** may include:
- jointing systems for pipe types and prefabricated sections, e.g. gibault and tension bands
  - tension bands
  - solvent cement joints
  - compression rings
  - bolted flanges
  - malleable jointing materials
  - electrofusion
  - butt welding

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Collection and distribution.

# NWP302A Install meters for non-potable, non-urban water supplies

## Modification History

NWP302A Release 2: Layout adjusted. No changes to content.

NWP302A Release 1: Primary release.

## Unit Descriptor

This unit covers the competency required to install water meters for non-potable water allocation in non-urban water systems.

## Application of the Unit

This unit of competency forms part of a skill set for meter installation and has application for the certification of water meter installers.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Confirm conditions of the site for meter installation.</b>	1.1 Identify the location of the site and establish <i>client information</i> .
	1.2 Identify access to the site and any <i>conditions of access</i> .
	1.3 Test the <i>conditions of the site</i> and analyse impact on installation assets.
	1.4 Complete an <i>environmental impact statement</i> for the site.
	1.5 Carry out a <i>job safety analysis</i> and identify hazards and control measures.
<b>2 Set out the site.</b>	2.1 Locate and install temporary benchmark.
	2.2 Store and secure material and equipment on site.
	2.3 Calculate and mark the site perimeters in relation to the flow of the channel.
	2.4 Ensure that excavations provide sufficient width for <i>movements of installation</i> .
<b>3 Install meter facilities.</b>	3.1 Install sumps and headwalls to ensure correct elevation, orientation and horizontal and vertical levels.
	3.2 Install pipes and meter pits to ensure the correct elevation, fall and orientation.
	3.3 Check pipe fittings and seals and eliminate flow disturbance.
	3.4 Install solar panels and display units according to manufacturers' requirements, check for operation and seal.
<b>4 Install meters.</b>	4.1 Install meters in meter pits according to manufacturers' requirements.
	4.2 Fit meters according to manufacturers' requirements.
	4.3 Align flanges, gaskets and internal pipe walls to eliminated flow disturbance and leaks.
	4.4 Locate and support meters to protect them from traffic and vibration.
<b>5 Restore site.</b>	5.1 Backfill upstream and downstream sumps with suitable material, moisture content and compaction to maximize compaction efficiency.
	5.2 Restore the site to closest to original site conditions.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### **Required skills:**

- meter installation construction project planning
- calculation of head, flow and measurements of pipes and pressure
- undertake locational assessment and risk analysis for meter installation
- sample and test soil for backfill and installation structures
- analyse the impact of water infiltration on the stability of structures
- measure the head of water to judge sufficiency for meter's accuracy
- check power supply and links
- position solar panels to maximise power collection
- undertake a job safety analysis and checking hazards and safety requirements
- store and safe use of equipment on site
- determine excavation requirements
- calculate sump and headwall elevation and orientation
- calculate pipe and meter pit elevation, fall and presentation.
- install transducers and cabling safely
- interpret manufacturers' requirements for fitting meters in meter pits
- use techniques to protect meters from disturbance
- assess the effectiveness of backfill
- undertake site restoration

### **Required knowledge:**

- the purpose and standards for non-urban water metering.
- community expectations for water measurement and use
- standards for the installation of non-urban meters in open and closed conduit systems
- the social, environmental, economic and political responsibilities of water authorities in relation to meter installation
- requirements for checking the pattern approval of meters
- requirements for compliance with meter installation standards
- meter manufacturers guidelines and installation manual for specific meters
- the organisation's policies and procedures for water meter installation
- conditions for meter location and suitable installation assets and meters for the conditions
- causes of flow disturbance
- potential environmental causes of meter failure
- the organisation's environmental impact guidelines
- maintenance requirements for meter facility within and open channel
- relevant safety requirements including confined space

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to install meters for non-potable, non-urban water supplies including:

- identifying and analysing client requirements, site conditions and their impact on the types of meter required, and the design of the installation
- identifying and analysing environmental conditions and limitations and the impact of work to be undertaken
- identifying and analysing safety risks and hazards and responding to remove risks and hazards
- preparing sites and equipment for installation
- installing meter facilities using site specific requirements
- installing meters according to client and manufacturers' requirements and conditions
- identifying faults, changes and failure indicators
- restoring sites to original conditions

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts



- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning or examination to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Client information*** will include:

- landowner details
- GPS coordinates
- identification of the supply channel
- running distance from validated point on the channel
- discharge point

***Conditions of access*** will include:

- suitability of existing access
- landowner conditions
- stock safety
- vehicle and driver safety

***Conditions of the site*** will include:

- soil sampling and testing
- water infiltration
- compaction of backfill
- suitability of source head for accuracy
- power supply
- communication links

***Environmental impact statement*** will include:

- water
- air
- soil
- vegetation
- fauna
- cultural and heritage

***Job safety analysis*** will include:

- personal protective equipment
- safe access
- confined space requirements
- safe use of machinery and equipment
- level of risk of hazards
- adjustments to control hazards

***Movements of installation*** will include:

- protect from collapse
- correct depth
- sufficient compaction

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Collection and distribution.

# **NWP304A Maintain meters for non-potable, non-urban water supplies**

## **Modification History**

NWP304A Release 2: Layout adjusted. No changes to content.

NWP304A Release 1: Primary release.

## **Unit Descriptor**

This unit describes the skills and knowledge required for the maintenance of water meters in open and closed conduit, for non-potable water allocation in non-urban water systems.

No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.

## **Application of the Unit**

This unit covers the maintenance of the operational integrity of already installed meters, metering systems and their components. This unit covers corrective, predictive and preventative maintenance.

This unit does not cover replacement of the meter itself, or other significant components such as pipes, sumps and emplacements; capital works/asset replacement or tasks that use skills required for complex installations.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the Performance criteria describe the required performance needed to

essential outcomes of a unit of competency. demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Confirm meter type and location within asset management system.</b>	<p>1.1 Obtain organisational maintenance plan and manufacturers guidelines, where available.</p> <p>1.2 Locate meter <b><i>emplacement</i></b> on a map or by GPS or according to organisational procedures.</p> <p>1.3 Confirm that <b><i>meter type</i></b> matches maintenance plan or manufacturer's guidelines.</p> <p>1.4 Confirm that meter number matches maintenance plan.</p>
<b>2 Check condition of meters and metering system.</b>	<p>2.1 Identify <b><i>faults</i></b> using an <b><i>asset condition checklist</i></b>.</p> <p>2.2 Establish maintenance requirements.</p> <p>2.3 Check for hydraulic disturbances.</p> <p>2.4 Check condition of battery and charging system.</p> <p>2.5 Perform in situ test of meter as applicable.</p>
<b>3 Maintain meter and meter facilities.</b>	<p>3.1 <b><i>Rectify</i></b> faults in <b><i>components</i></b>, according to organisational guidelines.</p> <p>3.2 Identify faults which need to be rectified by a third party, according to organisational guidelines.</p>
<b>4 Test and recommission.</b>	<p>4.1 Ensure meter complies with standards.</p> <p>4.2 Perform in situ re-test of meter as applicable.</p> <p>4.3 Replace seals and tags.</p> <p>4.4 <b><i>Record faults</i></b> and meter performance, maintenance and repairs according to <b><i>organisational procedures</i></b> and <b><i>statutory requirements</i></b>.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- reading and analysis of an electronic display
- input of data into electronic controller

- working with low voltage wiring
- reading manufacturer's instructions, plans, exploded drawings, parts catalogues
- reading verification marks
- appropriate use of tags and seals

### **Required knowledge:**

- organisational policies and procedures for water meter maintenance
- organisational rights and responsibilities
- manufacturers maintenance procedures for specific meter types
- knowledge of checking pattern approval requirements (NMI)
- standards for non-urban metering (ATS 4747)
- manufacturers maintenance guidelines
- GPS
- meter types and accuracy limits
- head
- water quality
- flow rates
- roles and responsibilities of maintenance personnel
- OHS guidelines
- environmental, cultural and heritage guidelines

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- confirms the site and the meter
- checks meter condition
- replaces components as required
- documents the maintenance

### **Context of and specific resources for assessment**

Assessment must ensure:

- access to a range of meters and installation sites
- access to organisational documentation
- observance of OHS guidelines

A range of assessment methods should be used to assess knowledge. The following examples are appropriate for this unit:

- written questions

- oral questions on the job during the maintenance process
- written reports including asset condition checklist, meter condition report
- third party reports from workplace supervisors

A range of assessment methods should be used to assess skills. The following examples are appropriate for this unit:

- demonstrations of meter maintenance in a workplace environment
- written Reports including asset condition checklist, meter condition report
- third party reports from workplace supervisors

Assessment should be based on evidence which has been gathered from a number of meter installations in a range of conditions which reflect a predictable variety of routine requirements and the range of variables, as well as which allow the potential for applying knowledge and skills in some conditions which require problem solving and contingency responses.

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time

- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Emplacement*** may include:

- sumps, pipes, civil structures
- pits, concrete structures

***Meter type*** may include:

- electromagnetic
- ultrasonic (Doppler, transit time)
- mechanical meters (propeller actuated, turbine)
- systems of automated or manually operated weirs and gates with flow measurement capability
- open channel flumes and thin-plate weirs
- channel or stream gauging emplacements

***Faults*** may include:

- weeds and other obstructing materials
- dirty solar panels
- blockages and leakages of pipes and channels
- leaking/seeping channel banks
- animal infestations (wasp nests, ants and spider webs, bird nests, yabbies)
- electrical interference
- distortion of pipes
- flow disturbance factors

***Asset condition checklist*** may include:

- visual clues - leaks, breaks, seals, vandalism or tampering, wiring, tags and verification marks
- validated third-party reports
- display outputs - fault codes
- erratic or inconsistent data readings

**Rectify** may include:

- water quality, water flow (flow rate and full pipe)
- operating parameters of the emplacement & meter (eg full flowing or partially full; operating range with respect to flows)
- electrical interference
- check of security seals
- unblocking/ desilting
- ensuring flanges etc are tight
- replacing components according to organisational guidelines

**Components** may include:

- sensors
- chips
- cogs
- spindles
- transducers
- outputs
- probes
- connectors
- wiring
- seals & guides (doors & valves)
- actuation system
- chargers & batteries

**Record faults** may include:

- asset condition checklist
- meter condition report

**Organisational procedures and statutory requirements** may include:

- maintenance plan
- manufacturers guidelines
- Australian Technical Standards

## **Unit Sector(s)**

Not applicable.



# **NWP305B Monitor and conduct minor maintenance on complex flow control and metering devices**

## **Modification History**

NWP305B Release 2: Layout adjusted. No changes to content.

NWP305B Release 1: Primary release.

## **Unit Descriptor**

This unit of competency describes the outcomes required to monitor the operation of complex flow control, measuring and regulating devices controlling water supply in ground and/or surface water source systems, or water supply and/or distribution systems, wastewater collection and transfer systems. This competency also covers minor maintenance responsibilities.

## **Application of the Unit**

This unit supports the attainment of skills and knowledge required for field staff with a specific responsibility for monitoring the operation of complex flow control, measuring and regulating devices, conducting minor maintenance and ensuring that problems and anomalies are rectified by specialist technicians in a timely manner.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Plan and prepare for work.</b>	<p>1.1 Interpret work requirements for <i>monitoring complex flow control and metering devices</i> from plans, drawing specifications and instructions.</p> <p>1.2 Select and check <i>equipment and tools</i> to meet the safety requirements of the task and site.</p> <p>1.3 Correctly select, fit and use required safety equipment, including personal protective equipment.</p>
<b>2 Monitor device and equipment performance.</b>	<p>2.1 Identify devices and equipment and interpret specifications for operation.</p> <p>2.2 Check information on devices and equipment performance and report according to <i>organisational and statutory requirements</i>.</p>
<b>3 Conduct minor maintenance on devices and equipment.</b>	<p>3.1 Undertake routine maintenance tasks for complex devices according to manufacturer's specifications and organisational requirements.</p> <p>3.2 Secure devices and equipment according to organisational requirements.</p> <p>3.3 Identify and report <i>problems and anomalies</i> immediately to appropriate personnel for correction.</p>
<b>4 Monitor system performance.</b>	<p>4.1 Schedule and monitor <i>routine inspections</i> of system and networks according to organisational procedures.</p> <p>4.2 Collect, analyse and report data on system performance and usage according to organisational requirements.</p> <p>4.3 Take samples according to organisational requirements.</p>
<b>5 Compile process records and reports.</b>	<p>5.1 Report information relating to system demand adjustment requirements according to organisational requirements.</p> <p>5.2 Identify process faults and the operational condition of the system and network and report according to organisational requirements.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- identify and report operational problems
- collect and report system performance information

- inspect flow regulation, measuring and regulating devices
- produce reports and logs
- use communication systems
- give and receive instructions
- interpret plans, charts and instructions
- interpret policies, procedures and standards
- communicate with customers and other employees
- use personal protective equipment

### **Required knowledge:**

- monitoring flow control, measuring and regulating devices' performance
- system hydraulics
- system layout
- relevant utilities and service bodies
- communication systems
- materials handling
- environmental, landscape and ground structure of water distribution and/or wastewater collection systems
- system and network risk factors and potential hazards
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of system and site
- flow measurement procedures
- data collection and recording
- system flow control mechanisms and control systems
- where relevant, lock out procedures for mechanical and electrical installations

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to monitor the operation of complex flow control, measuring and regulating devices including:

- interpreting work requirements and selecting appropriate equipment and tools, including personal protective equipment
- identifying devices and equipment to be monitored and relevant operational specifications
- collecting and recording information on device performance

- conducting minor routine maintenance tasks and secure devices
- identifying and reporting problems and anomalies
- inspecting system and networks
- collecting and recording data on system performance
- taking samples
- reporting monitoring and inspecting findings
- identifying and reporting on system performance

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a

manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Monitoring complex flow control and metering devices*** may include:

- SCADA
- checking pressures at PSVs
- checking the status of valves and sensors

***Equipment and tools*** may include:

- electronic digital monitoring and metering systems (telemetry) and system adjustments
- basic hand and power tools
- manual chart recording systems
- communication equipment
- lifting and winching equipment
- on- and off-road vehicles
- atmosphere monitor
- safety and rescue equipment

***Organisational and statutory requirements*** may include:

- by-laws and organisational policies
- standard operating procedures
- environment protection
- occupational health and safety
- marine
- Water Acts
- flood operation procedures
- emergency and incident management plans
- World Health Organisation standards
- Australian Drinking Water Guidelines
- Mines Act

***Routine inspections*** may include:

- interaction and communication with other employees, other authorities and the general public
- visual observation
- implementation of reporting procedures that may also include procedures for the implementation of by-laws, organisational policies, standard operating procedures and

- Reporting of *problems and anomalies* may include:
- statutory requirements
  - location of faults, such as:
    - sensor
    - signal
    - power supply
    - actuator
    - valve
  - contacting designated specialist

### **Unit Sector(s)**

Not applicable.

### **Competency field**

Collection and distribution.

# NWP316B Monitor and schedule water deliveries

## Modification History

NWP316B Release 2: Layout adjusted. No changes to content.

NWP316B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to schedule water deliveries for irrigation and/or domestic and stock supply systems, including monitoring flows, analysing data, coordinating hydraulic processes and compiling operational reports.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for field staff and operators with a specific responsibility for ensuring that water deliveries meet varying customer requirements.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where *bold italicised* text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Schedule water deliveries.</b>	1.1 Identify and record customer water orders. 1.2 Analyse water orders to determine water delivery and flow rate requirements. 1.3 <i>Schedule water deliveries</i> to meet flow rate requirements and organisational standards for channel balance and capacity restraints.
<b>2 Monitor water delivery.</b>	2.1 Monitor channel flow rate, regulation and delivery according to customer requirements. 2.2 Maintain delivery performance records according to organisational requirements. 2.3 Analyse system performance using system data and records to determine actual and planned performance.
<b>3 Coordinate and control water delivery.</b>	3.1 Calculate system adjustments according to demand and organisational requirements. 3.2 Coordinate flow regulation, channel levels, security of flow devices and settings according to demand and organisational requirements.
<b>4 Compile reports and records of water delivery.</b>	4.1 Compile reports from system performance data according to organisational requirements. 4.2 Maintain appropriate measurements and delivery records according to organisational requirements.

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- identifies and responds to operational problems
- produces basic reports and logs
- operates communications equipment
- gives and receives instructions
- follows plans, charts and instructions
- uses safety equipment and personal protective equipment
- communicates with customers and other employees
- works effectively as part of a team
- performs work related calculations
- operates irrigation and/or domestic stock supply system
- checks channel flow



- identifies control system faults

### **Required knowledge:**

- system hydraulics
- impact of the principles of hydraulics on the operation of flows
- coordination processes
- principles of scheduling
- system layout
- system operations
- policies and standard operating procedures
- communication systems
- lock out procedures for mechanical and electrical installations
- environmental aspects of irrigation and/or stock and domestic supply system asset infrastructure
- safety procedures
- environment, landscape and ground structure of work area
- risk factors and potential hazards of irrigation and/or domestic and stock supply systems
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of site plant
- water flow calculations
- flow measurement procedures
- gravity systems
- control systems

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to schedule water deliveries for irrigation and/or domestic and stock supply systems including:

- analysing volumes and flow rates required for water deliveries
- preparing schedules for water deliveries from customer orders
- monitoring and regulating system performance
- adjusting system according to demand
- coordinating flow regulating devices
- completing relevant documentation

## **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Schedule water deliveries*** may include:

- interaction and communication with:
  - team members
  - other authorities
  - the general public
- implementation of reporting procedures that may also include:
  - procedures for the implementation of by-laws
  - organisational policies
  - standard operating procedures
  - statutory requirements

## Unit Sector(s)

Not applicable.

## Competency field

Collection and distribution.

# NWP362B Monitor, operate and control reclaimed water irrigation

## Modification History

NWP362B Release 2: Layout adjusted. No changes to content.

NWP362B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to monitor, operate and control reclaimed water irrigation and the use of reclaimed water for irrigation practices.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for staff with a specific responsibility for analysing the critical aspects of reclaimed water reuse management relating to a project or site and implementing reclaimed water reuse irrigation in compliance with organisational, environmental and legislative requirements.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Assess sites for reclaimed water irrigation.</b>	1.1 Identify soil/water interactions and <i>soil properties</i> important for plant growth. 1.2 Identify soil <i>sampling</i> sites, collect samples and conduct <i>soil testing</i> . 1.3 Classify soils using field texture, pH and structure analysis. 1.4 Monitor and determine the <i>water holding capacity</i> of the soil.
<b>2 Assess quality of reclaimed water for irrigation.</b>	2.1 Sample and test reclaimed water and interpret <i>quality parameters</i> . 2.2 Determine crops suitable for the quality of reclaimed water and site conditions.
<b>3 Implement reclaimed water irrigation.</b>	3.1 Identify basic features of <i>irrigation systems</i> . 3.2 Operate and maintain irrigation <i>equipment</i> according to organisational requirements. 3.3 Identify and apply irrigation <i>scheduling options</i> for reclaimed water. 3.4 Use crop factors and climate data to produce <i>water budgets</i> . 3.5 Apply irrigation water and collect and monitor tail water or runoff according to <i>organisational and statutory requirements</i> .
<b>4 Respond to water or soil quality issues.</b>	4.1 Develop <i>irrigation management options</i> to respond to water quality issues. 4.2 Identify and apply requirements and options for <i>soil ameliorants</i> . 4.3 Monitor infiltration and drainage according to organisational requirements.
<b>5 Compile reclaimed water irrigation records.</b>	5.1 Compile <i>reports</i> to meet organisational procedures and statutory requirements. 5.2 Report observations outside defined parameters for further action.

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- implement best practice irrigation procedures
- monitor and manage soil

- solve operational problems
- access, interpret and apply relevant legislation
- apply environmental policies, plans and procedures
- apply control procedures to environmental risks and incidents
- assess environmental risks at the work site
- report and record environmental procedures
- access, interpret and apply standard operating procedures
- communicate effectively with customers
- complete basic workplace records and/or reports
- identify soil groups
- use safety and personal protective equipment
- perform work-related calculations
- work effectively as part of a team
- use communication equipment
- give and receive instructions
- sample and test soil and water

**Required knowledge:**

- key principles of irrigation practices, including irrigation scheduling
- key characteristics of reclaimed water
- relevant legislative requirements
- standard operating procedures
- environmental management procedures
- control procedures for environmental risks and incidents
- risk assessment procedures
- environmental impact assessment
- recording procedures
- reporting procedures
- established environmental management procedures
- risk assessment procedures
- primary agencies involved in drinking water quality management
- water quality performance indicators
- an overview of the water supply system
- water hazardous agents and preventative strategies
- community and agency roles and responsibilities in monitoring water quality
- best management practices for the use of reclaimed water for irrigation purposes
- reclaimed water usage licensing procedures and requirements
- environmental, landscape and ground structure of work area
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of site or plant
- interpretation and use of material safety data sheets

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to monitor, operate and control reclaimed water irrigation, including:

- analysis of the critical aspects of reclaimed water reuse management relating to the project or site
- implementing reclaimed water reuse irrigation
- identifying environment, health and safety risks and impact on soil, stock and operators
- applying environmental procedures
- participating in and contributing to reviews of reclaimed water reuse procedures

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- collecting and noting circumstances and observations relating to a specific breaches of legislation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence

- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

*Soil properties* may include:

- surface soil
- subsoil
- soil profiles
- a, b & c horizons
- texture:
  - rock/gravel
  - sand
  - silt
  - clay
- soil structure
- aggregates
- minerals
- pores
- soil colour

*Soil sampling* may include:

- selection of sample site/s using methods such as:
  - grid
  - random
  - zigzag
  - transect



- collection of samples from:
    - field pits
    - auger holes
  - consistent application of sampling procedures as identified by the Department of Agriculture
  - maintenance of the integrity of the sample according to applicable statutory guidelines (Department of Agriculture, EPA)
- Soil testing*** may include:
- soil pH
  - soil texture assessment
  - mottle colour
  - soil nutrients
  - nitrogen
  - phosphorus (Olsen P or Colwell P)
  - potassium
  - fertiliser requirements
  - cation exchange capacity (CEC)
  - exchangeable sodium percentage (ESP)
  - calcium/magnesium ratio
  - organic matter
  - hydraulic conductivity
  - consistence (dry only)
  - strength
  - stickiness
  - plasticity
  - Emerson dispersion grade
- Water holding capacity*** may include:
- hydraulic conductivity
  - soil water potential
  - infiltration/leaching rates
  - field capacity determination
- Reclaimed water ***quality parameters*** may include:
- pH
  - BOD/COD
  - total salt concentration
  - total Dissolved Solids (TDS)
  - soluble salts by electrical conductivity (EC)
  - nutrients - N, P, K
  - anions and cations
  - sodium adsorption ratio (SAR)
  - adjusted SAR
- Irrigation systems*** may include:
- border check flood irrigation
  - graded or contour furrows
  - sub-surface irrigation

- sprinklers
  - localised systems, such as:
    - drip
    - micro spray
    - trickle
- Equipment** may include:
- electronic monitoring and metering systems
  - reclaimed water flow distribution systems, including:
    - pipes
    - valves
    - pumps
    - channels
    - checks
    - drains
    - collection dams
    - flow control gates
  - pressured distribution equipment, such as:
    - sprinklers
    - travelling irrigators
  - sampling and testing equipment
  - infiltration testing equipment
  - manual chart recording systems
  - on- and off-road vehicles
  - communication equipment
  - atmosphere monitoring equipment
  - personal protective equipment
  - communication equipment
  - computerised equipment
- Irrigation *scheduling options* may include:
- measurement of soil moisture content
  - on-site, physical soil moisture investigations
  - evaporation minus rainfall calculations
  - tensiometers
  - gypsum blocks
  - neutron probes
  - capacitance probes
- Water budgets** may include:
- weather details
  - rainfall
  - evaporation
  - crop factors and predicted plant water requirement
  - leaching requirements
  - soil types and characteristics
  - monthly/yearly calculation of reclaimed water required

**Organisational**

*requirements* may include:

- calculation of suitable land areas for use
- organisational policies and procedures
- occupational health and safety
- electrical and mechanical procedures

**Statutory requirements** may include:

- environmental legislation, including relevant:
  - Federal legislation
  - State/Territory legislations
  - local government by-laws
  - government or quasi-government policies and regulations
  - community planning and development agreements, such as land care agreements
- Water Acts
- licensing and/or drainage agreements
- plumbing and drainage standards
- hazardous substances
- World Health Organisation standards
- NHMRC guidelines

**Irrigation management options** may include:

- shandyng to reduce salt or nutrient loads
- managing algal outbreaks
- identification and reduction of odours from irrigation
- restricting livestock or public access due to water quality issues
- suspension of irrigation

**Soil ameliorants** may include:

- gypsum (calcium sulphate)
- hydrated lime (liml)
- agricultural lime (calcium carbonate)
- biosolids

**Reports** may include:

- reclaimed water irrigation data including:
  - applications dates and volumes applied
  - volumes of run-off
  - water quality
- rainfall, evaporation and/or other meteorological data
- water budgets
- salt budgets
- plant performance data

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Collection and distribution.

## **NWP401B Coordinate and monitor the application of environmental plans and procedures**

### **Modification History**

NWP401B Release 2: Layout adjusted. No changes to content.

NWP401B Release 1: Primary release.

### **Unit Descriptor**

This unit of competency describes the outcomes required to monitor and coordinate the application of environmental plans and procedures to specific projects and to develop environmental procedures for the local work area.

### **Application of the Unit**

This unit supports the attainment of skills and knowledge required for staff with a specific responsibility for ensuring that all relevant environmental plans and policies are applied to each project and work site within the scope of their job role; and for ensuring that environmental plans and policies are implemented, monitored, reviewed and reported according to organisational and statutory requirements.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

This unit contains employability skills.

### **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Determine relevant environmental plans and procedures.</b>	<p>1.1 Identify <i>environmental plans and procedures</i> and determine relevance to <i>specific projects or work sites</i>.</p> <p>1.2 Interpret relevant environmental plans and procedures in relation to specific project or site activities.</p>
<b>2 Implement environmental plans and procedures.</b>	<p>2.1 Identify <i>environmental risks and impacts</i>.</p> <p>2.2 Manage and minimise environmental risks.</p> <p>2.3 Apply emergency procedures.</p> <p>2.4 Carry out activities according to environmental plans and procedures.</p> <p>2.5 Maintain effective participation and contribution.</p>
<b>3 Develop project or site specific environmental procedures.</b>	<p>3.1 Assess the need for project or site specific environmental procedures.</p> <p>3.2 Consult <i>stakeholders</i> and address issues and concerns.</p> <p>3.3 Develop specific project or site environmental procedures.</p> <p>3.4 Review and report specific project or site environmental procedures according to <i>organisational procedures and statutory requirements</i>.</p>
<b>4 Control environmental incidents.</b>	<p>4.1 Identify environmental incidents and apply appropriate control measures.</p> <p>4.2 Analyse environmental incidents to prevent recurrence.</p> <p>4.3 Record and report environmental incidents and complete <i>environmental management documentation</i> according to organisational requirements.</p>
<b>5 Monitor and report on environmental plans and procedures.</b>	<p>5.1 Monitor and report the implementation of environmental plans and procedures according to organisational requirements.</p> <p>5.2 Report environmental risks according to organisational procedures.</p> <p>5.3 Ensure participation by the relevant work force in reviews of environmental procedures and report according to organisational requirements.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### **Required skills:**

- apply control procedures at environmental risks and incidents
- access, interpret and apply relevant legislation and standard operating procedures
- assess environmental risks at the specific project or site
- apply environmental plans and procedures
- report and record environmental procedures
- develop local workplace environmental procedures
- identify risks and impacts
- apply consultation processes
- manage environmental incidents
- conduct environmental audits
- apply due diligence
- monitor a specific project or site
- identify possible cultural or heritage sites
- identify potential pollutants
- analyse personal and team performance against work objectives
- solve operational problems

### **Required knowledge:**

- relevant legislative requirements
- standard operating procedures
- environmental plans and procedures
- sedimentation and erosion control
- risk assessment procedures
- rare and endangered plants
- recording procedures
- reporting procedures
- monitoring procedures
- identification of risks and impacts
- consultation procedures
- incident management procedures
- potential environmental risks and incidents
- disposal of dangerous and contaminated soils
- environmental auditing
- concepts of due diligence
- principles of environmental protection
- endangered species and habitat protection
- environmental impact assessment
- control procedures for environmental risks and incidents
- waste management

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to coordinate and monitor the application of environmental plans and procedures including:

- identifying and analysing environmental plans and procedures relevant to a representative variety of projects and work sites
- interpreting and implementing relevant environmental plans and procedures for a typical project or work site
- developing site- or project-specific environmental plans and procedures for an atypical project or work site, including consultation with stakeholders
- managing environmental incidents
- monitoring, reporting and reviewing the implementation of environmental plans and procedures
- coordinating participation by relevant sectors of the workforce

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's



- competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
  - where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
  - assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

- Environmental plans and procedures*** may include:
- national, state or local government policies or local government or regional development plans concerning:
    - water resources
    - industry and cross industry issues
    - business, corporate or enterprise issues
    - cultural and heritage issues
    - conservation
    - flora and fauna
    - waste disposal
    - coastal protection
    - groundwater protection
    - irrigation
    - salination control
    - pollution and litter control
    - river and surface water systems

- chemical management
- biological control
- organisational procedures, including:
  - minimisation of waste materials
  - proper disposal of waste materials
  - restriction of burning off
  - correct handling of toxic substances
  - containment of chemicals such as chlorofluorocarbons
  - minimisation of factors that contribute, directly or indirectly, to the production of greenhouse gases
  - correct use of enterprise vehicles and machinery
  - reuse or recycling of trade materials where possible
  - overall reduction of energy usage through general awareness and the use of appropriate technologies

***Specific projects or work sites*** may include:

- buildings
- plants
- construction and maintenance sites
- workshops
- laboratories
- bulkwater storage sites
- surface or groundwater sites
- catchments
- flood plains irrigation sites
- wetlands
- drainage sites
- waste disposal sites

***Environmental risks and impacts*** may include:

- risks, including:
  - impact of mismanagement of chemicals
  - impact of mismanagement of biological agents
  - detrimental impact on limited water resources
  - spillage
  - waste disposal
  - detrimental impact on water catchment areas (urban and non-urban)
  - detrimental impact on rivers, waterways and channels
  - unsatisfactory water and wastewater treatment processes
  - unsatisfactory trade waste treatment and disposal processes
  - poor construction processes
  - planning deficiencies

- incidents of environmental impact, including:
  - emissions to air
  - releases to/of water
  - releases to land
  - vibration and noise
  - disposal of waste
  - contamination of land
  - impact on communities
  - destruction of habitat
  - use of energy sources
  - waste generation processes and technologies
  - impact on culturally significant sites
- incidents may involve the implementation of emergency responses

**Stakeholders** may include:

- the enterprise
- all levels of government
- industry (e.g. extractive, other utilities, manufacturing)
- community action groups
- environmental conservation groups
- land care groups
- primary producers
- the general community and individuals
- Indigenous and Torres Strait Islander groups

**Organisational and procedures and statutory requirements** may include:

- environmental legislation, including:
  - relevant federal legislation
  - relevant state or territory legislation
  - relevant local government by-laws
  - relevant government and quasi government policies and regulations

**Environmental management documentation** may include:

- information on applicable environmental laws or other requirements
- complaint records
- training records
- process information
- process operational logbooks
- inspection, maintenance and calibration records
- relevant contractor and supplier information
- incident reports
- information on emergency preparedness and response
- records of significant environmental impacts
- chain of custody and compliance records

- audit results
- management reviews

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Common.

# NWP410C Coordinate and monitor asset construction and maintenance

## Modification History

NWP410C Release 2: Layout adjusted. No changes to content.

NWP410C Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to coordinate and monitor asset construction and maintenance, including site management and associated commissioning and post-commissioning activities.

## Application of the Unit

This unit is required by operators with responsibility for ensuring that asset construction and maintenance activities are performed and completed in compliance with all relevant organisational and statutory requirements. The level of responsibility may vary according to the size, scope, location, and technical complexity of individual projects.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where *bold italicised* text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Plan and prepare for asset construction and maintenance.</b>	1.1 Determine <i>work requirements</i> according to asset purpose, maintenance history, components, maintenance schedules and known logistics. 1.2 Confirm maintenance plan and prioritise and schedule work. 1.3 Confirm <i>authorisations</i> and communication with stakeholders. 1.4 Identify and address <i>stakeholders</i> issues that impact on construction or maintenance. 1.5 Conduct <i>site inspections</i> according to organisational procedures and risk management guidelines.
<b>2 Undertake work site maintenance.</b>	2.1 Monitor material handling procedures according to organisational requirements. 2.2 Monitor construction activities to ensure compliance with <i>occupational health and safety and environmental regulations</i> . 2.3 Confirm maintenance requirements by detailed diagnosis of problems and conditions at the site. 2.4 Carry out <i>maintenance tasks</i> according to the condition of the equipment and organisational requirements. 2.5 Use equipment, tools and technology safely, effectively and productively.
<b>3 Test and commission work.</b>	3.1 Conduct tests and apply defined commissioning programs according to <i>organisational and manufacturers' requirements</i> . 3.2 Monitor test results to ensure that the assets function within agreed specifications. 3.3 Conduct and record inspections according to commissioning and stakeholders requirements.
<b>4 Conduct post-maintenance activities.</b>	4.1 Coordinate and monitor work site inspections and rehabilitation. 4.2 Undertake a review of the construction or installation and monitor asset performance. 4.3 Identify defects and make arrangements to rectify them. 4.4 Complete reports and documentation required by the organisation. 4.5 Store and secure reports according to information and data management system.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills:

- interpret and make adjustments to asset maintenance plan
- monitor work progress against a plan
- apply relevant organisational procedures based on legislation, risk management, manufacturers guidelines, site conditions and quality standards
- conduct site inspections and investigations
- communicate with supervisors, team members, contractors and the public using clear and direct communication
- prepare reports for management on asset monitoring and maintenance in organisation proformas
- interpret and apply a range of organisation documents
- liaise and negotiate with local and internal stakeholders
- detect and solve operational problems within area of authority and delegation
- work within safety requirements, identify hazards and use equipment and processes safely
- use safety and personal protective equipment
- interpret policies, standard operating procedures and standards related to monitoring and maintenance of water services assets
- control system operations, processes, failure and rectification
- use required forms of transport including marine craft, 4 wheel drive vehicles, aircraft, snow mobiles based on site location and conditions and safety and equipment management procedures
- use organisation equipment, tools and technology

### Required knowledge:

- enterprise contract conditions and compliance
- site inspection and investigation procedures
- organisational policies, procedures, guidelines and requirements for asset monitoring and maintenance
- system layout, integrity, design and performance
- evaluation and investigation requirements
- enterprise auditing and recording procedures and reporting requirements
- characteristics, technical capabilities and limitations of materials and equipment according to manufacturers' specifications
- occupational health and safety policies and procedures including material handling procedures, use of protective equipment, safe driving in hazardous conditions, bush and water survival, working in the location of power supplies, working in confined spaces
- relevant environmental and natural resource management legislation
- risk factors and potential hazards involved with water pressures and flows

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to plan, coordinate and monitor the construction or maintenance of water industry assets, including:

- analysing work requirements
- prioritising and scheduling work
- liaising and negotiating with all relevant stakeholders and work teams
- planning construction or maintenance activities
- monitoring work performance for compliance with OHS and other organisational and statutory requirements
- providing technical advice on maintenance methods
- conducting risk and hazard assessments
- reporting recommendations for risk and hazard prevention
- conducting or supervising asset tests
- implementing commissioning programs and post commissioning inspections
- coordinating and monitoring the rehabilitation of the worksite
- reviewing the construction or installation and monitoring performance
- identifying and reporting defects

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical



requirements of the workplace

- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Work requirements*** will include the organisation and site specific requirements including:

- purpose and history of site and its assets
- maintenance plans and specifications
- site location and conditions
- risk and hazard management procedures
- communication methods and equipment
- authorisations, permits and restrictions
- environmental and heritage conditions
- recording and reporting asset condition and maintenance
- preparing and coordinating the availability and transporting

of:

- maintenance and construction support
- equipment and tools
- replacement assets
- safety and protective equipment
- communication equipment
- technical expertise
- surveying equipment
- camping and survival resources
- rescue and retrieval resources
- federal, state and local government
- quarantine controls
- legal access
- traffic management
- Blue Card

*Authorisations* may include:

*Stakeholders* may include:

- contractors
- government and regulatory authorities
- property owners
- utility organisations
- specialised work teams
- general public
- asset users

*Site inspections* may include:

- confirmation of:
  - plans
  - contracts
  - purpose
  - asset history
  - fault reports
  - components
  - risk factors
- inspection of preparation work
- assessment of compliance with specifications and manufacturers' guidelines
- assessment of compliance with procedures and legislation including:
  - occupational health and safety requirements
  - environmental
  - natural resource management
  - water quality

*Occupational health and safety and environmental*

*requirements* will include:

- confined spaces
- heights
- water
- forests
- equipment operation
- plant operation
- contamination issues
- weather exposure
- herbicides
- pesticides
- solvents
- fuels
- PPE requirements
- onsite communication and procedures for working remotely.
- equipment:
  - ladders
  - harness
  - trailer
- personnel safety:
  - medical constraints and conditions
  - CPR
  - First Aid
  - water survival
  - bush survival
  - self rescue
  - traffic management authority

*Maintenance tasks* will be influenced by consideration of:

- performance benchmarks
- reference marks
- CTF
- relevant section:
  - control
  - approach
  - inlet
  - tailwater
  - DM
- long survey
- staff gauges
- peak level indicators
- power supplies
- instrument circuits

***Organisational and manufacturers' requirements***

may include:

- lightning protection
- banks
- site access
- transducer exposure
- general and special conditions of contract and site specifications
- plans, maps and drawings
- authorisations and permits
- operational manuals
- manufacturers' manuals and specifications
- maintenance manuals
- plans of other authorities, services and utilities
- hazard and response reports
- project plans
- maintenance checklists

**Unit Sector(s)**

Not applicable.

**Competency field**

Asset management.

# NWP425B Coordinate and monitor the operation of irrigation delivery systems

## Modification History

NWP425B Release 2: Layout adjusted. No changes to content.

NWP425B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to coordinate and monitor irrigation delivery systems to ensure system maintenance and performance standards and customer liaison.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for staff with a specific responsibility for ensuring that the operation of irrigation systems complies with organisational and statutory requirements. The level of responsibility will vary according to the size and complexity of the irrigation system.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 <b>Confirm performance measures in irrigation system's management plan.</b>	1.1 Identify customer requirements for irrigated culture. 1.2 Identify <i>environmental factors</i> that impact on the irrigation system. 1.3 Consult <i>historic system information</i> and <i>stakeholders</i> as appropriate 1.4 Confirm performance requirements for an <i>irrigation system management plan</i> .
2 <b>Monitor and coordinate processes and resource targets.</b>	2.1 Correctly select, fit and use <i>equipment</i> , including personal protective equipment. 2.2 Apply <i>monitoring and testing programs</i> and identify, investigate and report any deviations from water quantity, quality, release or flow. 2.3 Evaluate the timeliness, volume and flow rates of water deliveries and identify, investigate and report deviations from agreed service levels. 2.4 Evaluate maintenance budgets, activity programs and output target measures and identify, investigate and report deviations from targets. 2.5 Identify and record links between operational problems and maintenance activities.
3 <b>Report outcomes of coordination and monitoring.</b>	3.1 Analyse, record and report coordination and monitoring data according to <i>organisational procedures and statutory requirements</i> . 3.2 Identify and report current and potential problems according to organisational procedures. 3.3 Make recommendations for improvements in system performance and/or customer service.

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- interpret and apply legislation and policies
- coordinate measuring and testing activities
- conduct investigations

- assess environmental impact
- uses safety equipment and personal protective equipment
- communicate with customers and other employees
- operate irrigation and/or domestic stock supply system
- check channel flow
- identify control system faults

**Required knowledge:**

- relevant legislation
- relevant enterprise policies
- range of appropriate measuring and testing procedures
- investigation procedures
- customer expectations and requirements
- operations and maintenance policies and procedures
- occupational health and safety and environmental legislation, Acts and procedures
- impact of the principles of hydraulics on the operation of flows
- coordination processes
- principles of scheduling
- system layout
- system operations
- policies and standard operating procedures
- communication systems
- lock out procedures for mechanical and electrical installations
- environmental aspects of irrigation and/or stock and domestic supply system asset infrastructure
- safety procedures
- environment, landscape and ground structure of work area
- risk factors and potential hazards of irrigation and/or domestic and stock supply systems
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of site plant
- water flow calculations
- flow measurement procedures
- gravity systems
- control systems

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

**Critical aspects for**                      The candidate should demonstrate the ability to coordinate

**assessment and evidence required to demonstrate competency in this unit**

and monitor the operation of irrigation systems including:

- identifying customer requirements for irrigated culture and environmental factors that impact on the irrigation system
- consulting historic system information and stakeholders as appropriate
- confirming performance requirements for an irrigation system management plan
- implementing monitoring and testing programs and investigating and reporting deviations from planned parameters
- evaluating performance of water deliveries and investigating and reporting deviations from agreed service levels
- evaluating performance targets such as maintenance budgets, activity programs and output target and investigating and reporting deviations
- analysing and reporting data
- identifying and reporting problems
- making recommendations for system performance or customer service improvements

**Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts



- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs if the candidate, accessibility of the item, and local industry and regional contexts.

***Environmental factors*** may include:

- environmental flows
- chemicals
- nutrients
- salinity
- downstream requirements

***Historic system information*** may include:

- previous studies
- impact of weather
- relevant hydrometric information
- previous system deliveries
- previous flow rates
- operational procedures

***Stakeholders*** may include:

- customers
- government
- farmer and grower associations
- downstream land holders
- other water authorities

***Irrigation system management plan*** may include:

- employees
- customer representative committees
- land care or similar active groups
- local communities
- service levels
- capital investment
- maintenance levels

***Equipment*** may include:

- electronic monitoring and metering systems
- manual chart recording systems
- on- and off-road vehicles
- communication equipment
- personal protective equipment

***Monitoring and testing programs*** may include:

- timeliness of deliveries
- flow
- input and output quality
- testing procedures
- frequency
- sampling locations
- budgets
- physical achievement targets
- operational procedures
- number of complaints

***Organisational and statutory requirements*** may include:

- relevant federal legislation
- relevant state or territory legislation
- relevant local government by-laws or planning instruments
- board or authority by-laws

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Collection and distribution.

# NWP512B Implement and manage catchment management plan

## Modification History

NWP512B Release 2: Layout adjusted. No changes to content.

NWP512B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to implement and manage activities in water catchments that impact on water yield and/or quality to ensure performance measures for the catchment management plan are met.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for managers in water organisations with responsibility for the management of water catchments.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where <b><i>bold italicised</i></b> text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Prepare for catchment management.</b>	<p>1.1 Confirm performance measures for the catchment management plan.</p> <p>1.2 Identify and interpret <i>catchment management requirements</i>.</p> <p>1.3 Identify <i>user and customer</i> requirements that impact on the catchment area.</p> <p>1.4 Gather <i>historical catchment information</i> and evaluate as input to the management process.</p> <p>1.5 Identify, interpret and assess water quality and quantity requirements.</p> <p>1.6 Identify and interpret <i>environmental factors</i> and other relevant <i>issues</i> that impact on the catchment area.</p>
<b>2 Implement the catchment management plan.</b>	<p>2.1 Inform and educate stakeholders about catchment activity regulations.</p> <p>2.2 Develop management plan activities.</p> <p>2.3 Develop the implementation plan.</p> <p>2.4 Coordinate management plan activities.</p>
<b>3 Monitor the catchment management plan.</b>	<p>3.1 <i>Design</i> and implement <i>monitoring and testing programs</i>.</p> <p>3.2 Analyse, interpret and record testing results.</p> <p>3.3 Coordinate and manage the identification and investigation of current and/or potential problems.</p> <p>3.4 Report the results of the investigation of problems and make recommendations.</p> <p>3.5 Monitor the catchment area usage according to the plan.</p> <p>3.6 Coordinate and manage the identification, investigation and reporting of breaches of usage provisions.</p>
<b>4 Monitor and evaluate the catchment management plan.</b>	<p>4.1 Review objectives of the management and implementation plans.</p> <p>4.2 Make recommendations for changes to objectives and implementation procedures.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- communicate effectively to a wide and diverse group of stakeholders
- interpret and apply legislation and policies
- design and manage measuring and testing activities
- analyse test results
- coordinate and oversees the conduct of investigations
- assess environmental impact
- implement management plans
- develop implementation plans that reflect management plan objectives and organisational requirements
- prepare reports and recommendations

**Required knowledge:**

- relevant historical records
- relevant legislation
- relevant enterprise policies
- range of appropriate measuring and testing procedures
- investigation procedures
- risk management principles
- customer expectations and requirements
- occupational health and safety and environmental legislation
- Acts and procedures

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to implement and manage activities in water catchments that impact on water yield and quality to ensure performance measures for the catchment management plan are met including:

- gathering, interpreting and synthesising information (including historical data, current legislation and standards, stakeholder views and water quality test results) to underpin the sound management of the water catchment plan
- consulting widely and effectively
- developing effective implementation plans that address the objectives and requirements specified in the management plan
- developing, implementing and overseeing testing and other monitoring arrangements to track the performance

**Context of and specific resources for assessment**

- of the catchment management plan
- preparing reports and recommendations for future action

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

- Catchment management requirements*** may include:
- relevant federal legislation
  - relevant state or territory legislation
  - relevant local government by-laws
  - organisational needs
  - codes of practice
- User and customer*** may include:
- recreational users of the catchment area
  - forestry and land management authorities
  - housing developers and home owners
  - farmers
  - traditional land owners
  - consumers of water
  - water authorities
- Historical catchment information*** may include:
- relevant hydrometrical information
  - previous monitoring studies
  - previous risk assessments
  - vegetation surveys
  - anecdotal information from land holders
  - geological data
  - hydro-geological data
- Environmental factors*** that impact on the catchment area may include:
- flora
  - fauna
  - chemicals
  - land degradation
  - nutrients
  - fire breaks
  - farming practices
  - land use
- Issues*** that impact on or relate to the catchment area may include:
- existence of known cultural sites
  - land use patterns
  - environmental issues
  - other human activity
- Monitoring and testing programs are designed*** and may include reference to:
- sampling and testing procedures
  - the testing medium
  - the testing frequency

- sampling locations
- testing variables

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Collection and distribution.



# NWP513B Develop and review catchment management plan

## Modification History

NWP513B Release 2: Layout adjusted. No changes to content.

NWP513B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to develop and review catchment management plans that impact on water yield and/or quality.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for managers in water organisations with responsibility for the management of water catchments.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Prepare for catchment management.</b>	1.1 Identify and interpret <i>catchment management requirements</i> .
	1.2 Identify and evaluate <i>user and customer</i> requirements that impact on the catchment area.
	1.3 Gather <i>historical catchment information</i> and evaluate as input to the planning process.
	1.4 Identify, interpret and assess water quality and quantity requirements.
	1.5 Identify and interpret <i>environmental factors</i> and other relevant <i>issues</i> that impact on the catchment area.
<b>2 Develop the catchment management plan.</b>	2.1 Identify, interpret and validate <i>stakeholder</i> requirements that impact on the catchment area.
	2.2 Review and clarify organisational objectives and key performance indicators for the catchment management plan.
	2.3 Develop a catchment management plan.
<b>3 Review and refine the catchment management plan.</b>	3.1 Assess data from the ongoing implementation of the catchment management plan and use to inform the review of the plan.
	3.2 Review objectives of the management and implementation plans.
	3.3 Make recommendations for changes to objectives and implementation procedures.
	3.4 Provide advice and guidance to catchment area users and stakeholders.

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- interpret and apply legislation and policies
- interpret and use measuring and testing activities
- conduct investigations
- assess environmental impacts
- use data to inform planning process
- communicate and consult with stakeholders

### Required knowledge:

- water quality processes and parameters
- water management processes
- analysis of historical records
- relevant legislation
- relevant enterprise policies
- range of appropriate measuring and testing procedures
- risk management principles
- investigation procedures
- customer expectations and requirements
- occupational health and safety and environmental legislation
- Acts and procedures

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to develop and review catchment management plans that impact on water yield and quality including:

- gathering, interpreting and synthesising information (including historical data, current legislation and standards, stakeholder views and water quality test results) to underpin the sound development of the water catchment management plan
- consulting widely and effectively
- developing effective catchment management plans that address the water organisation's objectives and requirements
- using data from testing and other monitoring arrangements to track the performance of the catchment management plan and inform the review of the plan
- preparing reports and recommendations for changes to the objectives of the management plan and its implementation

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include

equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry

and regional contexts.

**Catchment management requirements** may include:

- relevant federal legislation
- relevant state or territory legislation
- relevant local government by-laws
- organisational needs
- codes of practice

**User and customer stakeholders** may include:

- recreational users of the catchment area
- forestry and land management authorities
- housing developers and home owners
- farmers
- traditional land owners
- consumers of water
- water authorities

**Historical catchment information** may include:

- relevant hydrometrical information
- previous monitoring studies
- previous risk assessments
- vegetation surveys
- anecdotal information from land holders
- geological data
- hydro-geological data

**Environmental factors** that impact on the catchment area may include:

- flora
- fauna
- chemicals
- land degradation
- nutrients
- fire breaks
- farming practices
- land use

**Issues** that impact on or relate to the catchment area may include:

- existence of known cultural sites
- land use patterns
- environmental issues
- other human activity

**Stakeholder** groups may include:

- state forestry bodies
- state parks authorities
- land care groups
- catchment management trusts and community groups
- environmental interest groups
- native title and indigenous groups
- state government
- local councils/shires
- water authorities

**Unit Sector(s)**

Not applicable.

**Competency field**

Collection and distribution.

# NWP516B Implement and manage surface water management plan

## Modification History

NWP516B Release 2: Layout adjusted. No changes to content.

NWP516B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required for the implementation of the management plan for surface water to ensure environmental considerations are met and source of supply is maintained.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for managers in water organisations with responsibility for the management of surface water resources.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where <b><i>bold italicised</i></b> text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Implement and coordinate monitoring and testing program.</b>	<p>1.1 Confirm performance measures of the <i>surface water</i> management plan.</p> <p>1.2 Design and implement <i>monitoring and testing programs</i>.</p> <p>1.3 Coordinate activities relating to the surface water plan.</p> <p>1.4 Interpret and record test results and education programs.</p> <p>1.5 Identify and investigate current and/or potential problems and report results and recommendations.</p> <p>1.6 Gather <i>historical surface water information</i> and evaluate.</p> <p>1.7 Monitor <i>water usage, water flow and water quality</i> according to the plan.</p>
<b>2 Monitor and evaluate performance of surface water management plans.</b>	<p>2.1 Identify, investigate and report deviations of planned water usage and quality and management plan procedures.</p> <p>2.2 Review objectives of the management and implementation plans.</p> <p>2.3 Review parameters for water usage and quality.</p> <p>2.4 Monitor and review <i>environmental factors that impact on surface water</i>.</p> <p>2.5 Make recommendations for changes to plan objectives and procedures and usage and quality parameters.</p> <p>2.6 Provide advice and guidance to water <i>users and stakeholders</i>.</p>
<b>3 Report on monitoring and implementation activities.</b>	<p>3.1 Identify and report deviations from the management plan.</p> <p>3.2 Review and report objectives of the management and implementation plans.</p> <p>3.3 Make recommendations for changes to plan objectives.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- interpret and apply legislation and policies
- coordinate measuring and testing activities
- conduct investigations
- assess environmental impacts
- communicate effectively with stakeholders and users
- make decisions based on the analysis of data



- report clearly and effectively

### **Required knowledge:**

- relevant legislation
- relevant enterprise policies
- measuring and testing procedures
- investigation procedures
- risk management principles
- customer expectations and requirements
- climatic and weather characteristics and impacts
- hydraulic analysis

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to implement management plans for surface water to ensure environmental considerations are met and source of supply is maintained:

- gathering, interpreting and synthesising information (including historical data, current legislation and standards, stakeholder views and water quantity and quality test results) to underpin the implementation of the surface water management plan
- designing and implementing testing processes and programs
- monitoring and evaluating the outcomes of the surface water management plan
- providing advice about water usage and communicate with stakeholders and users
- preparing reports and recommendations for future action

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit.

Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

- Surface water*** sources may include:
- dams and reservoirs
  - weirs and rivers
  - lakes
  - creeks and streams

***Monitoring and testing programs*** may include:

- wetlands
- off stream storage
- catchment areas
- storage tanks
- resource yields
- resource status
- flow rates
- testing procedures
- testing medium
- testing frequency
- sampling locations
- testing variables
- land use changes
- hydrometrical information
- previous monitoring studies
- previous risk assessments
- geological data
- hydro-geological data
- land use studies
- environmental management studies
- anecdotal information from land owners
- usage and environment allocations
- licenses
- legislative requirements
- enterprise policies
- cost benefit analysis
- environmental flow requirements
- catchment usage and management
- weather and climate
- rainfall run-off
- chemicals
- salinity
- nutrients
- reservoir operations
- natural events
- water consumers
- government
- water authorities
- environmental departments
- recreational users of the area
- interest groups

***Historical surface water information*** may include:

***Water usage, water flow and water quality*** may be influenced by a range of factors including:

***Environmental factors that impact on surface water*** may include:

***Users and stakeholders*** may include:

- industry
- extractive industry

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Collection and distribution.

# NWP517B Develop and review surface water management plan

## Modification History

NWP517B Release 2: Layout adjusted. No changes to content.

NWP517B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to develop and review a surface water management plan to ensure environmental considerations are met and source of supply is maintained.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for managers in water organisations with responsibility for the management of surface water resources.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where <b>bold italicised</b> text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Plan and prepare for management of surface water flows and quality.</b>	1.1 Identify and interpret <i>surface water</i> flow requirements.
	1.2 Identify and interpret <i>water flow, quality and quantity requirements</i> , including release.
	1.3 Identify and interpret <i>historic source water flow</i> and system capacity information.
	1.4 Identify and interpret environmental flows that impact on water flows and quality.
	1.5 Identify and interpret <i>environmental factors</i> that impact on surface water.
	1.6 Identify, interpret and review the current status of resource and operational protocols.
<b>2 Develop the surface water management plan.</b>	2.1 Identify and interpret surface water management requirements.
	2.2 Identify, interpret and validate stakeholder requirements that impact on surface water.
	2.3 Develop a <i>surface water management plan</i> .
<b>3 Review the surface water management plan.</b>	3.1 Analyse and report deviations from planned performance measures.
	3.2 Review objectives of the management and implementation plans.
	3.3 Review parameters for water usage and quality through <i>monitoring and testing programs</i> .
	3.4 Make recommendations for changes to plan objectives and procedures, and usage and quality parameters.
	3.5 Provide advice and guidance to water <i>users and stakeholders</i> .

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- interpret and apply legislation and policies
- coordinate measuring and testing activities
- conduct investigations
- assess environmental impact
- use data to inform planning process
- communicate and consult with stakeholders and users

### **Required knowledge:**

- relevant legislation
- relevant enterprise policies
- measuring and testing procedures
- investigation procedures
- risk management principles
- customer expectations and requirements
- climatic and weather characteristics and impacts
- hydraulic analysis

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to develop and review a surface water management plan to ensure environmental considerations are met and source of supply is maintained including:

- gathering, interpreting and synthesising information (including historical data, current legislation and standards, stakeholder views and monitoring and test results) to underpin the sound development of the surface water management plan
- consulting widely and effectively
- developing effective surface water management plans that address the water organisation's objectives and requirements
- using data from testing and other monitoring arrangements to track the performance of the surface water management plan and inform the review of the plan
- preparing reports and recommendations for changes to the objectives of the management plan and its implementation

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include

equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Surface water*** sources may • dams



include:

- reservoirs
- weirs
- rivers
- lakes
- creeks and streams
- wetlands
- off stream storage
- catchment areas
- storage tanks

***Water flow, quality and quantity requirements*** may be influenced by factors including:

- usage and environment allocations
- licenses
- legislation
- enterprise policies
- cost benefit analysis

***Historic source water flow*** information may include:

- hydrological information
- previous monitoring studies
- previous risk assessments
- geological data
- hydro-geological data
- land use studies
- environmental management studies
- anecdotal information from land owners

***Environmental factors*** that impact on surface water may include:

- environmental flow requirements
- catchment usage and management
- weather and climate
- rainfall run-off
- chemicals
- salinity
- nutrients
- reservoir operations
- natural events

The development of a ***surface water management plan*** may include:

- setting targets and objectives for quantity
- quality
- stakeholders
- future use

***Monitoring and testing programs*** may include:

- resource yields
- resource status
- flow rates
- testing procedures
- testing medium
- testing frequency

*Users and stakeholders*  
may include:

- sampling locations
- testing variables
- land use changes
- water consumers
- government
- water authorities
- environmental departments
- recreational users of the area
- interest groups
- industry
- extractive industry

### **Unit Sector(s)**

Not applicable.

### **Competency field**

Collection and distribution.

# NWP518B Prepare and report on data related to flood mitigation

## Modification History

NWP518B Release 2: Layout adjusted. No changes to content.

NWP518B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to collect and analyse data associated with rainfall, run-off, flood estimation and reporting required for the development and communication of flood mitigation plans.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for planners and managers in water organisations with responsibility for the preparation of flood mitigation reports.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where <b><i>bold italicised</i></b> text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Analyse rainfall and run-off regimes.</b>	1.1 Access and interpret historical rainfall run-off and <i>flooding regimes</i> of specific catchments. 1.2 Delineate historical floods. 1.3 Model simulated, hypothetical or estimated rainfall intensity data and catchment characteristics. 1.4 Collate, manipulate and interpret <i>data</i> .
<b>2 Estimate flooding.</b>	2.1 Use <i>techniques for flood estimation</i> and apply to the development of flood estimation guidelines. 2.2 Estimate and record flood levels, extents and flow rates. 2.3 Complete and record <i>flood hazard assessments</i> . 2.4 Analyse and record the impact of <i>planning controls</i> of flood assessments.
<b>3 Report and communicate information.</b>	3.1 Collate, analyse and record information to meet organisational requirements. 3.2 Communicate information to <i>stakeholders</i> using standard organisational procedures. 3.3 Prepare and present reports in a clear, concise and timely manner to meet organisational requirements.

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- use mathematical techniques to analyse and model flood data
- collect and interpret data
- manipulate and model data
- develop clear and effective reports
- communicate effectively

### Required knowledge:

- catchment hydrology principles
- water flow measurement
- flow routing
- relevant legislation, by-laws and planning schemes
- mathematical calculation
- cultural environment
- occupational health and safety and environmental legislation, Acts and procedures

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to collect and analyse data associated with rainfall, run-off, flood estimation and reporting required for the development and communication of flood mitigation plans including:

- collecting relevant data
- analysing relevant data
- modelling of data
- preparing clear, concise and timely reports
- communicating data and outcomes to stakeholders and team members

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence

- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Flooding regimes*** may include:

- flood levels
- peaks; flow rates
- area extent
- duration

***Data*** may include:

- time series data
- historical
- rainfall
- flood levels

***Techniques for flood estimation*** may include:

- base flow separation
- flood frequency
- rainfall modelling

***Flood hazard assessments*** may include:

- the safety of people
- safety of animals
- land inundation
- house and other property inundation
- effects on communication and other infrastructures
- ability and extent of need for emergency services industry

**Planning controls** may include.

- cost analysis
- land use planning
- construction or destruction of physical structures (e.g. levee banks, sand bag levees)
- infrastructure development
- cultural land restrictions

**Stakeholders** may include:

- community groups
- land holders
- emergency response groups
- town planners
- utility managers (gas, electricity, water)
- local government
- industry and commerce

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Common.

# NWP519B Develop and report flood mitigation

## Modification History

NWP519B Release 2: Layout adjusted. No changes to content.

NWP519B Release 1: Primary release.

## Unit Descriptor

This unit of competency describes the outcomes required to analyse and model data relating to flooding, develop effective management and warning systems and communicate the outcomes concisely and effectively.

## Application of the Unit

This unit supports the attainment of skills and knowledge required for planners and managers in water organisations with responsibility for the preparation of flood management strategies and flood warning systems.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where <b><i>bold italicised</i></b> text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Analyse rainfall and run-off regimes.</b>	1.1 Access and interpret historical rainfall run-off and <i>flooding regimes</i> of specific catchments. 1.2 Delineate historical floods. 1.3 Model simulated, hypothetical or estimated rainfall intensity data and model catchment. 1.4 Collate, manipulate and interpret <i>data</i> .
<b>2 Estimate flooding.</b>	2.1 Use <i>techniques for flood estimation</i> and apply to flood estimation guidelines. 2.2 Estimate and record flood levels, extents and flow rates. 2.3 Undertake and record <i>flood hazard assessment</i> .
<b>3 Determine management and warning systems.</b>	3.1 Evaluate the roles of storage and/or retarding basins safety and flood attenuation strategies. 3.2 Evaluate current flood classifications and impacts and formulate planning controls for flood plain or waterway management. 3.3 Evaluate current flood warning systems. 3.4 Recommend or develop changes to existing flood plain or waterway management controls and warning systems.
<b>4 Report and communicate recommendations.</b>	4.1 Prepare and present reports in a clear, concise and timely manner to meet organisational requirements. 4.2 Communicate findings and recommendations to <i>stakeholders</i> .

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- use mathematical techniques to analyse and model flood data
- prepare and plan strategically
- computer skills
- collect and interpret data
- model data
- develop clear and effective reports
- communicate effectively
- interpret data
- manipulate data

- communicate with a range of stakeholders

### **Required knowledge:**

- catchment hydrology principles
- water flow measurement; flow routing
- relevant legislation, by-laws and planning schemes
- mathematical calculation
- cultural environment
- occupational health and safety and environmental legislation, Acts and procedures

## **Evidence Guide**

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The candidate should demonstrate the ability to analyse and develop flood mitigation warning systems and strategies using the effective:

- collecting relevant data
- analysing relevant data
- modelling data
- developing critical flood warning systems
- developing strategies to mitigate the impact of potential future floods
- preparing clear, concise and timely reports
- communicating data and outcomes to stakeholders and team members

### **Context of and specific resources for assessment**

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards, and government regulations

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and/or assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period

of time reflecting the scope of the role and the practical requirements of the workplace

- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence should only be made when the assessor has complete confidence in the person's competence over time and in various contexts
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

***Flooding regimes*** may include:

- flood levels
- peaks
- flow rates
- area extent
- duration
- time series data
- historical

***Data*** may include:

**Techniques for flood estimation** may include:

- rainfall
- flood levels
- base flow separation
- flood frequency
- rainfall modelling

**Flood hazard assessment** may include:

- safety of people
- safety of animals
- land inundation
- house and other property inundation
- effects on communication and other infrastructures
- ability and extent of need for emergency services industry
- cost analysis

**Stakeholders** may include:

- community groups
- land holders
- emergency response groups
- town planners
- utility managers (gas, electricity, water)
- local government
- industry and commerce

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Common.

## PSPPM402B Manage simple projects

### Modification History

PSPPM402B Release 2: Layout adjusted. No changes to content.

PSPPM402B Release 1: Primary release.

### Unit Descriptor

This unit covers management of generally low risk projects that may be small scale and managed by one person or a person with a small team. It includes implementing project start-up activities, coordinating project implementation, monitoring the project and arranging follow-up activities. Contract management requirements are not included as this aspect is addressed by units of competency within the Competency field of *Procurement and Contract Management*.

In practice, managing simple projects overlaps with other generalist and specialist work activities such as applying government processes, using resources, gathering information, managing contracts etc.

When this unit is completed in conjunction with *PSPPM401B Design simple projects* and *PSPPM403B Close simple projects*, the three units together are equivalent to the eight private sector Business Services project management competencies: BSBPM401A - BSBPM408A inclusive.

This unit, and unit *PSPPM405A Administer simple projects*, are mutually exclusive. One or the other, but not both, may contribute to a qualification.

This unit replaces and is equivalent to *PSPPM402A Implement projects*.

### Application of the Unit

Not applicable.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements are the essential outcomes of the unit of competency. Together, performance criteria specify the requirements for competent performance. Text in *bold italics* is explained in the Range Statement following.

### Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. <b>Implement start-up activities</b>	1.1 The <i>project plan</i> is updated with confirmed information for key dates and activities, resources and project governance details in accordance with the project implementation strategy.
	1.2 Project <i>stakeholders'</i> understanding of and agreement to fulfil the project requirements and their roles and responsibilities are confirmed.
	1.3 <i>Required systems</i> are established and maintained throughout the project in accordance with the project plan.
	1.4 A working knowledge of <i>project management tools</i> is used to facilitate integration of project activities and achievement of project outcomes.
2. <b>Coordinate project implementation</b>	2.1 <i>Integration</i> and <i>management</i> of project activities are handled in accordance with the project plan.
	2.2 Stakeholder input and expectations are managed and their commitment is maintained throughout the life of the project in accordance with organisational policy and procedures and the project plan.
	2.3 Disagreements and disputes are resolved or referred to a higher authority in accordance with organisational policy and procedures.
	2.4 Project <i>change proposals</i> are received and changes are recommended/made in accordance with the project plan, and documented in accordance with <i>policy and procedures</i> .
3. <b>Monitor project</b>	3.1 All aspects of the project are continually monitored and corrective action is taken as necessary to maintain progress in accordance with the project plan.
	3.2 Consultation and reporting mechanisms are applied in accordance with the communication plan when dealing with management, staff and/or contractors, steering committee

**ELEMENT****PERFORMANCE CRITERIA**

- members or other stakeholders.
- 3.3 Project governance plans and any related contracts are monitored, reviewed and amended as appropriate, and results are reported in accordance with the communication plan.
- 3.4 Project progress is monitored against agreed milestones in accordance with the project plan to provide a measure of performance throughout the life of the contract.
- 3.5 Programmed review of objectives and achievement is implemented in accordance with the project plan.
- 4. Arrange project follow-up activities**
- 4.1 Project deliverables are analysed against *specifications*, performance standards and project objectives, under broad guidance, and the results are reported to stakeholders.
- 4.2 An initial support package or product manual is produced, if required, to provide guidance for stakeholders who will be required to apply the project results.
- 4.3 The support package includes options for stakeholders to take account of environmental and cultural factors in applying project results.
- 4.4 Operational and support authorities are consulted to research any testing/trialling/building requirements resulting from the project, and evaluation of any recommendations are included in the project report.

**Required Skills and Knowledge**

This section describes the essential skills and knowledge and their level, required for this unit.

**Skill requirements**

Look for evidence that confirms skills in:

- leading and mentoring people to achieve project deliverables
- maintaining agreement of stakeholders and team members to timelines, roles and responsibilities
- communicating with stakeholders and team members using a range of communication styles to suit different audiences and purposes
- responding to diversity, including gender and disability
- using project management tools applicable to small scale or low risk projects
- applying ethical decision making and problem solving related to project management of small scale or low risk projects
- writing recommendations and preparing implementation support packages

requiring precision of expression

- applying workplace safety procedures in line with project requirements
- accessing/preparing information electronically or in hard copy

### Knowledge requirements

Look for evidence that confirms knowledge and understanding of:

- legislation, organisational policies and procedures that may impact on project management, for example:
  - public sector codes of ethics/conduct
  - occupational health and safety and environment requirements
  - project governance requirements
  - quality standards
- risk management
- procurement guidelines
- human resources
- equal employment opportunity, equity and diversity principles
- project management tools to suit a range of small scale or low risk projects
- project management principles
- organisational and political context

## Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the Unit descriptor, Performance Criteria, the Range Statement and the Assessment Guidelines for the Public Sector Training Package.

### Units to be assessed together

- *Pre-requisite* units that must be achieved prior to this unit: *Nil*
- *Co-requisite* units that must be assessed with this unit: *Nil*
- *Co-assessed units* that may be assessed with this unit to increase the efficiency and realism of the assessment process include, but are not limited to:

PSPETHC401A Uphold and support the values and principles of public service

PSPGOV402B Deliver and monitor service to clients

PSPGOV403B Use resources to achieve work unit goals

PSPGOV411A Deal with conflict

PSPGOV412A Use advanced workplace communication strategies

PSPGOV422A Apply government processes

PSPLEGN401A Encourage compliance with legislation in the



public sector

PSPPROC410A Administer contracts

PSPPM401B Design simple projects

PSPPM403B Close simple projects

- *Excluded units* that may not contribute to the same qualification as this unit:

PSPPM405A Administer simple projects

### **Overview of evidence requirements**

In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms:

- the knowledge requirements of this unit
- the skill requirements of this unit
- application of the Employability Skills as they relate to this unit (see Employability Summaries in Qualifications Framework)
- simple projects managed in a range of (3 or more) contexts (or occasions, over time)

### **Resources required to carry out assessment**

These resources include:

- legislation, guidelines, procedures and protocols relating to project management
- workplace project documentation
- scenarios and case studies
- examples of project management tools

### **Where and how to assess evidence**

Valid assessment of this unit requires:

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when implementing projects, including coping with difficulties, irregularities and breakdowns in routine
- simple projects managed in a range of (3 or more) contexts (or occasions, over time)

Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:

- people with disabilities
- people from culturally and linguistically diverse backgrounds
- Aboriginal and Torres Strait Islander people
- women
- young people
- older people
- people in rural and remote locations

Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination

of 2 or more of:

- case studies
- demonstration
- portfolios
- questioning
- scenarios
- authenticated evidence from the workplace and/or training courses

**For consistency of assessment**

Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments

## Range Statement

The Range Statement provides information about the context in which the unit of competency is carried out. The variables cater for differences between States and Territories and the Commonwealth, and between organisations and workplaces. They allow for different work requirements, work practices and knowledge. The Range Statement also provides a focus for assessment. It relates to the unit as a whole. Text in *bold italics* in the Performance Criteria is explained here.

*Project plan* will include some or all of:

- acquisition strategies
- budget and financial management strategy
- contract management
- cost estimates
- evaluation criteria
- expected outcomes/measurable benefits of the project
- facilities
- inclusions and exclusions from project
- information/communication strategy
- intellectual property strategies
- milestones
- objectives
- outputs/project deliverables and their acceptance criteria
- people plan including human resource management and human resource development
- performance criteria/indicators
- project control mechanisms
- project implementation strategy
- project governance strategy
- purpose

**Stakeholders** may include:

- quality assurance
- quality control
- quality standards for project
- rationale
- required project resources
- resource management
- risk management
- roles and responsibilities
- schedule/timeline
- task/work breakdown structure (WBS)
- project sponsor/funding bodies
- clients or customers (internal and external)
- industry
- other agencies
- general public
- relevant interest groups
- unions
- functional areas
- the organisation's senior management
- Ministers
- project team
- steering committee members
- end user
- supplier/service provider

**Required systems for project management** may include:

- planning and monitoring system
- financial management including:
  - budget allocation/funding
  - income generated
  - expenditure
- recordkeeping for documented information such as:
  - correspondence
  - quality data including survey, needs, test results
  - contracts
  - time allocated and spent on each aspect of the project
  - progress reports
  - performance reports against milestones
  - project outcomes
  - samples, prototypes, models

**Project management tools** may include:

- risk analysis
- organisational project governance framework
- communications plan

- reporting framework
- project management software and other tools:
  - Gantt and bar charts
  - Program Evaluation and Review Technique (PERT) charts
  - Critical Path Method
  - cost schedule control system
  - logistics support analysis
  - life cycle cost analysis
  - spreadsheets
  - recording systems - electronic and manual

***Integration of project activities*** may include:

- scope
- time
- cost
- quality
- human resources
- communications
- risk
- procurement

***Management*** may include:

- scope management
- communication and reporting
- schedule management
- financial management
- quality management
- resources management
- people management
- logistics management
- risk management
- contract management
- change management

***Change proposals*** may include:

- scope
- administration
- engineering, technical, technology changes
- time
- cost
- resources

***Policy and procedures*** may include:

- government legislation (Federal, State and Local) affecting organisation's administration such as:
  - public sector management acts
  - financial management and accounting legislation and regulations
  - privacy legislation

- government and organisational guidelines and procedures relating to:
  - project governance
  - resourcing
  - security
  - strategic plans
  - recruitment
  - risk management
  - procurement guidelines
  - designation approvals
  - industrial agreements

*Specifications* may include:

- functional
- technical
- performance
- material

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Project Management.

# PSPPM502B Manage complex projects

## Modification History

PSPPM502B Release 2: Layout adjusted. No changes to content.

PSPPM502B Release 1: Primary release.

## Unit Descriptor

This unit covers management of projects that may be reasonably complex in terms of scope, degree of risk, political, cultural and social factors that apply, consequences of failure and degree of control of the projects. It includes managing start-up, project implementation, project integration and follow-up activities. Contract management requirements are not included as this aspect is addressed by units of competency within the Competency field of *Procurement and Contract Management*.

In practice, managing complex projects overlaps with other generalist and specialist work activities such as acting ethically, coordinating resource allocation and usage, developing client services, undertaking research and analysis, etc.

When this unit is completed in conjunction with *PSPPM501B Design complex projects*, and *PSPPM503B Close complex projects*, the three units together are equivalent to the nine private sector Business Services project management competencies: BSBPM501A - BSBPM509A inclusive.

This unit replaces and is equivalent to *PSPPM502A Manage projects*.

## Application of the Unit

Not applicable.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements are the essential outcomes of the unit of competency. Together, performance criteria specify the requirements for competent performance. Text in *bold italics* is explained in the Range Statement following.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

#### 1. Manage start-up activities

- 1.1 *Project plans* are refined in consultation with steering committee and team members, and precise details are included for schedules of activities, milestones and resources.
- 1.2 *Required systems* are established and maintained throughout the project in accordance with the complexity of the project and in line with the project plan.
- 1.3 Project team members' understanding of and commitment to fulfilling the project requirements and their roles and responsibilities for the duration of the project are confirmed.
- 1.4 *Project management tools* are selected and applied effectively to achieve project outcomes.

#### 2. Manage project implementation

- 2.1 *Integration* and *management* of complex project activities are handled in accordance with the project plan.
- 2.2 Leadership and required *development* are provided to the project team, and morale, stress levels and triggers are managed throughout the life of the project in accordance with organisational *policy and procedures*.
- 2.3 *Stakeholder* input and expectations are managed throughout the project in accordance with the communication plan.
- 2.4 Disagreements and disputes are resolved to the satisfaction of stakeholders or referred to a higher authority in accordance with organisational policy and procedures.
- 2.5 Project *change proposals* are negotiated, agreed and documented in accordance with policy and procedures.

#### 3. Manage project integration

- 3.1 All aspects of the project and related projects are integrated and links are established to ensure objectives are met in accordance with the project plan.
- 3.2 Consultation and reporting mechanisms are applied in accordance with the communication plan and staff and contractors are regularly consulted to discuss progress and ensure effective results.
- 3.3 Project integration is monitored, and management plans and any related contracts are reviewed and amended as appropriate, with

**ELEMENT****PERFORMANCE CRITERIA**

4. Coordinate project follow-up activities	<p>results reported in accordance with mechanisms identified in the communication plan.</p> <p>3.4 Ongoing progress is monitored against agreed milestones in accordance with the project plan to provide a measure of performance throughout the life of the project.</p> <p>3.5 Programmed review of objectives and achievement is planned and implemented in accordance with the project plan.</p> <p>4.1 Significant judgment is applied in the analysis of project deliverables against <i>specifications</i>, performance standards and project objectives, and the results are reported to stakeholders.</p> <p>4.2 Support package arrangements are identified and offered to stakeholders who will be required to apply the project results.</p> <p>4.3 Options for stakeholders to take account of environmental and cultural factors in applying the project results are included in the support package.</p> <p>4.4 Operational and support authorities are consulted to investigate any testing/trialling/building and evaluation requirements resulting from the project, and funding implications estimated in project report.</p>
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**Required Skills and Knowledge**

This section describes the essential skills and knowledge and their level, required for this unit.

**Skill requirements**

Look for evidence that confirms skills in:

- leading and mentoring people to achieve project outcomes
- maintaining agreement of stakeholders and team members to timelines, roles and responsibilities
- negotiating with stakeholders and team members using communication styles to suit different audiences and purposes
- responding to diversity, including gender and disability
- using project management tools applicable to reasonably complex projects
- applying ethical decision making and problem solving related to project management of reasonably complex projects
- writing recommendations and preparing project reports requiring precision of expression
- applying workplace safety procedures in line with project requirements
- accessing/preparing information electronically or in hard copy



## Knowledge requirements

Look for evidence that confirms knowledge and understanding of:

- legislation, organisational policies and procedures that may impact on project implementation, for example:
  - public sector codes of ethics/conduct
  - occupational health and safety and environmental and sustainability requirements
- project governance requirements
- quality standards
- risk management
- procurement guidelines
- financial management and budgetary framework
- human resources
- equal employment opportunity, equity and diversity principles
- project management tools to suit a range of reasonably complex projects in terms of scope, degree of risk, political, cultural and social factors that apply, consequences of failure and degree of control of the project
- project management systems
- organisational and political context
- critical analysis in a project management context
- business and commercial issues related to the projects managed

## Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the Unit descriptor, Performance Criteria, the Range Statement and the Assessment Guidelines for the Public Sector Training Package.

### Units to be assessed together

- *Pre-requisite* units that must be achieved prior to this unit: *Nil*
- *Co-requisite* units that must be assessed with this unit: *Nil*
- *Co-assessed units* that may be assessed with this unit to increase the efficiency and realism of the assessment process include, but are not limited to:

PSPETHC501B Promote the values and ethos of public service

PSPGOV502B Develop client services

PSPGOV503B Coordinate resource allocation and usage

PSPGOV504B Undertake research and analysis

PSPGOV505A Promote diversity

PSPPM501B Design complex projects  
PSPPM503B Close complex projects  
PSPPROC501A Manage contract risk  
PSPPROC503A Manage contract performance

**Overview of evidence requirements**

In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms:

- the knowledge requirements of this unit
- the skill requirements of this unit
- application of the Employability Skills as they relate to this unit (see Employability Summaries in Qualifications Framework)
- management of complex projects in a range of (3 or more) contexts (or occasions, over time)

**Resources required to carry out assessment**

These resources include:

- legislation, guidelines, procedures and protocols relating to project management in the organisation and the public sector
- workplace project documentation
- scenarios and case studies
- examples of project management tools

**Where and how to assess evidence**

Valid assessment of this unit requires:

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when managing complete projects, including coping with difficulties, irregularities and breakdowns in routine
- management of complex projects in a range of (3 or more) contexts (or occasions, over time)

Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:

- people with disabilities
- people from culturally and linguistically diverse backgrounds
- Aboriginal and Torres Strait Islander people
- women
- young people
- older people
- people in rural and remote locations

Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination of 2 or more of:

- case studies
- demonstration

- portfolios
- questioning
- scenarios
- authenticated evidence from the workplace and/or training courses

**For consistency of assessment**

Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments

## Range Statement

The Range Statement provides information about the context in which the unit of competency is carried out. The variables cater for differences between States and Territories and the Commonwealth, and between organisations and workplaces. They allow for different work requirements, work practices and knowledge. The Range Statement also provides a focus for assessment. It relates to the unit as a whole. Text in *bold italics* in the Performance Criteria is explained here.

*Project plans* will include some or all of:

- acquisition strategies
- budget and financial management strategy
- contract management
- cost estimates
- evaluation criteria
- expected outcomes/measurable benefits of the project
- facilities
- inclusions and exclusions from project
- information/communication strategy
- intellectual property strategies
- milestones
- objectives
- outputs/project deliverables and their acceptance criteria
- people plan including human resource management and human resource development
- performance criteria/indicators
- project control mechanisms
- project implementation strategy
- project governance strategy
- purpose
- quality assurance
- quality control
- quality standards for project
- rationale

***Required systems for project management*** may include:

- required project resources
- resource management
- risk management
- roles and responsibilities
- schedule/timeline
- task/work breakdown structure (WBS)
- planning and monitoring system
- financial management including:
  - budget allocation/funding
  - income generated
  - expenditure
- recordkeeping for documented information such as:
  - correspondence
  - quality data including survey, needs, test results
  - contracts
  - time allocated and spent on each aspect of the project
  - progress reports
  - performance reports against milestones
  - project outcomes
  - samples, prototypes, models

***Project management tools*** may include:

- risk analysis
- organisational project governance framework
- communications plan
- reporting framework
- project management software and other tools:
  - Gantt and bar charts
  - Program Evaluation and Review Technique (PERT) charts
  - Critical Path Method
  - cost schedule control system
  - logistics support analysis
  - life cycle cost analysis
  - spreadsheets
  - recording systems - electronic and manual

***Integration of project activities*** may include:

- scope
- time
- cost
- quality
- human resources
- communications
- risk

**Management** may include:

- procurement
- scope management
- communication and reporting
- schedule management
- financial management
- fraud control
- quality management
- resources management
- people management
- logistics management
- risk management
- contract management
- project implementation
- transition
- change management

**Development** may include:

- regular meetings
- feedback
- encouragement
- mentoring and coaching
- additional physical and human resources (within allocated budget) if and as required

**Policy and procedures** may include:

- government legislation (Federal, State and Local) affecting organisation's administration such as:
  - public sector management acts
  - financial management and accounting legislation and regulations
  - privacy legislation
- government and organisational guidelines and procedures relating to:
  - project governance
  - resourcing
  - security
  - strategic plans
  - recruitment
  - risk management
  - procurement guidelines
  - designation approvals
  - industrial agreements
  - environment and sustainability

**Stakeholders** may include:

- project sponsor/funding bodies
- clients or customers (internal and external)

- industry
- other agencies
- general public
- relevant interest groups
- unions
- functional areas
- the organisation's senior management
- Ministers
- project team
- steering committee
- end user
- supplier/service provider
- administration
- cost
- engineering, technical, technology changes
- resources
- scope
- specifications
- time
- functional
- technical
- performance
- material

***Contract change proposals*** may include:

***Specifications*** may include:

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Project Management.

## PSPPM503B Close complex projects

### Modification History

PSPPM503B Release 2: Layout adjusted. No changes to content.

PSPPM503B Release 1: Primary release.

### Unit Descriptor

This unit covers closure of projects that may be reasonably complex in terms of scope, degree of risk, political, cultural and social factors that apply, consequences of failure and degree of control of the projects. It includes reviewing project activity and managing project closure. Contract management requirements are not included as this aspect is addressed by units of competency within the Competency field of *Procurement and Contract Management*.

In practice, closing complex projects overlaps with other generalist and specialist work activities such as acting ethically, coordinating resource allocation and usage, developing client services, undertaking research and analysis, etc.

When this unit is completed in conjunction with *PSPPM501B Design complex projects* and *PSPPM502B Manage complex projects*, the three units together are equivalent to the nine private sector Business Services project management competencies: BSBPM501A - BSBPM509A inclusive.

### Application of the Unit

Not applicable.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements are the essential outcomes of the unit of competency. Together, performance criteria specify the requirements for competent performance. Text in *bold italics* is explained in the Range Statement following.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

#### 1. Review project activity

- 1.1 Evaluation of project process, supplier performance and achievement against objectives is undertaken in consultation with *stakeholders* and results are reported in accordance with the *project plan* evaluation framework and organisational *policy and procedures*.
- 1.2 The extent to which clients needs were met is evaluated and action to rectify problems is identified and documented.
- 1.3 Implications of project outputs/outcomes for policies and operating procedures are identified and recommendations are made for their amendment.
- 1.4 Information obtained from the evaluation of the project is provided in accordance with organisational requirements so it may be used to improve relevant policy and practice .

#### 2. Manage project closure

- 2.1 Any funding associated with the project is acquitted against project budget items, and financial records are checked for accuracy and completed in accordance with organisational procedures.
- 2.2 Project wind-down is *managed* and *documentation*, records and *approvals* are handled in accordance with project plan and organisational policy and procedures.
- 2.3 Project stakeholders are debriefed, and infrastructure and resources are redeployed in accordance with organisational policy and procedures.
- 2.4 Project hand-over to user/s is completed in accordance with organisational procedures, and lessons learnt are documented and reported to stakeholders to assist in continuous improvement.
- 2.5 Stakeholders are advised of procedures and authorities for initial support to apply project results where relevant, and strategies are provided to manage long-term project momentum in accordance with organisational requirements.



## Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

### Skill requirements

Look for evidence that confirms skills in:

- analysing results and evaluating outcomes against objectives
- writing recommendations and preparing reports requiring precision of expression
- communicating with stakeholders and team members using a range of communication styles to suit different audiences and purposes
- responding to diversity, including gender and disability
- debriefing stakeholders and redeploying resources and infrastructure
- acquitting and reporting on resource expenditure including time and costs
- using project management tools applicable to reasonably complex projects
- applying workplace safety procedures in line with project requirements
- accessing/preparing information electronically or in hard copy

### Knowledge requirements

Look for evidence that confirms knowledge and understanding of:

- legislation, organisational policies and procedures that may impact on project finalisation, for example:
  - public sector codes of ethics/conduct
  - occupational health and safety and environmental and sustainability requirements
  - project governance requirements
  - quality standards
  - risk management
  - procurement guidelines
  - financial management
  - human resource management and development
  - equal employment opportunity, equity and diversity principles
  - project specifications and objectives
- project management tools to suit a range of reasonably complex projects in terms of scope, degree of risk, political, cultural and social factors that apply, consequences of failure and degree of control of the project
- project management principles and systems
- critical analysis in a project management context
- business and commercial issues related to the projects managed
- organisational and political environment

## Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the Unit descriptor, Performance Criteria, the Range Statement and the Assessment Guidelines for the Public Sector Training Package.

### Units to be assessed together

- *Pre-requisite* units that must be achieved prior to this unit: *Nil*
- *Co-requisite* units that must be assessed with this unit: *Nil*
- *Co-assessed units* that may be assessed with this unit to increase the efficiency and realism of the assessment process include, but are not limited to:

PSPETHC501B Promote the values and ethos of public service

PSPGOV502B Develop client services

PSPGOV503B Coordinate resource allocation and usage

PSPGOV504B Undertake research and analysis

PSPGOV505A Promote diversity

PSPGOV507A Undertake negotiations

PSPGOV512A Use complex workplace communication strategies

PSPGOV517A Coordinate risk management

PSPPM501B Design complex projects

PSPPM502B Manage complex projects

PSPPROC504A Finalise contracts

### Overview of evidence requirements

In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms:

- the knowledge requirements of this unit
- the skill requirements of this unit
- application of the Employability Skills as they relate to this unit (see Employability Summaries in Qualifications Framework)
- reviewing and closing complex projects in a range of (3 or more) contexts (or occasions, over time)

### Resources required to carry out assessment

These resources include:

- legislation, guidelines, procedures and protocols relating to project close-out
- workplace project documentation
- scenarios and case studies
- examples of project management tools suited to reasonably complex projects

### Where and how to

Valid assessment of this unit requires:

## assess evidence

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when reviewing and closing complex projects, including coping with difficulties, irregularities and breakdowns in routine
- reviewing and closing complex projects in a range of (3 or more) contexts (or occasions, over time)

Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:

- people with disabilities
- people from culturally and linguistically diverse backgrounds
- Aboriginal and Torres Strait Islander people
- women
- young people
- older people
- people in rural and remote locations

Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination of 2 or more of:

- case studies
- demonstration
- observation
- portfolios
- projects
- questioning
- scenarios
- simulation or role plays
- authenticated evidence from the workplace and/or training courses

## For consistency of assessment

Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments

## Range Statement

The Range Statement provides information about the context in which the unit of competency is carried out. The variables cater for differences between States and Territories and the Commonwealth, and between organisations and workplaces. They allow for different work requirements, work practices and knowledge. The Range Statement also provides a focus for assessment. It relates to the unit as a whole. Text in ***bold italics*** in the Performance Criteria is explained here.

**Stakeholders** may include:

- project sponsor/funding bodies
- clients or customers (internal and external)
- industry
- other agencies
- general public
- relevant interest groups
- unions
- functional areas
- the organisation's senior management
- Ministers
- project team
- steering committee members
- end user
- supplier/service provider

**Project plan** will include some or all of:

- acquisition strategies
- budget and financial management strategy
- contract management
- cost estimates
- evaluation criteria
- expected outcomes/measurable benefits of the project
- facilities
- inclusions and exclusions from project
- information/communication strategy
- intellectual property strategies
- milestones
- objectives
- outputs/project deliverables and their acceptance criteria
- people plan including human resource management and human resource development
- performance criteria/indicators
- project control mechanisms
- project implementation strategy
- project governance strategy
- purpose
- quality assurance
- quality control
- quality standards for project
- rationale
- required project resources
- resource management
- risk management
- roles and responsibilities

***Policy and procedures*** may include:

- schedule/timeline
- task/work breakdown structure (WBS)
- government legislation (Federal, State and Local) affecting organisation's administration such as:
  - public sector management acts
  - financial management and accounting legislation and regulations
  - privacy legislation
- government and organisational guidelines and procedures relating to:
  - project governance
  - resourcing
  - security
  - strategic plans
  - recruitment
  - risk management
  - procurement guidelines
  - designation approvals
  - industrial agreements
  - environment and sustainability

***Management of project wind-down*** may include:

- risks
- issues
- assets
- consultants
- project team
- support staff

***Documentation*** may include:

- project completion report
- supplier performance reports
- whole-of-life support plans
- transfer documents
- financial reports and acquittals
- evaluation reports
- transition plans

***Approvals*** may be required from:

- project sponsor/funding body
- business owner of the project
- program manager
- line manager
- project governance office/personnel in the organisation
- chief executive officer, manager or management representative
- customer or client

**Unit Sector(s)**

Not applicable.

**Competency field**

Project Management.

# PSPPOL404A Support policy implementation

## Modification History

PSPPOL404A Release 2: Layout adjusted. No changes to content.

PSPPOL404A Release 1: Primary release.

## Unit Descriptor

This unit covers the identification and application of policy in a public sector work environment. It includes identifying relevant policy, implementing policy, and monitoring and reporting on policy implementation.

In practice, supporting policy implementation occurs in the context of other generalist or specialist work activities such as delivering client services, providing input to change, implementing workplace safety procedures, awarding contracts etc.

This unit replaces and is equivalent to *PSPPOLI401A Support policy implementation*.

## Application of the Unit

Not applicable.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements are the essential outcomes of the unit of competency. Together, performance criteria specify the requirements for competent performance. Text in *bold italics* is explained in the Range Statement following.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify relevant policy	1.1 <i>Work situations</i> that are shaped by government or organisation policy are identified in accordance with public sector guidelines.
	1.2 <i>Policy</i> relating to particular work situations is identified and located.
2. Implement policy	2.1 Policy to be implemented is interpreted under direction to identify and plan for change in work practices.
	2.2 The implications of policy for individual work practices are identified, and practices are confirmed/adjusted to reflect policy requirements in accordance with organisational procedures.
	2.3 Others affected by policy requirements are supported to accommodate those requirements.
	2.4 Policy is implemented to support achievement of outcomes intended in specific work areas.
3. Monitor and report on policy implementation	3.1 Information that will assist with the evaluation of the effectiveness of policy implementation is gathered, recorded and reported under direction in accordance with organisational procedures.
	3.2 <i>Information</i> that will assist with the evaluation of the impact of policy implementation on organisational outcomes is gathered, recorded and reported under direction in accordance with organisational procedures.

## Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

### Skill requirements

Look for evidence that confirms skills in:

- reading complex and formal documents such as policy and legislation and providing information on their application
- researching and providing information
- preparing written reports requiring accuracy of expression and language and structures suited to the intended audience
- working with legislation drafters and legal advisers
- writing guidelines in plain English



- working as a member of a team to consult on and prepare policy guidelines
- adjusting communication to suit different audiences
- responding to diversity, including gender and disability
- gathering and analysing policy feedback
- accessing policies and legislation electronically or in hard copy
- identifying and addressing the environmental and occupational health and safety implications of policy/s being implemented

### Knowledge requirements

Look for evidence that confirms knowledge and understanding of:

- practices and procedures for developing policy guidelines
- policy feedback mechanisms
- current organisation policies
- whole of government policies and international policy obligations that impact on organisation policy
- organisation and government procedures and protocols
- public sector code/s of ethics and code/s of conduct
- equal employment opportunity, equity and diversity principles
- environmental and occupational health and safety implications of policy/s being implemented

## Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the Unit descriptor, Performance Criteria, the Range Statement and the Assessment Guidelines for the Public Sector Training Package.

### Units to be assessed together

- *Pre-requisite* units that must be achieved prior to this unit: *Nil*
- *Co-requisite* units that must be assessed with this unit: *Nil*
- *Co-assessed units* that may be assessed with this unit to increase the efficiency and realism of the assessment process include, but are not limited to, public sector generalist and specialist units in the Certificate IV in Government.

Choice from the following is recommended:

PSPGOV402B Deliver and monitor service to clients

PSPGOV403B Use resources to achieve work unit goals

PSPGOV408A Value diversity

PSPGOV422A Apply government processes

PSPREG407B Produce formal record of interview

PSPREG410B Give evidence

PSPPROC409A Receive and select offers

**Overview of evidence requirements**

In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms:

- the knowledge requirements of this unit
- the skill requirements of this unit
- application of the Employability Skills as they relate to this unit (see Employability Summaries in Qualifications Framework)
- policy implementation supported in a range of (2 or more) contexts (or occasions, over time)

**Resources required to carry out assessment**

These resources include:

- relevant policy and legislation
- public sector standards, procedures and protocols
- policy guidelines

**Where and how to assess evidence**

Valid assessment of this unit requires:

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when supporting policy implementation, including coping with difficulties, irregularities and breakdowns in routine
- policy implementation supported in a range of (2 or more) contexts (or occasions, over time)

Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:

- people with disabilities
- people from culturally and linguistically diverse backgrounds
- Aboriginal and Torres Strait Islander people
- women
- young people
- older people
- people in rural and remote locations

Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination of 2 or more of:

- case studies
- portfolios
- projects
- questioning
- scenarios
- authenticated evidence from the workplace and/or training

courses

**For consistency of assessment**

Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments

## Range Statement

The Range Statement provides information about the context in which the unit of competency is carried out. The variables cater for differences between States and Territories and the Commonwealth, and between organisations and workplaces. They allow for different work requirements, work practices and knowledge. The Range Statement also provides a focus for assessment. It relates to the unit as a whole. Text in *bold italics* in the Performance Criteria is explained here.

*Work situations* may include:

- processes
- outcomes
- priorities
- client services
- core business
- service delivery mode/s
- organisational structure

*Policy* may include:

- government policy
- organisation policy

*Information for evaluation* may include:

- statistical data
- qualitative data
- anecdotal feedback
- survey data
- stakeholder opinions

## Unit Sector(s)

Not applicable.

## Competency field

Policy.

# PSPPOL603A Manage policy implementation

## Modification History

PSPPOL603A Release 2: Layout adjusted. No changes to content.

PSPPOL603A Release 1: Primary release.

## Unit Descriptor

This unit covers the interpretation of policy and the management of the policy implementation process. It includes interpreting and communicating the requirements of policy, and policy implementation.

In practice, the management of policy implementation occurs in the context of other generalist and specialist work activities such as managing change, managing diversity, managing workplace safety, managing the delivery of client services, managing risk, directing the management of contracts, etc.

This unit replaces and, for qualification purposes is equivalent to *PSPPOLI601A Manage policy implementation*. The unit no longer requires evaluation of policy implementation. Evaluation is addressed in *PSPMNGT611A Manage evaluations*.

## Application of the Unit

Not applicable.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements are the essential outcomes of the unit of Together, performance criteria specify the requirements for competent performance. Text in *bold italics* is explained in the

competency.

Range Statement following.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |   |  |
|---|--|
| <p><b>1. Interpret and communicate requirements of policy</b></p> | <p>1.1 The expected outcomes of policy implementation are identified and explained to staff in a manner suited to their levels of understanding, experience and <i>specific needs</i>.</p> <p>1.2 <i>Policy</i> is interpreted relative to workplace responsibilities and accountabilities.</p> <p>1.3 The impact on <i>work activities</i> of policy implementation is communicated to staff.</p> <p>1.4 Staff are assisted with the interpretation of policy and its application to their work.</p> <p>1.5 Policy and its implications are explained to other stakeholders using language and materials to suit their current level of knowledge, experience and specific needs.</p> |
| <p><b>2. Implement policy</b></p>                                 | <p>2.1 Potential or impending policy changes are identified and strategies are prepared to accommodate and communicate those changes</p> <p>2.2 Work plans are prepared in consultation with staff and management to ensure that policy is implemented as intended.</p> <p>2.3 Staff performance is monitored to ensure that it complies with policy and corrective action is taken as necessary.</p> <p>2.4 Staff are assisted in adjusting to changes in accordance with their needs and experience.</p>   |

## Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

### Skill requirements

Look for evidence that confirms skills in:

- interpreting complex and formal documents such as policy and legislation, and assisting others to apply them in the workplace
- using communication to suit different audiences
- responding to diversity, including gender and disability
- accessing legislation and codes of ethics electronically or in hard copy

- preparing work plans requiring attention to detail and the interpretation and application of complex language and/or concepts
- providing leadership to the workgroup in the interpretation and implementation of policy
- identifying and addressing the environmental and occupational health and safety implications of the policy/s to be implemented

### Knowledge requirements

Look for evidence that confirms knowledge and understanding of:

- range and type of policies relating to the public sector
- public sector code/s of ethics and code/s of conduct
- organisation and government procedures
- equal employment opportunity, equity and diversity principles
- environmental and occupational health and safety implications of policy/s being implemented

## Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the Unit descriptor, Performance Criteria, the Range Statement and the Assessment Guidelines for the Public Sector Training Package.

### Units to be assessed together

- *Pre-requisite* units that must be achieved prior to this unit: *Nil*
- *Co-requisite* units that must be assessed with this unit: *Nil*
- *Co-assessed units* that may be assessed with this unit to increase the efficiency and realism of the assessment process include, but are not limited to:

PSPMNGT604B Manage change

PSPMNGT605B Manage diversity

PSPMNGT606B Manage quality client service

PSPMNGT608B Manage risk

PSPOHS602A Manage workplace safety

PSPPROC602B Direct the management of contracts

### Overview of evidence requirements

In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms:

- the knowledge requirements of this unit
- the skill requirements of this unit
- application of the Employability Skills as they relate to this unit (see Employability Summaries in Qualifications Framework)

	<ul style="list-style-type: none"><li>• management of policy implementation in a range of (2 or more) contexts (or occasions, over time)</li></ul>
<b>Resources required to carry out assessment</b>	<p>These resources include:</p> <ul style="list-style-type: none"><li>• relevant policy and legislation</li><li>• public sector standards, procedures and protocols</li><li>• policy guidelines</li></ul>
<b>Where and how to assess evidence</b>	<p>Valid assessment of this unit requires:</p> <ul style="list-style-type: none"><li>• a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when managing the implementation of policy, including coping with difficulties, irregularities and breakdowns in routine</li><li>• management of policy implementation in a range of (2 or more) contexts (or occasions, over time)</li></ul> <p>Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:</p> <ul style="list-style-type: none"><li>• people with disabilities</li><li>• people from culturally and linguistically diverse backgrounds</li><li>• Aboriginal and Torres Strait Islander people</li><li>• women</li><li>• young people</li><li>• older people</li><li>• people in rural and remote locations</li></ul> <p>Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination of 2 or more of:</p> <ul style="list-style-type: none"><li>• case studies</li><li>• portfolios</li><li>• projects</li><li>• questioning</li><li>• scenarios</li><li>• authenticated evidence from the workplace and/or training courses</li></ul>
<b>For consistency of assessment</b>	<p>Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments</p>

## Range Statement

The Range Statement provides information about the context in which the unit of competency is carried out. The variables cater for differences between States and Territories and the Commonwealth, and between organisations and workplaces. They allow for different work requirements, work practices and knowledge. The Range Statement also provides a focus for assessment. It relates to the unit as a whole. Text in *bold italics* in the Performance Criteria is explained here.

*Specific needs* may include:

- educational level
- preferred language
- literacy or numeracy
- cultural background
- ethnicity
- gender
- preferred interpersonal approach
- physical ability
- thinking/learning styles
- work experience
- working styles

*Policy* may include:

- government policy
- organisation policy

*Work activities* may include:

- processes
- outcomes
- priorities
- client services
- core business
- service delivery mode/s
- organisational structure

## Unit Sector(s)

Not applicable.

## Competency field

Policy.



## PUACOM012B Liaise with media at a local level

### Modification History

Not applicable.

### Unit Descriptor

#### Unit Descriptor

This unit covers the liaison with media at a low level incident and providing information about local events.

### Application of the Unit

#### Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

#### Prerequisite Unit/s

Nil

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

### Elements and Performance Criteria

#### ELEMENT

#### PERFORMANCE CRITERIA

#### 1. Determine media requirements

- 1.1 ***Organisational protocols*** are followed when ***liaising with the media***
- 1.2 The media's potential interest is assessed and arrangements are made to meet needs where appropriate
- 1.3 ***Operational responsibilities*** are balanced against the provision of information to the ***media***

#### 2. Provide information to the media

- 2.1 A positive image of the ***organisation*** is maintained when liaising with the media
- 2.2 Every opportunity is used to promote the organisation, its services and personnel
- 2.3 ***Relevant and succinct information*** is supplied to media when operational responsibilities are under control and when organisational representative is available to talk to the media

#### 3. Publicise an event

- 3.1 Relationship is established with media contacts
- 3.2 ***Event*** details and support materials are gathered and presented in a logical, relevant and concise manner to the media
- 3.3 Information provided to media is recorded and maintained

## **Required Skills and Knowledge**

### **REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

#### **Required Skills**

- attention to detail
- communicating facts in a fluent, clear and interesting manner
- empathy with victims and operational personnel
- liaison with media and other organisation personnel
- media presentation
- prioritisation between operational responsibilities and provision of information to media
- public speaking
- retaining professionalism under duress

#### **Required Knowledge**

- organisational protocols relating to media liaison (for example legal and organisation requirements relating to:
  - confidentiality
  - libel
  - accuracy
  - discrimination)
- role of media in disseminating information
- requirements of media to present information in a newsworthy/informative manner
- requirements of different media:
  - newspapers
  - magazines
  - radio
  - television (local, regional, national media)
- communication skills
- establishing media relationship

## **Evidence Guide**

### **EVIDENCE GUIDE**

## EVIDENCE GUIDE

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence be demonstrated in providing information to media whilst managing operational responsibilities

### Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

### Context of and specific resources for assessment

#### Context of assessment

On the job or in a simulated work environment

#### Specific resources for assessment

No special requirements

### Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

### Organisation may include

Fire  
Police  
State Emergency Service  
Emergency Management

### Organisational protocols may include

organisational policies and procedures  
personal presentation being as neat as possible considering the operational circumstances  
ensuring media liaison person is fully briefed and prepared  
acknowledge support of other organisations

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>seeking advice from headquarters where appropriate</li> <li>limiting comments on role of own service</li> <li>relevant Federal and State legislation and regulations</li> </ul>
<b>Liaising with the media may include</b>	<ul style="list-style-type: none"> <li>print (local, community, daily newspapers, magazines)</li> <li>television (live or pre-recorded)</li> <li>radio (live or pre-recorded)</li> </ul>
<b>Operational responsibilities may include</b>	<ul style="list-style-type: none"> <li>preservation of life and property, which is the principal concern to all public safety personnel</li> <li>presenting information relevant to the public</li> </ul>
<b>Event may include</b>	<ul style="list-style-type: none"> <li>long service to organisation</li> <li>medal presentation</li> <li>awarding of certificates</li> <li>donations/sponsorships/fundraising</li> <li>recruiting</li> <li>new equipment</li> <li>VIP visit</li> <li>open day</li> <li>training</li> <li>unusual rescues</li> <li>self help information</li> </ul>
<b>Media's potential interest may include</b>	<ul style="list-style-type: none"> <li>enormous media event</li> <li>standard report</li> <li>human interest</li> <li>in the public's interest</li> </ul>
<b>Media's requirements may include</b>	<ul style="list-style-type: none"> <li>deadlines</li> <li>capabilities</li> <li>visual and verbal requirements</li> <li>types of medium</li> <li>variation</li> <li>journalists</li> <li>amenities</li> </ul>

**RANGE STATEMENT**

	briefing area
<b>Media may include</b>	access to media liaison person bilingual personnel and bilingual information representatives from mainstream, community and ethnic television print and broadcast media
<b>Organisational positive image may include</b>	promote the relevance and efficiency of the service report the facts heroism of personnel organisational personnel are co-operative and responsive organisational personnel well presented handling media in most positive manner in even the most adverse conditions/circumstances
<b>Media opportunity may include</b>	opportunity to promote the services provide educational information to the public airplay
<b>Relevant and succinct information may include</b>	information that according to protocol is available for public release report facts and avoid speculation do not supply classified information use language that can be readily understood by all to avoid misinterpretation

**Unit Sector(s)**

Not applicable.

**Corequisite Unit/s**

Co-requisite Unit/s Nil



## PUAEMR026 Treat operational risk

### Modification History

PUAEMR026 Release 1: Primary release.

### Unit Descriptor

This unit describes the outcomes required to identify, plan and implement treatment options in order to reduce risk.

### Application of the Unit

This unit applies to people working in a relatively simple and routine workplace in which they use the organisation's policy and procedures. They would normally have local supervisory/management responsibility and will apply known solutions to a variety of predictable problems.

No licencing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.



## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Make risk decision	<p>1.1 Calculated level of risk is compared to the established <i>risk criteria</i> and determined to be acceptable or unacceptable in consultation with the supervisor.</p> <p>1.2 Risk that is determined as unacceptable is documented and noted for treatment.</p>
2. Identify and select treatment options	<p>2.1 <i>Treatment options</i> of known risks are identified and confirmed as contained in <i>organisational standards and guidelines</i> or supervisor's guidance.</p> <p>2.2 Treatment options under consideration are evaluated for <i>effectiveness</i> within the given context.</p> <p>2.3 Selected treatment options are documented and communicated in accordance with organisational policies and procedures.</p>
3. Implement treatment options	<p>3.1 <i>Treatment plans</i> incorporating selected options are implemented in accordance with organisational policies and procedures.</p> <p>3.2 Treatment plans are communicated in the workplace in accordance with organisational policies and procedures.</p>
4. Monitor and review risk and the process	<p>4.1 Effectiveness and efficiency of the treatment plan is <i>monitored</i>, reviewed and recorded in accordance with organisational policies and procedures to ensure compliance and validity.</p> <p>4.2 Residual risk is calculated and communicated to supervisors so that a decision can be made whether to accept this risk or to re-establish the risk management process.</p> <p>4.3 Treatments are adjusted and communicated following the review process.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

### Required Skills

- communicating effectively with personnel at all levels of organisation and risk management specialists
- preparing more detailed reports for a range of target groups including OHS or risk

committee, OHS representatives, managers and supervisors

- managing own tasks within time frame
- using consultation and negotiation skills, particularly in relation to developing plans and implementing and monitoring designated actions
- contributing to the assessment of the resources needed to systematically treat risks and, where appropriate, access resources
- manage simple project implementation
- interpreting information and data to identify areas for improvement
- using language and literacy skills appropriate to the workgroup and the task
- using basic computer and information technology skills to access internal and external information and data on risk
- undertaking basic research to access relevant information and data
- paying attention to detail when making observations and recording outcomes

### **Required Knowledge**

- organisational policies, procedures and guidelines relevant to risk
- risk management terminology and language in accordance with relevant standards (risk, hazard, risk assessment, risk management and risk treatment)
- specified methods or tools endorsed by an organisation and provided for use in the identification and analysis of risk
- treatment options for risks relevant in the workplace
- team work principles and strategies
- basic project management strategies
- techniques for giving and receiving feedback in a constructive manner
- concept of common law duty of care
- structure and forms of legislation including regulations, codes of practice, associated standards and guidance material
- techniques/methods used to identify or analyse information
- verbal and non-verbal communication techniques including language style, active listening

## **Evidence Guide**

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Assessment must confirm the ability to define and identify risk language, definitions and terminology. Evidence must also be provided of stakeholders' involvement throughout the treatment process and that an informed analysis and selection of treatment options has been undertaken using the methodology and procedures approved by the organisation.

### **Consistency in performance**

Competency should be demonstrated by gathering evidence over a range of workplace scenarios, using a variety of tools and methodology and should include the assessment of a variety of risks that may adversely impact on the organisation.

### **Context of and specific resources for assessment**

#### **Context of assessment**

Competency should be assessed in the workplace or under conditions that closely simulate the workplace.

#### **Specific resources for assessment**

Access to:

- organisational documentation
- relevant organisational standards
- appropriate tools and methods used within the organisation
- simulated or real-world workplace

### **Guidance information for assessment**

Valid assessment of this unit requires:

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when applying the principles of treating operational risk, including coping with difficulties, irregularities and breakdowns in routine
- application of the principles of treating operational risk in a range of 3 or more contexts or occasions, over time

Assessment methods should reflect but not exceed workplace demands, such as literacy, and the needs of individuals who might be disadvantaged.

Assessment methods suitable for valid and reliable assessment of this unit must use authenticated evidence from the workplace and/or training courses and should include a combination of two or more of:

- workplace projects
- simulation or role plays
- case studies and scenarios
- observation
- portfolios

## Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Risk criteria*** may include:
- the nature and types of causes and consequences that can occur and how they will be measured
  - how likelihood will be defined
  - the timeframe(s) of the likelihood and/or consequence(s)
  - how the level of risk is to be determined
  - the views of stakeholders
  - the level at which risk becomes acceptable or tolerable
  - whether combinations of multiple risks should be taken into account and, if so, how and which combinations should be considered
- Treatment options*** may include:
- avoidance of the risk
  - removing a risk source
  - changing the likelihood of
  - an initiating event or source of risk occurring
  - a hazard impacting on elements at risk
  - changing the consequences of an identified hazard impact
  - sharing the risk
  - retaining the risk based on an informed decision
- Organisational standards and guidelines*** may include:
- AS/NZS ISO 31000:2009 Risk management—Principles and guidelines
  - regulatory or legislative requirements
  - environmental protection and sustainability regulations
  - industry standards and codes of practice
  - organisational charter/business plan
  - organisational OHS, risk management or resilience policies or operating procedures
- Effectiveness*** may include:
- benefits to the individual
  - benefits to the organisation
  - cost benefits resulting from the implementation of the treatment
  - cost of implementing the treatment option
- Treatment plans*** may include:
- budgeting
  - expected outcome of treatments
  - performance measures

- Monitored* may include:
- responsibilities
  - review process to be set in place
  - schedules
  - critical observation
  - identification of changes over time
  - regular checking
  - regular recording

### **Unit Sector(s)**

Not applicable.

### **Custom Content Section**

Not applicable.

## PUAEMR027 Assess operational risk

### Modification History

PUAEMR027 Release 1: Primary release.

### Unit Descriptor

This unit describes the outcomes required to identify and assess risk in an operational environment.

No licencing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

### Application of the Unit

This competency applies to workers at a relatively simple and routine level, in which they use established organisational policy and procedures. Workers would normally have local supervisory or management responsibility and apply known solutions to a variety of predictable problems.

The unit covers the first four steps of the risk management process and provides the skills and knowledge required to conduct a risk assessment.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1. Establish the risk context</b>	<p>1.1 Objectives and scope are identified using organisational risk management standards and guidelines.</p> <p>1.2 <b>Risk criteria</b> are identified and confirmed as contained in organisational policies, procedures or supervisor guidance.</p> <p>1.3 <b>Structure for the planning</b> required to conduct a risk assessment is determined.</p> <p>1.4 <b>Stakeholder</b> aims and objectives are identified and recorded in accordance with workplace procedures and guidelines.</p>
<b>2. Identify risk</b>	<p>2.1 All possible sources of risk which may affect the situation or objectives are identified and recorded in consultation with stakeholders.</p> <p>2.2 Risks are identified using a <b>specified methodology or tool</b> in accordance with workplace procedures and guidelines.</p> <p>2.3 Risk statements describing consequences are generated.</p>
<b>3. Analyse risk</b>	<p>3.1 Risks are analysed by estimating the likelihood of particular consequences occurring.</p> <p>3.2 Levels of risk are determined, documented and communicated in accordance with organisational policies and procedures.</p>
<b>4. Evaluate risk</b>	<p>4.1 Levels of risk are prioritised for treatment.</p> <p>4.2 Calculated level of risk is compared to the established risk evaluation criteria, and communicated to supervisors.</p> <p>4.3 Risks are monitored and reviewed until appropriate treatment measures have been implemented.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

## Required Skills

- communicating effectively with risk management specialists and people at all organisational levels
- preparing more detailed reports for a range of target groups including OHS or risk committee, OHS representatives, managers and supervisors
- managing own tasks within time frame
- using consultation and negotiation skills, particularly in relation to developing plans and implementing and monitoring designated actions
- contributing to the assessment of the resources needed to systematically assess risks and, where appropriate, access resources
- analysing relevant workplace information and data, and make observations including of workplace tasks and interactions between people, their activities, equipment, environment and systems
- carrying out simple arithmetical calculations (e.g. % change), and produce graphs of workplace information and data to identify trends and recognise limitations
- interpreting information and data to identify areas for improvement
- using language and literacy skills appropriate to the workgroup and the task
- using basic computer and information technology skills to access internal and external information and data on risk
- undertaking basic research to access relevant information and data
- paying attention to detail when making observations and recording outcomes.

## Required Knowledge

- organisational policies, procedures and guidelines relevant to risk
- risk management terminology and language in accordance with relevant standards
- specified methods or tools endorsed by an organisation and provided for use in the identification and analysis of risk
- team work principles and strategies
- techniques for giving and receiving feedback in a constructive manner
- concept of common law duty of care as applies in emergency risk management context
- structure and forms of legislation including regulations, codes of practice, associated standards and guidance material
- roles and responsibilities under OHS legislation of employees, including supervisors and contractors
- techniques/methods used to identify or analyse information
- verbal and non-verbal communication techniques including language style, active listening



## Evidence Guide

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to define and identify risk language, definitions and terminology. Evidence must also be provided of stakeholder's involvement throughout the process and that an informed analysis of the risks has been undertaken using tools and methodology approved by the organisation.

### Consistency in performance

Competency should be demonstrated by gathering evidence over a range of workplace scenarios, using a variety of tools and methodology and should include the assessment of a variety of risks that may adversely impact on the organisation.

### Context of and specific resources for assessment

#### Context of assessment

Competency should be assessed in the workplace or under conditions that closely simulate the workplace

#### Specific resources for assessment

Access to:

- organisational documentation
- relevant organisational standards
- appropriate tools and methods used within the organisation
- simulated or real-world workplaces

### Guidance information for assessment

Valid assessment of this unit requires:

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when applying the principles of operational risk assessment, including coping with difficulties, irregularities and breakdowns in routine
- application of the principles of operational risk assessment in a range of 3 or more contexts or occasions, over time.

Assessment methods should reflect but not exceed workplace demands, such as literacy, and the needs of individuals who might be disadvantaged.

Assessment methods suitable for valid and reliable assessment of this unit must use authenticated evidence from the workplace and/or training courses and may include a combination of two or more of:

- workplace projects

- simulation or role plays
- case studies and scenarios
- observation
- portfolios

## Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

***Organisational risk management standards and guidelines*** may include:

- Standard AS/NZS/ISO 31000:2009 Risk Management—Principles and Guidelines
- regulatory or legislative requirements e.g. ohs act
- environmental protection and sustainability regulations
- industry standards and codes of practice
- organisational charter/business plan
- organisational ohs, risk management or resilience policies or operating procedures

***Risk criteria*** may include:

- the nature and types of causes and consequences that can occur and how they will be measured
- how likelihood will be defined
- the timeframe(s) of the likelihood and/or consequence(s)
- how the level of risk is to be determined
- the views of stakeholders
- the level at which risk becomes acceptable or tolerable
- whether combinations of multiple risks should be taken into account and, if so, how and which combinations should be considered

***Structure for the planning*** may include:

- documentation required
- analysis tools which are required to conduct the assessment
- approach taken to conduct the assessment
- depth of assessment

***Specified methodology or tools*** may include:

- a risk matrix
- analysis of risk registers
- brainstorming
- business continuity planning
- examining any available data e.g. audit

- results/incident reports
- expert judgement
  - focus groups
  - nomogram
  - scenario analysis

## **Unit Sector(s)**

Not applicable.

## PUAFIR201B Prevent injury

### Modification History

Not applicable.

### Unit Descriptor

#### Unit Descriptor

This unit covers the competency associated with the identification, avoidance, review, and evaluation of workplace risks and hazards, maintenance of personal safety and the reporting to supervisors and team members.

### Application of the Unit

#### Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

#### Prerequisite Unit/s

Nil

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

### Elements and Performance Criteria

#### ELEMENT

#### PERFORMANCE CRITERIA

1. **Identify workplace hazards and risks and advise others**

- 1.1 Procedures and practices are followed to identify workplace *hazards* and risks
- 1.2 Appropriate procedures for dealing with hazards in the workplace are followed in accordance with Occupational Health and Safety (OH&S) guidelines and the organisation's procedures
- 1.3 *Contact* is maintained at all times with other crew members and supervisor
- 1.4 Hazards in the work area and warnings of hazardous situations are recognised and reported to designated personnel
- 1.5 Stressful situations are recognised and support is sought or given to minimise effect

2. **Implement hazard control procedures**

- 2.1 *Personal protective clothing and equipment* is selected and donned in accordance with the organisation's procedures and within its limitations
- 2.2 Appropriate procedures and work instructions for controlling risks and hazards are followed
- 2.3 Personal health is protected in accordance with legislative and organisation's procedures
- 2.4 Equipment appropriate to dealing with a hazard is used in accordance with standard operating procedures

ELEMENT	PERFORMANCE CRITERIA
3. <b>Review effectiveness of hazard control procedures</b>	<p>2.5 Controls are implemented to minimise damage to the environment</p> <p>2.6 Fluid and food intake and rest breaks are maintained in accordance with environmental and working conditions and the organisation's policy</p> <p>2.7 Assistance is given to crew members in danger while maintaining personal safety in accordance with the organisation's procedures</p> <p>3.1 Hazard controls are monitored to ensure continued effectiveness</p> <p>3.2 Changes in incident behaviour and conditions are reported immediately to supervisor</p> <p>3.3 Factors which may create or increase <i>risk</i> to life, property or the environment are identified, reported and controlled in so far as possible</p>
4. <b>Participate in the implementation of OH&amp;S in the workplace</b>	<p>4.1 OH&amp;S issues are raised with designated personnel in accordance with procedures and OH&amp;S legislation</p> <p>4.2 Contributions to OH&amp;S implementation in the workplace are made within organisation's procedures and scope of responsibilities and competencies</p> <p>4.3 Activities/debriefings are undertaken which <i>alleviate occupational stress</i></p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required Skills

identification of typical hazards in the workplace

use of protective clothing and equipment

#### Required Knowledge

Health and fitness requirements such as diet and nutrition, exercise, impact of smoking, alcohol and drugs on the body

## REQUIRED SKILLS AND KNOWLEDGE

Occupational hazards encountered in the workplace such as structural collapse, electricity, chemicals, dust, wildfires, extreme temperatures, biological, radiation, hazardous atmospheres, flammable and combustible liquids and gases and manual handling

Personal protection such as clothing and equipment requirements, survival in life threatening situations and health hazards

Signs of occupational stress, limiting stress, dealing with stress and seeking assistance

Signs of fatigue and dealing with fatigue

Methods of hazard control and reporting in accordance with the organisation's procedures

Procedures for participating in OH&S arrangements

## Evidence Guide

### EVIDENCE GUIDE

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

It is essential for this unit that competence be demonstrated in:

correct identification of hazards in the workplace  
 application of the organisation's procedures including the correct selection and use of PPE  
 advising and reporting of workplace hazards in accordance with the organisation's requirements  
 notification of risk to the team and supervisor in a timely manner

#### **Consistency in performance**

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

#### **Context of and specific resources for assessment**

#### **Context of assessment**

A combination of oral or written presentations, observations, on the job and/or in a range of simulated environments

## EVIDENCE GUIDE

<p><b>Guidance information for assessment</b></p>	<p><b>Specific resources for assessment</b></p> <p>Availability of appropriate protective clothing, equipment and organisational procedures</p> <p>Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.</p>
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## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<p><b>Workplaces may include</b></p>	<p>locations where activities and operations may occur such as structures, open spaces, water, public and private property, (including crown land), mobile property, confined spaces</p>
<p><b>Activities to alleviate occupational stress include</b></p>	<p>avoidance</p> <p>limiting exposure</p> <p>withdrawal</p> <p>defusion/debriefing</p> <p>counselling services</p> <p>referral to medical services or relevant government agencies</p>
<p><b>Hazards must include those associated with</b></p>	<p>urban, rural and aircraft fires</p> <p>training and simulation activities</p> <p>hazardous materials</p> <p>electricity</p>
<p><b>and may also include</b></p>	<p>prescribed burning activities</p> <p>vehicle and industrial rescue/extrication</p> <p>flood, storm and tempest rescues</p> <p>travelling in vehicles and</p>



**RANGE STATEMENT**

<b>The nature of the hazard must include</b>	travelling in aircraft
	<b>Incident</b>
	chemical spills such as those involving dangerous goods; vapours/poisonous gases/smoke; contaminated fire water; explosions/flammability; radioactivity; environmental
	contamination of air/land/water, appliances and equipment
	<b>Biological</b>
	biological such as infections, bites, stings, radiation
	<b>Personal</b>
	heat stress; dehydration
	psychological such as critical incident stress; shock, drownings
	<b>Environmental</b>
	fire and explosions; falling objects (trees, masonry, rocks etc.); subsidence; water load; structural collapse, radiant heat
	entrapment by fire in a vehicle or on foot
	chemical types
	heavy machinery
<b>and may also include</b>	confined space/structure
	aerial retardant drops
	broken terrain
<b>Risk control measures must include</b>	use of clothing and equipment to provide protection
	eye, sight, hearing protection
	appropriate training
	barriers
	vehicle protection hoses and devices
	survival techniques
	life support equipment/features
<b>and may also include</b>	spill clean up kits
	electrically insulated tools and equipment

**RANGE STATEMENT**

	<p>fire blankets/roll over protection</p> <p>goggles, face shield, hearing protection and chainsaw chaps</p> <p>adequate food, fluid and other welfare needs during extended operations</p>
<b>Personal protective clothing and equipment must include</b>	<p>Turnout uniform and gloves</p> <p>respiratory protection</p> <p>eye protection</p>
<b>and may also include</b>	<p>face shield</p> <p>chemical protective clothing</p> <p>personal lines</p> <p>personal distress units</p> <p>personal accessories kit</p> <p>chainsaw chaps</p>
<b>Life support equipment/features may include</b>	<p>radiation shielding</p> <p>vehicle cabins with/without sprays</p> <p>low water level indicators</p> <p>protective vests</p> <p>fire blankets</p> <p>first aid kit</p>
<b>Factors which must require evaluation and review include</b>	<p>available resources</p> <p>traffic and spectators</p> <p>wind strength/direction</p> <p>temperature and relative humidity</p> <p>fire development/behaviour</p> <p>structural and equipment integrity</p> <p>water supply/pressure</p> <p>vegetation type</p> <p>topographical features including slope, terrain and aspect</p>
<b>Contact with crew members and supervisors must</b>	<p>visual</p> <p>touch</p>

## **RANGE STATEMENT**

<b>include</b>	radio verbal
<b>and may also may include</b>	electronic and written
<b>Designated personnel must include</b>	other crew members/supervisors/OH&S representatives

## **Unit Sector(s)**

Not applicable.

## **Corequisite Unit/s**

**Co-requisite Unit/s**                      PUATEA001B Work in a team

## PUAFIR204B Respond to wildfire

### Modification History

Not applicable.

### Unit Descriptor

#### Unit Descriptor

This unit covers competency for responding to a wildfire when working as a member of a team, under direct supervision.

### Application of the Unit

#### Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

#### Prerequisite Unit/s

PUAFIR201B Prevent injury

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. <b>Prepare to respond to fire</b>	1.1 The location of fire and the most effective route to the fire are obtained taking into account local conditions 1.2 <b>Protective clothing</b> and <b>equipment</b> , food and fluid requirements are identified and relevant preparations undertaken prior to departure
2. <b>Proceed to fire</b>	2.1 The location of the fire is confirmed on approach 2.2 Access to the area is gained with minimum injury to personnel or damage to vehicles, equipment or the environment 2.3 Evidence of fire cause is noted and brought to the attention of the supervisor
3. <b>Obtain and use extinguishing media and equipment</b>	3.1 Nominated media and equipment are located and obtained 3.2 Equipment is used to deliver the nominated media in accordance with the organisation's and manufacturer's procedures
4. <b>Combat wildfire</b>	4.1 Instructions are received, confirmed and implemented in accordance with the organisation's safe work practices and procedures 4.2 Equipment and <b>extinguishing media</b> used are appropriate to wildfire conditions 4.3 Control lines are prepared in accordance with the

ELEMENT	PERFORMANCE CRITERIA
5. <b>Observe and react to wildfire and weather conditions</b>	<p>organisation's procedures</p> <p>4.4 Equipment is positioned, made ready for use and protected from damage in accordance with the organisation's procedures</p> <p>4.5 Fire is attacked taking into account <i>wildfire hazards</i> as directed and in accordance with the organisation's procedures</p> <p>4.6 Evidence of fire cause and area of fire origin are protected</p> <p>4.7 Communication is maintained at all times in accordance with the organisation's procedures</p> <p>5.1 Conditions at the fire are observed and their effect on fire behaviour and development are noted and reported to supervisor</p> <p>5.2 <i>Weather</i> conditions and changes to fire behaviour are observed and reported to the supervisor</p> <p>5.3 Variations in terrain, <i>fuel</i> types and fuel arrangements are observed and the effect on fire behaviour is reported to the supervisor as required</p> <p>5.4 A safe escape route or refuge is identified and maintained at all times</p> <p>5.5 Communication is maintained with other <i>firefighting</i> personnel and the supervisor throughout operational activities</p>
6. <b>Participate in mop-up and patrol activities</b>	<p>6.1 Mopping-up activities are carried out under direction in accordance with the organisation's procedures</p> <p>6.2 Patrol of the perimeter or sector of the fire is maintained in accordance with the organisation's procedures</p>
7. <b>Assist in ancillary operations</b>	<p>7.1 Activities to complement firefighting operations are carried out as directed and according to the organisation's procedure</p>
8. <b>Recover and store equipment</b>	<p>8.1 Equipment and consumables are recovered as directed</p> <p>8.2 Equipment is stored in accordance with the organisation's procedures</p> <p>8.3 Cleaning and maintenance are carried out in accordance with the organisation's procedures</p>

**ELEMENT**

**PERFORMANCE CRITERIA**

**Required Skills and Knowledge**

**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

**Required Skills**

- use of wildfire control tools and equipment
- undertaking dry and wet wildfire attack
- detection of hot spots, stags, unsecured wildfire perimeter

**Required Knowledge**

- fire behaviour
- extinguishing media, water, foam, suppressants
- knapsack
- operating firefighting equipment
- responding to wildfire
- wildfire control tactics and techniques
- wildfire hazards, safety techniques
- fuel load, moisture content of fuel, topography, fireground signals
- organisation's operating procedures
- effects of wildfire on structures
- awareness of health and fitness requirements

**Evidence Guide**

**EVIDENCE GUIDE**

## EVIDENCE GUIDE

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

For this unit it is essential that competence be demonstrated by:

- reacting to changing wildfire behaviour due to changes in weather, topography and fuel conditions
- participating in dry wildfire control
- use of extinguishing media in wildfire control
- maintaining health and safety of self, other workers and people in the immediate work area
- participating in mop-up and patrol
- undertaking operational activities safely

### Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

### Context of and specific resources for assessment

#### Context of assessment

A combination of oral or written presentation, observation on the job or in a simulated wildfire (grass, crop, scrub, forest) environment

#### Specific resources for assessment

- access to controlled or contained fires
- availability of wildfire control equipment

### Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

### Types of wildfire must include

ground, surface, crown



**RANGE STATEMENT**

<b>Types of fuel may include</b>	grass crop forest heath plantation scrub
<b>Fuel features must include</b>	type size arrangement/distribution quantity moisture content topography local fire conditions
<b>Weather factors must include</b>	variations to wind speed and direction relative humidity temperature atmospheric stability
<b>Wildfire extinguishing media must include</b>	water
<b>and may also include</b>	wetting agent Class A foam fire suppressants (short and long term) earth retardants
<b>Wildfire extinguishing equipment must include</b>	tanker hand tools hose and small gear pump
<b>and may also include</b>	aircraft ropes and lines knap sack

**RANGE STATEMENT****Types of firefighting strategies must include**

chainsaw  
 offensive strategy  
 defensive strategy  
 flank attack  
 combined strategy  
 direct attack  
 parallel attack  
 indirect attack  
 combination attack

**Wildfire hazards must include**

heat related illness  
 fatigue  
 smoke inhalation  
 burns  
 sprain or fracture  
 snake or insect bite  
 falling branches/trees  
 manual handling  
 trips/falls  
 disorientation  
 environmental  
 lack of visibility  
 water bombing operations

**Variations in topography must include**

elevation  
 slope  
 aspect  
 landscape features

**Access may be gained by**

vehicle  
 aircraft  
 boat  
 foot

**Information about access**

radio/phone

**RANGE STATEMENT**

<b>must be received by</b>	personal contact
<b>and may also include</b>	map reference
<b>Personal protective clothing and equipment must include</b>	turnout uniform and gloves eye protection hearing protection respiratory protection
<b>and may also include</b>	protective hoods accessories as per organisational standards
<b>Ancillary activities may include</b>	provision/transportation of food, water and equipment for an incident working with earth moving equipment such as bulldozer, grader, tractor with blade

**Unit Sector(s)**

Not applicable.

**Corequisite Unit/s**

**Co-requisite Unit/s** Nil

# PUAFIR303B Suppress wildfire

## Modification History

Not applicable.

## Unit Descriptor

### Unit Descriptor

This unit covers competency while working as a member of a team when suppressing a wildfire and is often undertaken without direct supervision.

## Application of the Unit

### Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

### Prerequisite Unit/s

PUAFIR204B Respond to wildfire

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. **Receive and report details of wildfire**

- 1.1 Details of the fire's location and development of the fire are received and recorded
- 1.2 Fire details are reported in accordance with the organisation's procedures

2. **Prepare to respond to fire**

- 2.1 The location of and access to the *wildfire* are confirmed and the most effective route is ascertained
- 2.2 Required organisational *equipment*, protective clothing, apparel, food and water required are assessed and procured before departure
- 2.3 The most appropriate method of transport to the wildfire is selected and used

3. **Proceed to fire**

- 3.1 The location of the wildfire is confirmed from observation or by direction while on approach
- 3.2 Access to area is determined and achieved with minimum injury to personnel or damage to vehicles, equipment or environmentally sensitive areas
- 3.3 The safety of people in the wildfire area is assessed and monitored
- 3.4 Evidence of the wildfire cause is noted and brought to the attention of the appropriate authority
- 3.5 *Navigational* tools are used for planning and

**ELEMENT****PERFORMANCE CRITERIA****4. Protect people**

operational purposes

- 4.1 As far as conditions allow, the number and location of people in the threatened area is determined
- 4.2 Appropriate evacuation or non-evacuation protocols are identified and applied or advised to persons in the path of a wildfire
- 4.3 **Access** to hazardous locations is controlled
- 4.4 The safe defensibility of property is evaluated and assistance is provided to help occupiers
- 4.5 Advice and support is provided to occupiers in helping them safely defend their property
- 4.6 The safety of people in the threatened area is monitored during the course of the fire
- 4.7 The safety of people in the area is checked and confirmed after the passing of the fire

**5. Combat wildfire**

- 5.1 **Media** and equipment are selected and used to allow wildfire control operations to be conducted effectively and safely in accordance with the organisation's procedures and OH&S procedures
- 5.2 The most suitable location from which to use equipment to commence wildfire control operations is selected
- 5.3 Access to the selected area of operations is gained in the safest and most effective manner
- 5.4 Fire **hazards** are identified and action taken to minimise the risk of injury to the public, personnel and self
- 5.5 Fire control strategies and tactics are employed to achieve the objectives in accordance with the organisation's procedures
- 5.6 Fire control activities undertaken minimise overall damage and impact on the environment
- 5.7 Potential **fire behaviour** is considered and acted upon to ensure safety and achievement of objective
- 5.8 Fuel, **weather** and **topographical factors** are observed and potential fire behaviour anticipated
- 5.9 The effectiveness of tactics employed is reported to the supervisor
- 5.10 Area of origin and evidence of fire cause is protected and brought to attention of

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
<b>6. Conduct mop-up and patrol activities</b>	<p>supervisor or relevant authority</p> <p>5.11 Safe egress and/or refuge from the fire is identified and communicated to personnel</p> <p>6.1 Mop-up and patrol activities are carried out effectively and safely to the distance determined by the Incident Controller</p> <p>6.2 Patrol of the perimeter or sector of the fire is maintained in accordance with the organisation's procedures and guidelines</p>
<b>7. Recover and maintain equipment</b>	<p>7.1 Equipment is made up and made ready for operational use in accordance with the organisation's procedures</p> <p>7.2 Damaged or missing equipment is replaced, recorded and/or reported in accordance with the organisation's procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required Skills

wildfire control and suppression; back burning; use of wildfire control tools and equipment

map reading and interpretation

detection of hot spots, stags,

unsecured wildfire perimeter,

mop-up activities

#### Required Knowledge

Firefighting Protocols

organisation policy; direct, indirect, parallel attack; wet, dry firefighting; backburning (ground, aerial); control lines and firebreaks; defensive firefighting tactics

Fire attack procedures

standard operating procedures; reporting; patrol; mop-up; briefings/instructions;

## REQUIRED SKILLS AND KNOWLEDGE

identification of cause

Safety

organisation first-aid requirements; fireground hazards; procedures for dealing with injury; safety near vehicles and machines; briefings; team work

Fuel and its impact on fire behaviour

moisture content, quantity, type, arrangement and distribution, size, drought effects, curing

Fire behaviour

rate of spread, flame height and intensity, spotting, fire development, junction zones

Topography and its impact on fire behaviour

slope, aspect, physical features, turbulence

Weather factors which impact on fire behaviour

wind direction and speed

wind changes

temperature

relative humidity

atmospheric stability

## Evidence Guide

### EVIDENCE GUIDE

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

For this unit it is essential that competence be demonstrated by:

anticipating and reacting to changing wildfire behaviour

observing and reacting to weather behaviour

undertaking dry wildfire control activity

use of extinguishing media

maintaining health and safety of self, other workers and people in the wildfire area

completing mop-up and patrol



## EVIDENCE GUIDE

	reading maps and navigation
	<p><b>Consistency in performance</b></p> <p>Evidence should be gathered over a period of time in a range of actual or simulated workplace environments</p>
<b>Context of and specific resources for assessment</b>	<p><b>Context of assessment</b></p> <p>A combination of oral or written presentation, observation, on the job and/or in a range of simulated environments</p> <p><b>Specific resources for assessment</b></p> <p>access to controlled fires</p> <p>availability of wildfire control equipment</p>
<b>Guidance information for assessment</b>	Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<b>Types of wildfire must include</b>	ground surface and crown fire
<b>Fuel types may include</b>	grass crop forest plantation heath
<b>Fuel features which will impact on fire development must include</b>	type size arrangement/distribution

**RANGE STATEMENT**

	quantity
	seasonal effects
	effects of drought
	moisture content
<b>Wildfire extinguishing media must include</b>	water
<b>and may also include</b>	wetting agents
	Class A foam
	fire suppressants (short and long term)/earth retardants
<b>Wildfire extinguishing equipment must include</b>	tanker
	hand tool
	hose and small gear
	pump
<b>and may also include</b>	aircraft
	ropes and lines
	knap sack
	chainsaw
<b>Types of firefighting strategies must include</b>	offensive strategy
	defensive strategy
	combined strategy
	direct attack
	parallel attack
	indirect attack
	flank attack
	combination attack
	reconnaissance
	mop-up
	patrol
<b>Access methods may include by</b>	vehicle
	aircraft

**RANGE STATEMENT**

	boat
	foot
<b>Topographic factors which may impact on fire development must include</b>	elevation
	slope
	wind turbulence
	local wind effects
	botanical effects
	aspect
<b>Weather factors which may impact on fire development must include</b>	wind direction and speed
	wind changes
	temperature
	relative humidity
	atmospheric stability
	cold fronts
	local effects
	adiabatic winds
	katabatic winds
	sea breezes
	land breezes
<b>Personal protective clothing and equipment must include</b>	turnout uniform and gloves
	eye protection
	hearing protection
	respiratory protection
<b>and may also include</b>	protective hoods
	accessories as per organisational standards
<b>Ancillary activities may include</b>	provision and transport of food, water, fuel and equipment of an incident
	aircraft operations
	working with earthmoving equipment
<b>Navigational aids must include</b>	maps
	compass

**RANGE STATEMENT****and may also include**

geographical information systems  
 global positioning satellites  
 aerial photographs

**Wildfire hazards must include**

heat-related illness (heat exhaustion and dehydration)  
 fatigue  
 smoke inhalation  
 burns  
 sprain or fracture  
 trips/falls  
 snake or insect bite  
 lack of visibility  
 falling branches and trees  
 rolling objects  
 falling objects  
 manual handling  
 disorientation  
 water bombing operation  
 environmental

**Fire behaviour is evidenced by**

rate of spread  
 flame height and intensity  
 spotting  
 fire development  
 terrain, topography  
 fuel load and arrangement  
 weather conditions - winds, fire whirls

**Unit Sector(s)**

Not applicable.

## **Corequisite Unit/s**

**Co-requisite Unit/s** Nil

## **PUAFIR406B Develop prescribed burning plans**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

This unit covers the development of plans for prescribed burning in areas for which the organisation is responsible to meet defined objectives through a range of strategies.

### **Application of the Unit**

#### **Application of the Unit**

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

#### **Prerequisite Unit/s**

PUAFIR303B Suppress wildfire

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. <b>Identify target areas and burn objectives</b>	1.1 Areas requiring prescribed burning are identified in accordance with the organisation's procedures 1.2 Burn objectives are developed in accordance with the organisation's procedures
2. <b>Prepare plans for prescribed burning</b>	2.1 Strategies and tactics which are suitable for the location and will meet objectives, are nominated in accordance with organisational procedures and programs 2.2 Consultation with other <i>interested parties</i> , during the planning process, is conducted in accordance with organisational procedures 2.3 Proposed strategies and tactics take into account the safety of persons and <i>protection of property, assets</i> and the <i>environment</i> 2.4 Resources required and conditions for implementation of the strategies and tactics, are specified in accordance with organisational procedures
3. <b>Monitor implementation of prescribed burning plans</b>	3.1 Progress of plan implementation is monitored for compliance with organisational requirements 3.2 Prescribed burning activities are recorded in accordance with organisational procedures 3.3 <i>Incidents</i> are reported and investigated in accordance with organisational procedures

## ELEMENT

## PERFORMANCE CRITERIA

### Required Skills and Knowledge

#### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required Skills

community consultation and liaison  
recommending actions to be taken, communicating with others  
preparation of plans  
map reading  
measuring quantities, calculating areas

#### Required Knowledge

wildfire hazards  
prescribed burning strategies  
wildfire behaviour  
organisational procedures and programs  
legislation relevant to wildfire hazard reduction  
effects of fire on vegetation, fauna and fuel accumulation  
effects of fire on areas and places of cultural significance

### Evidence Guide

#### EVIDENCE GUIDE

**Critical aspects for  
assessment and evidence  
required to demonstrate**

It is essential for this unit that competence be demonstrated by:



## EVIDENCE GUIDE

### competency in this unit

identifying wildfire hazards  
 developing objectives  
 meeting objectives for burn strategies and tactics  
 minimising environmental impact  
 recognising and consulting interested parties

### Consistency in performance

competency demonstrated over a period of time within the range of variables

### Context of and specific resources for assessment

#### Context of assessment

on the job and/or  
 indirect evidence in the form of documentation, and/or  
 discussion with the applicant and nominated referees  
 simulated situations

#### Specific resources for assessment

travel to remote locations may be necessary

### Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

### Hazards may include

flammable vegetation  
 flammable hazardous materials  
 adjoining land use, proximity to urban areas

### Actions may include

assist in community protection  
 hazard reduction  
 vegetation management

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>habitat management</li> <li>management of cultural sites</li> </ul>
<b>Interested parties may include</b>	<ul style="list-style-type: none"> <li>government organisations including local, state and federal</li> <li>adjacent land owners and/or managers</li> <li>community groups with specific interests</li> </ul>
<b>Safety of people may include</b>	<ul style="list-style-type: none"> <li>people on areas adjacent to the target area</li> <li>people permanently or temporarily in the target area</li> <li>smoke management</li> </ul>
<b>Protection of property and assets may include</b>	<ul style="list-style-type: none"> <li>property and assets adjacent to the target area</li> <li>commercial crops or other assets on the target area</li> <li>cultural sites, historical buildings, etc.</li> </ul>
<b>Protection of the environment may include</b>	<ul style="list-style-type: none"> <li>native flora and fauna</li> <li>rare and endangered species</li> <li>water quality</li> <li>soil conservation</li> <li>safe use of chemical sprays</li> <li>smoke management</li> </ul>
<b>Incidents may include</b>	<ul style="list-style-type: none"> <li>fire escapes over control lines</li> <li>accidental chemical spillage</li> <li>damage to equipment and property</li> <li>damage to environment</li> <li>injury to persons</li> <li>complaints from persons or organisations</li> </ul>

**Unit Sector(s)**

Not applicable.

## Corequisite Unit/s

Co-requisite Unit/s Nil

## PUAFIR407B Conduct prescribed burning

### Modification History

Not applicable.

### Unit Descriptor

**Unit Descriptor** This unit covers the competency for conducting a prescribed burn.

### Application of the Unit

**Application of the Unit** The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

**Prerequisite Unit/s** PUAFIR303B Suppress wildfire

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

#### 1. Prepare to burn

- 1.1 Burn plan is identified in accordance with the organisational procedures and legislative requirements
- 1.2 A *contingency plan* is developed based on *local conditions at the time of burn* and communicated to all personnel
- 1.3 Permits are obtained in accordance with organisational procedures
- 1.4 Burn *notifications* are issued in accordance with organisational procedures
- 1.5 Resource requirements are identified
- 1.6 Control lines are specified and prepared in accordance with organisational procedures
- 1.7 *Assets* are *protected* in accordance with organisational procedures
- 1.8 *Weather conditions* are *monitored*

#### 2. Conduct burn

- 2.1 *Resources* are gathered and deployed
- 2.2 Day of burn notifications are issued
- 2.3 Pre burn checks are conducted
- 2.4 *Lighting* is conducted in accordance with plan or organisational procedures
- 2.5 *Burning* is monitored and operational changes are made as required

ELEMENT	PERFORMANCE CRITERIA
3. <b>Conduct post burn activities</b>	2.6 Records are kept in accordance with organisational procedures 2.7 Burn operations are concluded 3.1 Outcomes of the burn are assessed and reported 3.2 Variations from the burn plan are reported in accordance with organisational procedures 3.3 <b>Restoration and rehabilitation</b> is carried out in accordance with organisational requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required Skills

developing a prescribed burn  
 conducting high and low intensity prescribed burns  
 establishing control lines for prescribed burns  
 developing a contingency plan  
 monitoring the burn  
 undertaking patrol activities

#### Required Knowledge

legislative, organisational policy and procedures for conducting a prescribed burn  
 types of prescribed burns  
 seasonal restrictions on prescribed burns  
 authorisations required for conducting a burn  
 high and low intensity prescribed burns  
 ignition patterns and techniques  
 developing a prescription  
 resource requirements  
 procedures for monitoring prescribed burns and securing burn area

## REQUIRED SKILLS AND KNOWLEDGE

### Evidence Guide

#### EVIDENCE GUIDE

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

It is essential for this unit that competence is demonstrated in:

- the preparation of burn plans for a designated area
- the effective conduct of a burn, utilising the appropriate resources and record action taken
- follow up activities once the burn is completed

#### **Consistency in performance**

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

#### **Context of and specific resources for assessment**

#### **Context of assessment**

Evidence of competence may be demonstrated on the job and/or in a simulated environment

#### **Specific resources for assessment**

Access to a range of controlled or simulated fires  
lighting equipment

#### **Guidance information for assessment**

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

### Range Statement

#### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised***

**RANGE STATEMENT**

wording in the Performance Criteria is detailed below.

<b>Assets to be protected</b>	<ul style="list-style-type: none"> <li>buildings</li> <li>historic relics</li> <li>camp or recreational areas</li> <li>utilities (power and telephone lines, water supply structures, communications towers)</li> <li>research plots, reference areas</li> <li>area of rare or sensitive flora and fauna</li> <li>crops</li> <li>plantations</li> <li>other property</li> </ul>
<b>Notifications may be given to persons or organisations who</b>	<ul style="list-style-type: none"> <li>have an interest in the area to be burned</li> <li>have an interest in adjacent land to which a burn could spread</li> <li>have an interest in managing the consequences of a burn</li> <li>have an interest in specific assets</li> <li>may be concerned by evidence of a burn</li> </ul>
<b>Notification plans are required for</b>	<ul style="list-style-type: none"> <li>private land</li> <li>public land</li> </ul>
<b>Weather conditions to be monitored</b>	<ul style="list-style-type: none"> <li>temperature, relative humidity, wind, atmospheric stability</li> </ul>
<b>Resources may include</b>	<ul style="list-style-type: none"> <li>experienced crew for ground ignition, trained navigators, bombardiers for aerial ignition, equipment and supplies, tankers, other vehicles, equipment, back-up, logistical support</li> </ul>
<b>Lighting techniques and patterns may include</b>	<ul style="list-style-type: none"> <li>ignition method</li> <li>lighting pattern</li> <li>ignition spacing</li> </ul>
<b>Burn operations may include</b>	<ul style="list-style-type: none"> <li>low intensity burns</li> <li>high intensity burns</li> </ul>
<b>Monitoring of burning may include</b>	<ul style="list-style-type: none"> <li>observations</li> <li>predictions</li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>recording</li> <li>fuel moisture content</li> <li>wind speed and direction</li> <li>flame height</li> <li>rate of spread</li> <li>smoke development</li> </ul>
<b>Conclusion of burning operations</b>	<ul style="list-style-type: none"> <li>patrol or burn area</li> <li>mop up</li> <li>black out</li> </ul>
<b>Contingency plans for escapes include</b>	<ul style="list-style-type: none"> <li>reasons for escape</li> <li>special resources/secondary control lines</li> <li>command structure</li> </ul>
<b>Local conditions at time of burn may include</b>	<ul style="list-style-type: none"> <li>wind strength and direction</li> <li>temperature</li> <li>changes in conditions</li> <li>anticipated changes</li> </ul>
<b>Restoration and rehabilitation may be required for</b>	<ul style="list-style-type: none"> <li>control lines</li> <li>vehicle tracks</li> <li>areas disturbed by tracked machinery</li> <li>revegetating damaged areas</li> <li>repairing fences</li> </ul>

**Unit Sector(s)**

Not applicable.

**Corequisite Unit/s**

Co-requisite Unit/s Nil



# PUAFIR601B Develop and administer agency policy, procedures and practices

## Modification History

Not applicable.

## Unit Descriptor

### Unit Descriptor

This unit covers competency in the administration of an agency's policies, procedures and practices to support the achievement of organisational and operational objectives.

## Application of the Unit

### Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

### Prerequisite Unit/s

PUAFIR504B Assist with formulation and implementation of plans and policies

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. **Identify and develop policies, procedures and practices**

- 1.1 Need for new policies, procedures and practices is identified in consultation with *stakeholders*
- 1.2 Consultative processes are used to exchange information to assist in problem solving and decision-making in line with organisation's requirements
- 1.3 Cooperation and input to the decision-making process is obtained from all appropriate stakeholders

2. **Manage the implementation of policy, procedures and practices**

- 2.1 Organisation's *policies, practices and procedures* are efficiently and effectively implemented and adhered to
- 2.2 General administration procedures are maintained to ensure organisation's objectives are met
- 2.3 *Information flows* in an effective and efficient manner within the organisation
- 2.4 *Information systems* are consistent to meet the information needs of the organisation
- 2.5 Information gathering, storage and security/confidentiality is consistent with the operational and strategic needs of the

ELEMENT	PERFORMANCE CRITERIA
3. <b>Review policy, procedures and practices</b>	<p>organisation</p> <p>2.6 Copyright provisions are observed for all information</p> <p>3.1 Policy, procedures and practices are continually reviewed to ensure that information is current, accurate and clear, and meets the requirements of the organisation</p> <p>3.2 Decisions and actions taken are accurately recorded in accordance with organisation's policy, procedures and practices</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required Skills

demonstrated skills in verbal and written communications, presentations and submissions

liaison/interpersonal skills

review methods

negotiation and analytical skills

#### Required Knowledge

comprehensive understanding of the agency's policies, procedures and practices

administrative procedures

communication methodologies

## Evidence Guide

### EVIDENCE GUIDE

## EVIDENCE GUIDE

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence for this unit be demonstrated in the development, implementation and review of a range of policies and procedures

### Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

### Context of and specific resources for assessment

#### Context of assessment

Evidence of competence may be demonstrated on the job and at the same time by a set of exercises/case studies in a simulated workplace environment

Written or verbal assessment of the knowledge components may be used as supporting evidence

#### Specific resources for assessment

No special resource implications

### Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

### Stakeholders may include

Executive management, local, state and federal governments, industry, national and international associations, other emergency management and non-government organisations community groups technical advisers, consultants, work groups and individuals internal to the agency, customers

### Information systems may include

computer data bases  
personnel files

## RANGE STATEMENT

### **Information flow may include**

training and assessment records  
files  
notes and memos  
technical data banks  
assets and stock registers  
business plans  
annual reports  
notes and memos  
personal letters or memos  
personnel instructions/directives  
standing orders  
financial reports  
technical journals  
Chief Executive Officer's reports  
publications  
video, television, electronic information transfer  
service standards

### **Policies, practices and procedures may include**

relevant legislation, new reforms  
ministerial/government directives  
corporate, strategic and operational plans  
agency performance standards  
agency practices and guidelines  
procedures or guidelines  
agency agreements  
industrial agreements  
orders and directives  
quality standards

**Unit Sector(s)**

Not applicable.

**Corequisite Unit/s**

**Co-requisite Unit/s**                      Nil



## **PUALAW001B Protect and preserve incident scene**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

This unit covers the competency required, on arrival at the scene of an accident or incident, to conduct initial assessment, take action to maintain public safety and preserve the scene, and note and record details and information.

The unit is particularly applicable in cases where organisation personnel are the first to arrive at the scene of an accident or incident.

### **Application of the Unit**

#### **Application of the Unit**

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

### **Licensing/Regulatory Information**

Not applicable.

## Pre-Requisites

Prerequisite Unit/s Nil

## Employability Skills Information

Employability Skills This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

1. **Secure and preserve scene**

1.1 Initial *assessment* is participated in to identify *factors which will impact* on public safety and scene preservation

1.2 *Incident/accident scene* is effectively secured to *preserve the scene* and maintain public safety in line with legislative requirements

2. **Record and report details of incident scene**

2.1 *Details of the scene* are noted, *recorded and reported* according to organisation's policies and procedures

2.2 *Witness details* and information volunteered are recorded in accordance with *organisational and legislative requirements*

2.3 Information is communicated to *relevant personnel* in line with organisation's procedures

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required Skills

- listening
- note taking
- observation
- questioning
- reporting

#### Required Knowledge

- legislative and organisation requirements relating to scene preservation
- methods of securing scene
- organisation requirements for taking witness details and information
- regulatory requirements for taking witness details and information
- techniques for estimating distance
- techniques for removing public from scene
- types of information which may assist in investigations

## Evidence Guide

### EVIDENCE GUIDE

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Demonstrated ability to effectively secure scene and record and report details in accordance with the organisation's policies and procedures

#### Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

**Context of and specific resources for assessment**

#### Context of assessment

Performance at an incident, exercise or simulation is required to demonstrate competence in this unit. Written or verbal questions may be used as supporting evidence

## EVIDENCE GUIDE

	<b>Specific resources for assessment</b>
<b>Guidance information for assessment</b>	No special requirements  Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<b>Incident scene may include</b>	urban fire wild fire vehicle fire crime scene search for missing persons or evidence vehicle accident natural disaster industrial/mining accident incident involving death or injury to person or damage to property urban scene rural scene indoor scene outdoor scene animal incident marine aircraft train explosions hazardous materials
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**RANGE STATEMENT****Assessment of scene may be conducted**

at scene  
en route to and from scene

**Factors impacting may include**

public safety risk factors including factors that could impact on the safety of investigators  
response team  
the security/preservation of the actual site  
the security and preservation of situational evidence  
traffic  
tactical factors affecting the quality of the investigation including environmental circumstances  
chronology of events  
access to scene  
number of persons at scene  
availability of support services  
boundaries

**Persons at scene may include**

incident scene specialists  
forensic experts  
potential witnesses  
victims  
other bystanders  
personnel from other organisations  
media  
coroners  
pathologists  
medical practitioners  
undertakers  
forensic accountants  
information technology consultants  
legal officers  
owners and/or occupiers

**Security of scene may be affected by**

topography  
climatic conditions

**RANGE STATEMENT**

	human interference
	animal interference
	preservation of life/property
	structural integrity
	availability of personnel
<b>Securing scene may include</b>	removing non-emergency personnel from scene
	isolating scene
	erecting barriers
<b>Details of scene may include</b>	date
	time
	location
	damage
	persons present
	property involved
	possible causes
	items of evidence
	injuries
	status of utilities services such as broken water pipes
	animal species present
	flora
	fauna
	size and construction of building
	occupancy
	insurance details
<b>Witness details may include</b>	name
	contact details
	other details in accordance with organisation's policies and procedures
<b>Relevant personnel may include</b>	supervisor
	team leader
	police

**RANGE STATEMENT**

	investigating officer other organisation's personnel
<b>Communication may include</b>	verbal completing standard forms written
<b>Recording and reporting may include</b>	taking notes completing standard forms making sketches taking photographs taping electronic videoing
<b>Preserving scene may include</b>	preserving evidence and the area of origin
<b>Organisational and legislative requirements may vary between sectors and organisations and may include</b>	legislation relevant to the operation/incident/response legislation relevant to the organisation operational corporate and strategic plans operational procedures operational performance standards organisation's personnel practices and guidelines organisation's quality standards

**Unit Sector(s)**

Not applicable.

**Corequisite Unit/s**

Co-requisite Unit/s Nil





## **PUAOPE004B Conduct briefings/debriefings**

### **Modification History**

Not applicable.

### **Unit Descriptor**

**Unit Descriptor** This unit covers the competency to lead and manage a briefing or debriefing.

### **Application of the Unit**

**Application of the Unit** The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

**Prerequisite Unit/s** PUACOM001C Communicate in the workplace

### **Employability Skills Information**

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

#### 1. Prepare for the brief/debrief

- 1.1 A ***briefing***/debriefing is planned and prepared in accordance with organisation's policy and procedures
- 1.2 ***Relevant personnel*** involved in the activity are identified and informed of debriefing requirements
- 1.3 Briefing/***debriefing*** meeting is scheduled as soon as possible following the incident
- 1.4 An appropriate location for the brief/debrief is selected
- 1.5 Appropriate incident information is collected

#### 2. Conduct the brief/debrief

- 2.1 Purpose and structure of the brief/debrief is outlined to incident personnel
- 2.2 Discussion, analyses and evaluation by personnel of their anticipated or actual roles in the activity are encouraged
- 2.3 Contributions from personnel during the brief/debrief are continually sought, encouraged and valued
- 2.4 Review of the activity against the policies, practices and training of the organisation is undertaken to identify any discrepancies
- 2.5 Brief/debrief is conducted in accordance with the organisation's policies and procedures

#### 3. Conclude the brief/debrief

- 3.1 Contributions of personnel are acknowledged in a positive way
- 3.2 ***Brief/debrief follow-up actions*** are identified

**ELEMENT****PERFORMANCE CRITERIA**

- and acted upon in a timely manner
- 3.3 Brief/debrief findings are summarised and recorded if appropriate in a format suitable for **subsequent action** by the appropriate personnel
- 3.4 **Reports** are prepared for presentation to appropriate personnel as required

**Required Skills and Knowledge****REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

**Required Skills**

- communicate clearly in a group setting
- manage group processes
- prepare a briefing/debriefing plan
- provide feedback and encourage contributions from group members

**Required Knowledge**

- organisation's policies
- organisation's procedures for activity debriefing
- practices and training processes in relation to activity

**Evidence Guide****EVIDENCE GUIDE**

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

It is essential for this unit that competence be demonstrated in ability to communicate effectively with personnel and elicit and encourage contributions to the briefing/debriefing in a constructive and positive way

## EVIDENCE GUIDE

	<p><b>Consistency in performance</b></p> <p>Evidence should be gathered over a period of time in a range of actual or simulated workplace environments</p>
<p><b>Context of and specific resources for assessment</b></p>	<p><b>Context of assessment</b></p> <p>Evidence of competent performance by observing an individual conduct post activity briefings in a variety of actual and/or simulated operational contexts</p>
	<p><b>Specific resources for assessment</b></p> <p>No special requirements</p>
<p><b>Guidance information for assessment</b></p>	<p>Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.</p>

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<p><b>Activities may include</b></p>	<p>Incidents meetings public safety campaigns</p>
<p><b>Briefing may take place</b></p>	<p>prior to undertaking operational activities when significant changes are anticipated at an incident prior to undertaking training prior to undertaking workplace projects and other work related activities at regular intervals</p>
<p><b>Debriefing may take place</b></p>	<p>when incident personnel have been relieved immediately after the incident when personnel return to their home base a convenient time after the incident after a</p>

**RANGE STATEMENT**

	meeting/event at shift change overs
<b>Brief/debrief plan will include</b>	purpose subject matter timing location participants methodology
<b>Brief/debrief checklist may include</b>	incident background fatalities injuries loss damage incident response control and command communications supporting organisations welfare equipment and plant first aid and medical stress resources committed to the incident assessment of response strategies strategies to improve response adequacy of initial briefing analysis of planning analysis of performance against aims and objectives
<b>Brief/debrief follow-up action may include</b>	personnel informed of the outcomes of the debrief action taken to address issues identified
<b>Subsequent action may include</b>	reporting to other organisations review of procedures

**RANGE STATEMENT****Briefing/debriefing content and format may include**

facilitator led  
 collaborative  
 problem based  
 descriptive illustrative  
 level of language used

**Organisational policy, procedures, requirements and guidelines may vary between sectors and organisations and may include**

legislation relevant to the operation/incident/response  
 legislation relevant to the organisation  
 operational  
 corporate and strategic plans  
 operational policy and procedures  
 operational performance standards  
 organisational personnel practices and guidelines  
 organisational quality standards

**Relevant personnel**

human-operations personnel  
 volunteers  
 support personnel  
 local  
 state/territory and federal governments

**Reports may be submitted to**

organisation's management  
 steering committees  
 training division personnel  
 government agencies

**Locations**

will vary according to the timing of the brief/debrief which may be before, during or following an activity under non-operational or operational conditions

**Unit Sector(s)**

Not applicable.

## **Corequisite Unit/s**

**Co-requisite Unit/s**                      Nil

## PUAOPE005B Manage a multi team response

### Modification History

Not applicable.

### Unit Descriptor

#### Unit Descriptor

This unit covers the competency to manage a multi team response to incidents which may be time critical and/or potentially threatening to life, property or the environment.

### Application of the Unit

#### Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

#### Prerequisite Unit/s

PUAOPE001B Supervise response (Fire specific)



## Employability Skills Information

**Employability Skills** This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

### Elements and Performance Criteria

#### ELEMENT

#### PERFORMANCE CRITERIA

#### 1. Conduct an assessment of incident

- 1.1 A risk assessment of all factors impacting upon the response is conducted
- 1.2 An initial assessment of *resources* required is conducted
- 1.3 Resources required to deal with the incident are identified
- 1.4 *Constraints* which may impede the response are identified
- 1.5 *Initial response options* are identified and assessed

#### 2. Establish control and command

- 2.1 Control is assumed in accordance with the organisation's policies and procedures
- 2.2 *Communication systems* are activated in accordance with organisation's policies and procedures
- 2.3 Reporting processes are activated in accordance with organisational policies and procedures to provide continuous monitoring and evaluation of incident
- 2.4 *Command and control facilities* are established

#### 3. Develop operational plan

- 3.1 *Operational plan* is developed and adjusted if required in accordance with response requirements and operational guidelines

ELEMENT	PERFORMANCE CRITERIA
4. <b>Implement operational plan</b>	<p>3.2 Response strategies are identified</p> <p>3.3 Tactics to effectively manage the incident are identified in accordance with the operational plan</p> <p>3.4 Tasks are determined and prioritised</p> <p>4.1 Operational plan is communicated to teams in accordance with the organisation's guidelines</p> <p>4.2 Resources are deployed to ensure that the operational plan is implemented in accordance with organisation guidelines</p> <p>4.3 Operations are conducted and monitored in accordance with the operational plan</p> <p>4.4 Operational reports are issued in accordance with <i>policy and procedures</i></p> <p>4.5 Operations are modified as required by the situation</p> <p>4.6 Resources are requested, acquired and deployed</p>
5. <b>Manage post incident operations</b>	<p>5.1 Resources are accounted for and demobilised in accordance with organisational policies and procedures</p> <p>5.2 Post operational <i>documentation</i> is completed to organisational requirements</p> <p>5.3 Post incident recovery is initiated in accordance with the organisation's policies and procedures</p> <p>5.4 Effectiveness of operations is evaluated and documented</p> <p>5.5 Debriefing conducted in accordance with organisational guidelines</p> <p>5.6 Recommendations are made for changes in policies and procedures</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required Skills

- accessing information and support from the control facility

## REQUIRED SKILLS AND KNOWLEDGE

- development of response plans including predicting consequences and identifying improvements
- effective and efficient deployment of human and physical resources including:
  - electronic data exchange systems etc.
  - equipment and consumables
  - identification and correct use of equipment
  - materials
  - other organisations
  - personnel
  - personnel and external authorities
  - processes and procedures
  - radio frequency devices
  - team and personnel management
  - team dynamics
- use of a range of information technology devices including computers
- using tools and techniques to solve problems

### Required Knowledge

- codes of practice or other legislative requirements
- current principles and practices in response activities
- display of the following knowledge and skills in terms of job role or function:
  - emergency management plans
  - emergency site layout
  - focus of operation of work systems and equipment
  - legislation
  - organisational command structure
  - relevant agreements
  - roles and responsibilities of all organisations
  - security and confidentiality of material

## Evidence Guide

### EVIDENCE GUIDE

#### Critical aspects for assessment and evidence required to demonstrate

It is essential for this unit that competence be demonstrated in assessment of incident both functionally and strategically; development of a plan

## EVIDENCE GUIDE

### competency in this unit

and implementation of response in accordance with the organisation's policies and procedures.

Strategic reaction to changes within the emergency environment

### Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

### Context of and specific resources for assessment

#### Context of assessment

Assessment may occur in an operational environment or in an industry-approved simulated work environment

#### Specific resources for assessment

Resources should involve access to, or simulation of, emergency situations in a multi-team response environment.

This includes resources relating to: equipment, personnel, facilities etc appropriate to the emergency situation and within the bounds of responsibility as designated within the requirements of control

### Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

### Initial response options will be determined by

the availability of resources and estimated outcome  
organisational guidelines  
regulatory authorities  
legislative requirements

### Risks to life and property

fire

**RANGE STATEMENT****may include**

flood  
 hazardous materials  
 landslip  
 severe storm  
 biological agents  
 fauna rescue

**Transport may include**

on road  
 off road  
 aviation  
 maritime  
 rail

**Command facility may include**

field facility such as an existing airfield helipads or established operations centre

**En route hazards may include**

traffic  
 prevailing weather  
 road conditions  
 terrain  
 debris  
 plumes  
 animals  
 atmospheric hazards  
 tidal conditions  
 restricted areas  
 wires/masts/aerials  
 other aircraft  
 interference communications

**Hazardous conditions may include**

adverse weather  
 after dark operations  
 difficult terrain  
 dangerous goods and substances  
 time pressure

**RANGE STATEMENT**

<b>Incident assessment may include</b>	<ul style="list-style-type: none"> <li>visibility</li> <li>type of incident</li> <li>risk to life</li> <li>property and environment</li> <li>hazards</li> <li>capability of assigned personnel</li> <li>adequacy of allocated equipment</li> <li>information gathered from existing plans/databases</li> <li>forecasts</li> <li>meteorological profiles</li> </ul>
<b>Communications systems may include</b>	<ul style="list-style-type: none"> <li>radio</li> <li>telephone</li> <li>computer</li> <li>facsimile</li> <li>pager</li> <li>mobile data terminal</li> <li>satellite</li> <li>signalling</li> <li>signage</li> <li>warnings</li> </ul>
<b>Incidents may include</b>	<ul style="list-style-type: none"> <li>life threatening situations</li> <li>protection of property and the environment</li> </ul>
<b>Constraints may include</b>	<ul style="list-style-type: none"> <li>legislative</li> <li>resources</li> <li>time</li> <li>prevailing weather</li> <li>restrictions on duration of work or the conditions under which personnel may be employed</li> <li>constraints on road closure</li> <li>redirection of water course</li> <li>military areas</li> </ul>

## RANGE STATEMENT

	Aboriginal and Torres Strait Islander sacred sites
	other areas of environmental and cultural significance
	seasonal factors
	wilderness areas
	hazardous areas
	other areas requiring permission and/or authorisation to enter
	existing emergency management plans
	financial
<b>Documentation and reporting requirements may include</b>	input to debriefs
	completion of logs
	sitreps
	journal records
	assessment of safety procedures utilised
	financial statements
	post-operational report
<b>Resources may include</b>	human -
	<ul style="list-style-type: none"><li>• operations personnel</li><li>• volunteers</li><li>• support personnel</li></ul>
	local, federal and state/territory governments
	physical - equipment
	machinery
	vehicles
	technology devices
	communication devices
	equipment characteristics
	support services
	amenities
	parking
	safety equipment
	aircraft

**RANGE STATEMENT****Command facility establishment procedures and principles may include**

personnel  
 specialised personnel such as aviation authorities  
 equipment  
 material  
 proximity to incident  
 size and type of structure  
 special incident requirements  
 communication modes  
 topography  
 environment  
 climatic conditions  
 logistical operations  
 site access and exit requirements  
 security arrangements

**Monitoring of operations may include**

progress against plan  
 welfare of personnel  
 utilisation of resources and potential of incident

**Organisational policy, procedures, requirements and guidelines may vary between sectors and organisations and may include**

legislation relevant to the operation/incident/response  
 legislation relevant to the organisation  
 operational  
 corporate and strategic plans  
 operational procedures  
 operational performance standards  
 organisational personnel practices and guidelines  
 organisational quality standards  
 Civil Aviation Orders  
 search and rescue time  
 procedures/action

**Operational plan may include**

aims and objectives of the response/incident/operation  
 possible strategies to achieve objectives  
 possible tactics to implement strategies



## RANGE STATEMENT

<b>Operational plan may include</b>	resources required including their availability limitations contingencies and alternatives monitoring and evaluative procedures reporting requirements pre-plans flight plans consideration or aircraft type performance and suitability document (formal or informal) part of an overall plan cover one or more place area or region
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## Unit Sector(s)

Not applicable.

## Corequisite Unit/s

Co-requisite Unit/s Nil

## RIIMPO304B Conduct wheel loader operations

### Modification History

Not applicable.

### Unit Descriptor

This unit covers the conducting of wheel loader operations in mining and extractive industries. It includes planning and preparing for operations, operating the loader, and carrying out post-operational procedures.

### Application of the Unit

Wheel loaders are self-propelled wheeled machines with an integral front-mounted bucket-supporting structure and linkage. It loads or excavates through forward motion of the machine, and lifts, transports and discharges material. This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Coal mining
- Extractive industries
- Metalliferous mining

### Licensing/Regulatory Information

Refer to Unit Descriptor.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operations	1.1. Access, interpret and apply <b><i>compliance documentation</i></b> relevant to conducting wheel loader operations 1.2. Obtain, interpret and apply <b><i>work requirements and procedures</i></b> for the satisfactory completion of the allocated job 1.3. Access, interpret and apply <b><i>geological and survey data</i></b> required to complete the allocated job 1.4. <b><i>Inspect</i></b> and <b><i>prepare work area</i></b> in coordination with others 1.5. Identify, manage and report <b><i>potential hazards and risks</i></b> 1.6. Resolve <b><i>coordination requirements</i></b> with others at the site prior to commencing and during work activities 1.7. Select and wear <b><i>personal protective equipment</i></b> appropriate for work activities
2. Operate the loader	2.1. Carry out <b><i>pre-start, start-up, park-up and shutdown procedures</i></b> 2.2. Select and modify the <b><i>operating technique</i></b> to appropriately meet <b><i>changing work conditions</i></b> 2.3. Conduct, control and monitor operations within the equipment limitations 2.4. Act on or report <b><i>monitoring systems and alarms</i></b> 2.5. Recognise and respond to <b><i>hazardous and emergency situations</i></b> 2.6. Complete work in accordance with the agreed work requirements and within the operating capacity of the allocated equipment
3. Carry out post-operational procedures	3.1. Inspect, fault find and report faults 3.2. Carry out routine <b><i>operator servicing, maintenance and housekeeping tasks</i></b> 3.3. Maintain and process <b><i>records and reports</i></b>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct wheel loader operations:

- apply legislative, organisation and site requirements and procedures
- apply operational safety requirements
- apply environmental requirements
- apply environmentally sensitive fluids and materials disposal requirements and procedures
- apply chemical and fuel safety measures
- apply hazardous goods handling techniques
- apply manual lifting techniques
- work wearing personal protective equipment
- access, interpret and apply technical information
- interpret plans, reports, maps, specifications
- apply hand-eye coordination
- apply equipment operating techniques
- apply work tasks organising techniques
- work in a team
- apply equipment records maintenance requirements
- apply diagnostic techniques
- use relevant hand tools

### Required knowledge

Specific knowledge is required to achieve the performance criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following as required to conduct wheel loader operations:

- site risk control procedures
- hazard identification and response procedures
- hazardous substances handling techniques
- site personal protective equipment requirements
- site and equipment health and safety procedures
- site environmental and heritage requirements and constraints
- site quality requirements

- site communication procedures
- site product characteristics
- site geological and survey data
- site operational procedures
- pre-start, start-up, operating and shutdown procedures and techniques
- machine characteristics, technical capability and limitations
- machine operational procedures
- isolation procedures
- maintenance systems and procedures
- site record keeping requirements

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions for conducting wheel loader operations</li> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient completion of wheel loader operations</li> <li>• working with others to undertake and complete wheel loader operations that meet all of the required outcomes</li> <li>• consistent timely completion of wheel loader operations that safely, effectively and efficiently meets the required outcomes</li> </ul>
<b>Context of and specific resources for assessment</b>	<ul style="list-style-type: none"> <li>• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of</li> </ul>

	<p>workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</p> <ul style="list-style-type: none"> <li>• The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</li> <li>• Customisation of assessment and delivery environment to sensitively accommodate cultural diversity.</li> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances.</li> <li>• Where applicable, physical resources should include equipment modified for people with disabilities.</li> <li>• Access must be provided to appropriate learning and/or assessment support when required.</li> </ul>
<p><b>Method of assessment</b></p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes</li> <li>• consistently achieving the required outcomes</li> </ul> </li> <li>• first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• working with others to undertake and complete wheel loader operations</li> </ul> </li> </ul>

<b>Guidance information for assessment</b>	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.
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## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b>Relevant compliance documentation</b> may include:</p>	<ul style="list-style-type: none"> <li>• legislative, organisation and site requirements and procedures</li> <li>• manufacturer's guidelines and specifications</li> <li>• Australian standards</li> <li>• codes of practice</li> <li>• Employment and Workplace Relations legislation</li> <li>• Equal Employment Opportunity and Disability Discrimination legislation</li> </ul>
<p><b>Work requirements and procedures</b> may come from briefings, handovers, and work orders and may be written or verbal, formal or informal, depending on the complexity of the process and may include:</p>	<ul style="list-style-type: none"> <li>• product identification</li> <li>• nature and scope of tasks</li> <li>• achievement targets</li> <li>• operational conditions</li> <li>• obtaining permits required</li> <li>• site layout</li> <li>• out of bounds areas</li> <li>• worksite inspection requirements</li> <li>• lighting conditions</li> <li>• plant or equipment defects</li> <li>• hazards and potential hazards</li> <li>• coordination requirements or issues</li> <li>• contamination control requirements</li> <li>• environmental control requirements</li> <li>• barricade and signage requirements</li> </ul>
<p><b>Geological data</b> may include relevant site-specific information in relation to:</p>	<ul style="list-style-type: none"> <li>• rock type and characteristics</li> <li>• faults and joints</li> <li>• broken ground</li> <li>• water tables or other water sources</li> </ul>

	<ul style="list-style-type: none"> <li>• wet and dry areas</li> <li>• degree of compaction</li> </ul>
<b>Survey data</b> may include relevant site-specific information in relation to:	<ul style="list-style-type: none"> <li>• floor heights</li> <li>• bench heights and widths</li> <li>• ramp and floor grades</li> <li>• underground workings and voids</li> </ul>
<b>Inspect and prepare work area</b> may include:	<ul style="list-style-type: none"> <li>• identification of hazards</li> <li>• selection and implementation of control measures for the hazards identified</li> <li>• safeguarding site and non-site personnel by: <ul style="list-style-type: none"> <li>• erection of barricades and posting of signs</li> <li>• selection of appropriate equipment to ensure personnel safety and protection</li> </ul> </li> <li>• determination of appropriate path of movement for loads and equipment/vehicles</li> <li>• floor clean up to specified levels and grade requirements</li> <li>• selection and implementation of environmental control measures</li> </ul>
<b>Potential hazards and risks</b> may include:	<ul style="list-style-type: none"> <li>• installed services</li> <li>• damaged or defective pressurise hoses and fastenings</li> <li>• abandoned equipment</li> <li>• adjoining pit walls or structures</li> <li>• adverse weather conditions (electrical storms, floods, fires)</li> <li>• chemicals</li> <li>• contaminants</li> <li>• ancillary equipment</li> <li>• fences</li> <li>• holes and pot holes</li> <li>• over-hanging rocks</li> <li>• personnel</li> <li>• unsafe ground</li> <li>• unstable faces</li> <li>• vehicles</li> <li>• powerlines</li> <li>• dust and noise</li> <li>• conveyors</li> <li>• overhead services</li> <li>• stored energy which may include: <ul style="list-style-type: none"> <li>• engine components</li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>• radiators and cooling systems</li> <li>• hydraulic tanks and reservoirs</li> <li>• air tanks and reservoirs</li> <li>• hydraulic hoses</li> <li>• air hoses</li> <li>• tyres</li> <li>• air conditioning components</li> <li>• electrical components</li> <li>• braking systems</li> <li>• centrifugal forces</li> </ul>
<b>Coordination requirements</b> may include with:	<ul style="list-style-type: none"> <li>• other mobile plant operators</li> <li>• processing plant operators</li> <li>• maintenance personnel</li> <li>• water truck operators</li> <li>• service vehicle operators</li> <li>• crane and float operators</li> <li>• contractors</li> <li>• inspectors</li> <li>• supervisors</li> <li>• visitors</li> </ul>
<b>Personal protective equipment</b> includes:	<ul style="list-style-type: none"> <li>• steel-capped boots and hardhat</li> <li>• gloves</li> <li>• dust mask</li> <li>• eye and hearing protection</li> <li>• general protective and reflective clothing</li> </ul>
<b>Pre-start and start-up procedure</b> may include:	<ul style="list-style-type: none"> <li>• external check of the machine</li> <li>• inspection of attachments to ensure security and identify defects</li> <li>• selection, removing and fitting of attachments</li> <li>• checking of fluid levels (windscreen washer tank, hydraulic oil, coolant, grease, water, engine oil, fuel)</li> <li>• carry out lubrication</li> <li>• checking of display instrumentation and gauges (indicators, gauges, laser levels), computer systems</li> <li>• inspection of air filter restriction indicator</li> <li>• inspection and checking of cab (horn, lights, air conditioner)</li> <li>• testing of engine and stop engine lights</li> <li>• testing visual and audio warning devices and lights</li> </ul>

	<ul style="list-style-type: none"> <li>• checking instruments and control lever</li> <li>• reporting of defects and damage</li> </ul>
<b>Park-up and shutdown procedure</b> may include:	<ul style="list-style-type: none"> <li>• secure equipment as required by site procedures</li> <li>• render attachments safe</li> <li>• clear access ways</li> </ul>
<b>Operating techniques</b> may include:	<ul style="list-style-type: none"> <li>• manoeuvring</li> <li>• braking</li> <li>• bucket loading</li> <li>• single sided loading</li> <li>• double sided loading</li> <li>• drive by loading</li> <li>• load carrying</li> <li>• haulage vehicle positioning</li> <li>• load discharge</li> <li>• building and maintaining stockpiles</li> <li>• blending materials</li> <li>• attaching, securing, lifting, carrying and placing materials</li> <li>• driving machines on to floats</li> <li>• towing</li> <li>• observing site speed limits</li> <li>• working safely around: <ul style="list-style-type: none"> <li>• overhead powerlines</li> <li>• other machines and personnel</li> <li>• live stockpiles</li> </ul> </li> </ul>
<b>Changing work conditions</b> may include variations in:	<ul style="list-style-type: none"> <li>• bulk material grades</li> <li>• height of stockpiles</li> <li>• materials</li> <li>• contamination</li> <li>• haulage units</li> <li>• materials handling facilities</li> <li>• weather conditions</li> <li>• light conditions (including day and night)</li> </ul>
<b>Monitoring systems and alarms</b> may include:	<ul style="list-style-type: none"> <li>• brake air pressure</li> <li>• brake oil temperature</li> <li>• computer indicators</li> <li>• engine oil pressure</li> <li>• fuel filter</li> <li>• parking brake</li> <li>• retarder</li> </ul>

	<ul style="list-style-type: none"> <li>• service meter</li> <li>• speedometer/odometer</li> <li>• steering filters</li> <li>• tachometer</li> <li>• torque converter</li> <li>• oil temperature</li> <li>• transmission filter</li> <li>• voltmeter</li> <li>• water temperature</li> </ul>
<b>Hazardous and emergency situations</b> may include:	<ul style="list-style-type: none"> <li>• powerlines and other overhead services</li> <li>• dust and noise</li> <li>• face overhangs</li> <li>• lighting strikes (potential tyre explosion)</li> <li>• tyre fires (isolation procedures)</li> </ul>
<b>Operator service, maintenance and housekeeping</b> tasks are those established and authorised for the site and may include:	<ul style="list-style-type: none"> <li>• cleaning</li> <li>• authorised servicing and the monitoring</li> <li>• recording and reporting of faults</li> <li>• conduct of authorised minor replacements</li> <li>• provision of assistance to maintenance personnel during maintenance and repair activities</li> </ul>
<b>Records and reports</b> may include:	<ul style="list-style-type: none"> <li>• fuel usage</li> <li>• computer readings</li> <li>• end of shift documentation</li> <li>• supplies logs</li> <li>• work logs stockpile information</li> <li>• quality information</li> <li>• despatch details</li> </ul>

## Unit Sector(s)

Mobile Plant Operations

## Competency field

Refer to Unit Sector(s).

## Co-requisite units

Not applicable.



# RIIMPO318B Conduct civil construction skid steer loader operations

## Modification History

Not applicable.

## Unit Descriptor

This unit covers conducting skid steer loader operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating skid steer loaders; lifting, carrying and placing materials; selecting, removing and fitting attachments; relocating the skid steer loaders; carrying out machine operator maintenance; and cleaning up.

## Application of the Unit

This unit is appropriate for those working in operational roles, at worksites within:

- Civil construction

## Licensing/Regulatory Information

Refer to Unit Descriptor.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply <b>compliance documentation</b> relevant to <b>skid steer loader tasks</b> 1.2. Obtain, confirm and apply <b>work instructions</b> to the allotted task 1.3. Obtain, confirm and apply <b>safety requirements</b> to the allotted task 1.4. Obtain, identify and implement signage requirements from the project traffic management plan 1.5. Select plant, <b>tools and equipment</b> to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults 1.6. Identify, confirm and apply <b>environmental</b> protection requirements from the project environmental management plan, to the allotted task
2. Conduct machine pre-operational checks	2.1. Carry out pre-start, start-up, park and shutdown procedures 2.2. Check loader controls and functions, including implements or other attachments, brakes and manoeuvrability for serviceability and rectify or report any faults
3. Operate skid steer loader	3.1. Identify site hazards associated with skid steer loader operations and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques for skid steer loader to achieve optimum output in accordance with manufacturer's design specifications while achieving specified tolerances 3.3. Operate loader to work instructions
4. Lift, carry and place materials	4.1. Conduct <b>communication</b> practices associated with transportation and lifting of <b>materials</b> in accordance with site specific practices and procedures, and confirm between parties 4.2. Select, attach and apply slings and lifting

	<p>gear in accordance with safe working load requirements as identified in legislation</p> <p>4.3.Establish weight of load</p> <p>4.4.Position machinery to ensure stability and locate to effectively shift materials according to job specifications</p> <p>4.5.Shift load safely and effectively</p> <p>4.6.Move load in accordance with conventional hand and available signals</p>
5. Select, remove and fit attachments	<p>5.1.Select <i>attachment</i> for the task</p> <p>5.2.Remove and fit attachment</p> <p>5.3.Test attachment to ensure correct fitting and operation as specified</p> <p>5.4.Use attachment in accordance with recommendations and design limits</p> <p>5.5.Clean and store removed attachments in designated location</p>
6. Relocate the skid steer loader	<p>6.1.Move skid steer loader safely between worksites, observing relevant codes and traffic management requirements</p> <p>6.2.Prepare for relocation of skid steer loader</p>
7. Carry out machine operator maintenance	<p>7.1.Safely park, shutdown and prepare machine for <i>maintenance</i></p> <p>7.2.Conduct inspection and fault finding</p> <p>7.3.Remove and replace defective parts safely and effectively</p> <p>7.4.Carry out regular programmed maintenance tasks</p>
8. Clean up	<p>8.1.Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>8.2.Clean, check, maintain and store plant tools and equipment</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly

for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct civil construction skid steer loader operations:

- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- perform safe working load calculations
- apply skid steer loader operating techniques
- apply processes for interpreting drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- apply basic earthworks calculations
- apply levelling techniques

### **Required knowledge**

Specific knowledge is required to achieve the performance criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following as required to conduct civil construction skid steer loader operations:

- skid steer loader types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- site and equipment safety requirements
- techniques for calculating safe working loads
- skid steer loader techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheet and materials handling methods
- Project Quality Requirements
- civil construction terminology
- methods of changing machine attachments
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage
- levelling techniques
- JSAs/Safe work method statement



## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions for conducting civil construction skid steer loader operations</li> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient completion of civil construction skid steer loader operations, including:             <ul style="list-style-type: none"> <li>• in a minimum of two different soil types, and</li> <li>• to include the mandatory tasks of stripping/spreading topsoil and materials, lifting, loading vehicles, excavations, mixing materials and site clean-up</li> </ul> </li> <li>• working with others to undertake and complete civil construction skid steer loader operations that meet all of the required outcomes</li> <li>• consistent timely completion of civil construction skid steer loader operations that safely, effectively and efficiently meet the required outcomes</li> </ul>
<b>Context of and specific resources for assessment</b>	<ul style="list-style-type: none"> <li>• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</li> <li>• The assessment environment should not disadvantage the participant. For example,</li> </ul>

	<p>language, literacy and numeracy demands of assessment should not be greater than those required on the job.</p> <ul style="list-style-type: none"> <li>• Customisation of assessment and delivery environment to sensitively accommodate cultural diversity.</li> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances.</li> <li>• Where applicable, physical resources should include equipment modified for people with disabilities.</li> <li>• Access must be provided to appropriate learning and/or assessment support when required.</li> </ul>
<p><b>Method of assessment</b></p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes including: <ul style="list-style-type: none"> <li>• in a minimum of two different soil types, and</li> <li>• to include the mandatory tasks of stripping/ spreading topsoil and materials, lifting, loading vehicles, excavations, mixing materials and site clean-up</li> </ul> </li> <li>• consistently achieving the required outcomes</li> </ul> </li> <li>• first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• working with others to conduct civil</li> </ul> </li> </ul>

	construction skid steer loader operations
<b>Guidance information for assessment</b>	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Relevant compliance documentation</b> may include:	<ul style="list-style-type: none"> <li>legislative, organisation and site requirements and procedures</li> <li>manufacturer's guidelines and specifications</li> <li>Australian standards</li> <li>codes of practice</li> <li>Employment and Workplace Relations legislation</li> <li>Equal Employment Opportunity and Disability Discrimination legislation</li> </ul>
A <b>skid steer loader</b> is:	<ul style="list-style-type: none"> <li>a self-propelled wheeled machine in which steering is accomplished by skidding or reversing the wheels or tracks on one side of the machine. It has an integral front-mounted bucket-supporting structure and linkage, which loads or excavates through forward motion of the machine, and lifts, transports and discharges material</li> </ul>
<b>Skid steer loader</b> may include:	<ul style="list-style-type: none"> <li>compacting, truck excavation, lifting and carrying materials, cutting batters and benches, rock breaking and any activities associated with attachments listed</li> </ul>
<b>Skid steer loader tasks</b> are to include:	<ul style="list-style-type: none"> <li>stripping/spreading topsoil and materials, backfilling, lifting, loading vehicles, excavations, mixing materials and site clean-up</li> </ul>
<b>Work instructions</b> may include:	<ul style="list-style-type: none"> <li>plans, specifications, quality requirements and operational details</li> <li>quality requirements may include but not be limited to dimensions, tolerances, standards of</li> </ul>

	work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Safety requirements</b> are to be:	<ul style="list-style-type: none"> <li>in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan</li> </ul>
<b>Safety requirements</b> may include:	<ul style="list-style-type: none"> <li>protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances</li> <li>personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</li> <li>safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public</li> <li>safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, a safe distance from excavations, and secured from unauthorised access or movement</li> <li>hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials</li> <li>emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation</li> </ul>
<b>Tools and equipment</b> are to include:	<ul style="list-style-type: none"> <li>hand tools and maintenance equipment relevant to the particular loader</li> </ul>
<b>Environmental</b> requirements are to include:	<ul style="list-style-type: none"> <li>organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management</li> </ul>

<b>Communications practices</b> are to include:	<ul style="list-style-type: none"> <li>• verbal instructions and fault reporting and may include two-way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</li> <li>• on-site meeting processes may include notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues</li> </ul>
<b>Materials</b> may include:	<ul style="list-style-type: none"> <li>• clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes</li> <li>• rock types may include metamorphic, igneous and sedimentary</li> <li>• construction materials may include pegs, wire, cordage, safety equipment and other support equipments</li> </ul>
<b>Attachments</b> may include:	<ul style="list-style-type: none"> <li>• a front end loader (FEL), multipurpose 4:1 bucket, forklift, dozer blade, backhoe, auger, chain digger, power broom, profiler, tiller/mixer, rotary hoe, hammer, asphalt cutter/saw, concrete cutter/saw</li> </ul>
Operator <b>maintenance</b> is to include:	<ul style="list-style-type: none"> <li>• cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities</li> </ul>

## Unit Sector(s)

Mobile Plant Operations

## Competency field

Refer to Unit Sector(s).

## Co-requisite units

Not applicable.

## RIIMPO319A Conduct backhoe/loader operations

### Modification History

Not applicable.

### Unit Descriptor

This unit covers the conducting backhoe/loader operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating backhoe/ loaders; lifting, carrying and placing materials; selecting, removing and fitting attachments; relocating the backhoe/ loaders; carrying out machine operator maintenance; and cleaning up.

### Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

### Licensing/Regulatory Information

Refer to Unit Descriptor.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply <b>compliance documentation</b> relevant to conduct <b>backhoe/loader tasks</b> 1.2. Obtain, confirm and apply <b>work instructions</b> to the allotted task 1.3. Obtain, confirm and apply <b>safety requirements</b> to the allotted task 1.4. Identify, obtain and implement signage requirements from the project traffic management plan 1.5. Select plant, <b>tools and equipment</b> to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults 1.6. Identify, confirm and apply <b>environmental</b> protection requirements from the project environmental management plan, to the allotted task
2. Conduct machine pre-operational checks	2.1. Carry out <b>pre-start, start-up, park and shutdown procedures</b> 2.2. Check machine controls and functions, including implements or other attachments, brakes and manoeuvrability for serviceability and rectify or report any faults
3. Operate backhoe/ loader	3.1. Identify site hazards associated with backhoe/loader operations and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques for backhoe/loader to achieve optimum output in accordance with design specifications while achieving specified tolerances 3.3. Operate machine to work instructions
4. Lift, carry and place materials	4.1. Conduct <b>communication</b> practices associated with transportation and lifting of <b>materials</b> 4.2. Select and attach slings and lifting gear in accordance with safe working load requirements 4.3. Establish weight of load

	<p>4.4.Position and locate machinery to ensure stability to effectively shift materials according to job specifications</p> <p>4.5.Shift load safely and effectively</p> <p>4.6.Move load in accordance with conventional hand and audible signals</p>
5. Select, remove and fit attachments	<p>5.1.Select <i>attachment</i> for the task</p> <p>5.2.Remove and fit attachment</p> <p>5.3.Test attachment to ensure correct fitting and operation</p> <p>5.4.Use attachment in accordance with recommendations and design limits</p> <p>5.5.Clean and store removed attachments in designated location</p>
6. Relocate the backhoe/ loader	<p>6.1.Move backhoe/loader safely between worksites, observing relevant codes and traffic management requirements</p> <p>6.2.Prepare backhoe/loader for relocation</p>
7. Carry out machine operator maintenance	<p>7.1.Park safely, shutdown and prepare machine for <i>maintenance</i></p> <p>7.2.Conduct inspection and fault finding</p> <p>7.3.Remove, replace safely and effectively defective parts</p> <p>7.4.Carry out regular programmed maintenance tasks</p>
8. Clean up	<p>8.1.Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>8.2.Clean, check, maintain and store plant, tools and equipment</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct backhoe/loader operations:



- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- apply techniques for calculating safe working loads
- apply backhoe/loader techniques related to essential tasks
- interpret drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- interpret materials safety data sheet and materials handling methods
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- carry out basic earthworks calculations
- apply levelling techniques
- interpret JSA's/Safe work method statement

### **Required knowledge**

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct backhoe/loader operations:

- backhoe/loader types, characteristics, technical capabilities and limitations
- basic principles of soil technology for civil works
- site and equipment safety requirements
- techniques for calculating safe working loads
- backhoe/loader techniques related to essential tasks
- processes for interpreting drawings and sketches
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheet and materials handling methods
- project quality requirements
- civil construction terminology
- methods of changing machine attachments
- safe operating techniques in all terrain
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage
- levelling techniques
- JSA's/Safe work method statement

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions for conducting backhoe/loader operations</li> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient completion of backhoe/ loader operations, including:             <ul style="list-style-type: none"> <li>• in a minimum of two different soil types and</li> <li>• to include the mandatory tasks: mixing materials, stripping/spreading topsoils and materials, trench excavation, backfilling, lifting and carrying materials, loading dump trucks, wagons, hoppers, chutes, and cutting/boxing</li> </ul> </li> <li>• working with others to undertake and complete backhoe/ loader operations that meet all of the required outcomes</li> <li>• consistent timely completion of backhoe/loader operations that safely, effectively and efficiently meet the required outcomes</li> </ul>
<b>Context of and specific resources for assessment</b>	<ul style="list-style-type: none"> <li>• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</li> <li>• The assessment environment should not</li> </ul>

	<p>disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</p> <ul style="list-style-type: none"> <li>• Customisation of assessment and delivery environment to sensitively accommodate cultural diversity.</li> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances.</li> <li>• Where applicable, physical resources should include equipment modified for people with disabilities.</li> <li>• Access must be provided to appropriate learning and/or assessment support when required.</li> </ul>
<p><b>Method of assessment</b></p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes, including: <ul style="list-style-type: none"> <li>• in a minimum of two different soil types and</li> <li>• the mandatory tasks: mixing materials, stripping/spreading topsoils and materials, trench excavation, backfilling, lifting and carrying materials, loading dump trucks, wagons, hoppers, chutes, and cutting/boxing</li> </ul> </li> <li>• consistently achieving the required outcomes</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• working with others to undertake and complete the backhoe/loader operations</li> </ul> </li> </ul>
<b>Guidance information for assessment</b>	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b>Relevant compliance documentation</b> may include:</p>	<ul style="list-style-type: none"> <li>• legislative, organisation and site requirements and procedures</li> <li>• manufacturer's guidelines and specifications</li> <li>• Australian standards</li> <li>• codes of practice</li> <li>• Employment and workplace relations legislation</li> <li>• Equal Employment Opportunity and Disability Discrimination legislation</li> </ul>
<p>A <b>backhoe/loader</b> is:</p>	<ul style="list-style-type: none"> <li>• a self-propelled wheeled machine with a main structural support designed to carry both a front-mounted bucket loading mechanism and a rear-mounted backhoe</li> </ul>
<p><b>Backhoe/loader tasks</b> are to include:</p>	<ul style="list-style-type: none"> <li>• mixing materials, stripping/spreading topsoils and materials, trench excavation, backfilling, lifting and carrying materials, loading dump trucks, wagons, hoppers, chutes and cutting/boxing</li> </ul>
<p><b>Backhoe/loader tasks</b> may include:</p>	<ul style="list-style-type: none"> <li>• scrub clearing, ripping, compacting, cutting, batters and benches, rock breaking, demolition and any activities associated with the attachments listed</li> </ul>
<p>A <b>skid steer loader</b> is:</p>	<ul style="list-style-type: none"> <li>• a self-propelled wheeled machine in which steering is accomplished by skidding or reversing the wheels or tracks on one side of the machine. It has an integral front-mounted</li> </ul>

	<p>bucket-supporting structure and linkage, which loads or excavates through forward motion of the machine, and lifts, transports and discharges material</p>
<b>Skid steer loader</b> may include:	<ul style="list-style-type: none"> <li>• compacting, truck excavation, lifting and carrying materials, cutting batters and benches, rock breaking and any activities associated with attachments listed</li> </ul>
<b>Skid steer loader tasks</b> are to include:	<ul style="list-style-type: none"> <li>• stripping/ spreading topsoil and materials, backfilling, lifting, loading vehicles, excavations, mixing materials and site clean up</li> </ul>
<b>Work instructions</b> may include:	<ul style="list-style-type: none"> <li>• plans, specifications, quality requirements and operational details</li> <li>• quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction</li> </ul>
<b>Safety requirements</b> are to be:	<ul style="list-style-type: none"> <li>• in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan</li> </ul>
<b>Safety requirements</b> may include:	<ul style="list-style-type: none"> <li>• protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances</li> <li>• personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</li> <li>• safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public</li> <li>• safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement</li> </ul>

	<ul style="list-style-type: none"> <li>hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials</li> <li>emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation</li> </ul>
<b>Tools and equipment</b> are to include:	<ul style="list-style-type: none"> <li>hand tools and maintenance equipment relevant to the particular loader and may include lifting equipment</li> </ul>
<b>Environmental requirements</b> are to include:	<ul style="list-style-type: none"> <li>organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management</li> </ul>
<b>Communications practices</b> are to include:	<ul style="list-style-type: none"> <li>verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</li> <li>on site meeting processes may include notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues</li> </ul>
<b>Materials</b> may include:	<ul style="list-style-type: none"> <li>clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes</li> <li>rock types may include metamorphic, igneous and sedimentary</li> </ul>
<b>Attachments</b> may include:	<ul style="list-style-type: none"> <li>extending devices, tilt bucket, buckets, compaction wheel, ripper, plate compactor, rock breaker, auger, broom, mower/slasher, forklift, 4 in 1 bucket and free/rock grab</li> </ul>
Operator <b>maintenance</b> is to include:	<ul style="list-style-type: none"> <li>cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities</li> </ul>

## **Unit Sector(s)**

Mobile Plant Operations

## **Competency field**

Refer to Unit Sector(s).

## **Co-requisite units**

Not applicable.

## RIIMPO324A Conduct civil construction grader operations

### Modification History

Not applicable.

### Unit Descriptor

This unit covers conducting grader operations in the civil construction industry. It includes: planning and preparing; conducting machine pre-operational checks; operating the machine; selecting, removing and fitting attachments; relocating the machine; carrying out machine operator maintenance; and cleaning up.

### Application of the Unit

This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Civil construction

Operator license issued by OHS authority may be required in some states or territories and graders must be registered to drive and operate on public roads.

### Licensing/Regulatory Information

Refer to Unit Descriptor.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply <b>compliance documentation</b> relevant to <b>grader operations tasks</b> 1.2. Obtain, confirm and apply <b>work instructions</b> to the allotted task 1.3. Obtain, confirm and apply <b>safety requirements</b> to the allotted task 1.4. Resolve coordination requirements with others at the site prior to commencing and during work activities 1.5. Identify, obtain and implement signage requirements from the project traffic management plan 1.6. Select plant, <b>tools and equipment</b> to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults 1.7. Identify, confirm and apply <b>environmental</b> protection requirements from the project environmental management plan, to the allotted task
2. Conduct machine pre-operational checks	2.1. Carry out <b>pre-start, start-up, park and shutdown procedures</b> 2.2. Recognise and respond to hazardous and emergency situations as required 2.3. Check grader controls and functions, including implements or other attachments, brakes and manoeuvrability for serviceability and rectify or report any faults
3. Operate grader	3.1. Identify site hazards associated with grader operations and use safe operating techniques to minimise risk 3.2. Identify and apply operating techniques for grader to achieve optimum output in accordance with design specifications while achieving specified tolerances

	3.3. Operate grader to work instructions
4. Select, remove and fit attachments	<p>4.1. Select <i>attachment</i> for the task</p> <p>4.2. Remove and fit attachment</p> <p>4.3. Test attachment to ensure correct fitting and operation</p> <p>4.4. Use attachment in accordance with recommendations and design limits</p> <p>4.5. Clean and store removed attachments in designated location</p>
5. Relocate the grader	<p>5.1. Move grader safely between worksites, observing relevant codes and traffic management requirements</p> <p>5.2. Prepare grader for relocation</p>
6. Carry out machine operator maintenance	<p>6.1. Safely park, shutdown and prepare machine for <i>maintenance</i></p> <p>6.2. Conduct inspection and fault finding</p> <p>6.3. Remove and replace defective parts safely and effectively</p> <p>6.4. Carry out regular programmed maintenance and housekeeping tasks</p> <p>6.5. Maintain and process records</p>
7. Clean up	<p>7.1. Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>7.2. Clean, check, maintain and store plant, tools and equipment</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to conduct grader operations:

- apply legislative, organisation and site requirements and procedures
- apply site and equipment safety requirements
- apply grader operating techniques related to essential tasks, including:
  - apply cut and fill techniques

- apply levelling techniques
- construct drains
- form and carry a windrow
- tow equipment/plant
- apply processes for interpreting drawings and sketches
- apply operational, maintenance and basic diagnostic procedures
- apply site isolation and traffic control responsibilities and authorities
- interpret materials safety data sheets and apply materials handling methods
- apply project quality requirements
- use civil construction terminology
- apply methods of changing machine attachments
- apply safe operating techniques in all terrain
- carry out basic earthworks calculations
- apply JSA's/Safe work method statement procedures
- apply diagnostic techniques
- apply operations directing techniques
- apply driving techniques
- apply hazardous goods handling techniques
- interpret plans, reports, maps, specifications
- apply lifting techniques
- organise work tasks
- apply defect reporting requirements
- apply safe work practices
- use communications equipment
- use computer systems
- use hand and power tools

### **Required knowledge**

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to conduct grader operations:

- site risk control procedures
- site and equipment health and safety procedures, including:
  - site isolation and traffic control responsibilities and authorities
  - materials safety data sheets (MSDS) and materials handling methods
  - JSA's/Safe work method statement
  - hazard identification and response procedures
  - site and project personal protective equipment requirements
- site and project environmental requirements and constraints
- site and project quality requirements
- site and project communication procedures

- site operational procedures
- civil construction activity sequences of road construction, earthworks and drainage
- civil construction terminology
- processes for interpreting drawings and sketches
- site soil and survey data
- basic principles of soil technology for civil works
- grader types, characteristics, technical capability and limitations
- grader pre-start, start-up, operating and shut-down procedures and techniques
- grader and attachment operating techniques related to essential tasks, including:
  - safe operating techniques in all terrain
  - levelling techniques
- operational, maintenance and basic diagnostic procedures
- methods of changing machine attachments
- site record keeping requirements
- basic earthworks calculations

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions for conducting grader operations</li> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient completion of grader operations, including:           <ul style="list-style-type: none"> <li>• in a minimum of two different soil types and</li> <li>• to include the mandatory tasks of cutting and maintaining drains, forming/upgrading/maintaining roads, mixing/ spreading materials, scarifying and ripping, cutting and trimming of batters and trimming of road sub-grades and pavements</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• working with others to undertake and complete grader operations that meet all of the required outcomes</li> <li>• consistent timely completion of grader operations that safely, effectively and efficiently meet the required outcomes</li> <li>• laser guidance or ATS are not to be used to assist in control of the machine during assessment</li> </ul>
<b>Context of and specific resources for assessment</b>	<ul style="list-style-type: none"> <li>• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</li> <li>• The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</li> <li>• Customisation of assessment and delivery environment to sensitively accommodate cultural diversity.</li> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances.</li> <li>• Where applicable, physical resources should include equipment modified for people with disabilities.</li> <li>• Access must be provided to appropriate learning and/or assessment support when required.</li> </ul>
<b>Method of assessment</b>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment</p>

	<p>methods:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes, including: <ul style="list-style-type: none"> <li>• in a minimum of two different soil types, and</li> <li>• to include the mandatory tasks of cutting and maintaining drains, forming/upgrading/ maintaining roads, mixing/ spreading materials, scarifying and ripping, cutting and trimming of batters and trimming of road sub-grades and pavements</li> </ul> </li> <li>• consistently achieving the required outcomes</li> </ul> </li> <li>• first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• working with others to undertake and complete grader operations</li> </ul> </li> </ul>
<b>Guidance information for assessment</b>	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

### **Relevant compliance documentation**

may include:

- legislative, organisation and site requirements and procedures
- manufacturer's guidelines and specifications
- Australian standards
- codes of practice

	<ul style="list-style-type: none"> <li>• Employment and workplace relations legislation</li> <li>• Equal Employment Opportunity and Disability Discrimination legislation</li> </ul>
<b>A grader:</b>	<ul style="list-style-type: none"> <li>• is a self-propelled articulating or rigid framed wheeled machine, designed to cut, move and place construction materials using a centrally mounted blade and may include forward and/or rear mounted rippers/scarifiers</li> <li>• the blade and attachment controls are normally hydraulic; however, they may be mechanical</li> </ul>
<b>Grader tasks</b> are to include:	<ul style="list-style-type: none"> <li>• cutting and maintaining drains, forming/upgrading/maintaining roads, mixing/spreading materials, scarifying and ripping, cutting and trimming of batters and trimming of road sub-grades and pavements</li> </ul>
<b>Grader tasks</b> may include:	<ul style="list-style-type: none"> <li>• stripping/spreading topsoil and materials, cutting/boxing, cut and fill</li> </ul>
<b>Work instructions</b> may include:	<ul style="list-style-type: none"> <li>• plans, specifications, quality requirements and operational details</li> <li>• quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction</li> <li>• soil types and information</li> <li>• survey data, including: cut and fill levels, layer thicknesses, finished levels, finished grades and cross-falls</li> </ul>
<b>Safety requirements</b> are to be:	<ul style="list-style-type: none"> <li>• in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan</li> </ul>
<b>Safety requirements</b> may include:	<ul style="list-style-type: none"> <li>• the site safety plan and organisational policies and procedures</li> <li>• protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances</li> <li>• personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</li> <li>• safe operating procedures which are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel,</li> </ul>

	<p>restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public</p> <ul style="list-style-type: none"> <li>• safe parking practices which is to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement</li> <li>• hazards and risks may include but not be limited to installed services, damaged or defective pressurise hoses and fastenings, abandoned equipment, adverse weather conditions (electrical storms, floods, fires), chemicals, contaminants, ancillary equipment, fences, holes and pot holes, over-hanging rocks, personnel, unsafe ground, unstable faces, vehicles, powerlines, dust and noise, conveyors, overhead services and stored energy which may include: engine components, radiators and cooling systems, hydraulic tanks and reservoirs, air tanks and reservoirs, hydraulic hoses, air hoses, tyres, air conditioning components, electrical components, braking systems, centrifugal forces</li> <li>• hazardous and emergency situations, which may include: motor vehicle accidents, lighting strikes (potential tyre explosion) and tyre fires (isolation procedures)</li> <li>• emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational First Aid requirements and evacuation</li> </ul>
<p><b>Tools and equipment</b> are to include:</p>	<ul style="list-style-type: none"> <li>• hand tools and maintenance equipment relevant to the particular grader</li> </ul>
<p><b>Environmental</b> requirements are to include:</p>	<ul style="list-style-type: none"> <li>• organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management</li> </ul>
<p><b>pre-start, start-up, park and shutdown procedures</b> may include:</p>	<ul style="list-style-type: none"> <li>• external check of the machine</li> <li>• inspection of attachments to ensure security and identify defects</li> <li>• checking of fluid levels (windscreen washer tank, hydraulic oil, coolant, grease, water,</li> </ul>



	<p>engine oil, fuel)</p> <ul style="list-style-type: none"> <li>• carry out lubrication</li> <li>• checking of display instrumentation and gauges (indicators, gauges, laser levels), computer systems, including: <ul style="list-style-type: none"> <li>• brake air pressure</li> <li>• brake oil temperature</li> <li>• computer indicators</li> <li>• engine oil pressure</li> <li>• fuel filter</li> <li>• parking brake</li> <li>• retarder</li> <li>• service meter</li> <li>• speedometer/odometer</li> <li>• steering filters</li> <li>• tachometer</li> <li>• torque converter</li> <li>• oil temperature</li> <li>• transmission filter</li> <li>• voltmeter</li> <li>• water temperature</li> </ul> </li> <li>• inspection of air filter restriction indicator</li> <li>• inspection and checking of cab (horn, lights, air conditioner)</li> <li>• testing of engine and stop engine lights</li> <li>• testing visual and audio warning devices and lights</li> <li>• checking instruments and control lever</li> <li>• reporting of defects and damage</li> <li>• secure equipment as required by site procedures</li> <li>• render attachments safe</li> <li>• clear access ways</li> </ul>
<b>Materials</b> may include:	<ul style="list-style-type: none"> <li>• clays, silts, stone, gravel, mud, rock, sand, topsoil, blended materials, organic materials, typical construction site materials/waste and bituminous mixes</li> <li>• rock types may include metamorphic, igneous and sedimentary</li> </ul>
<b>Attachments</b> are to include:	<ul style="list-style-type: none"> <li>• tynes/scarifiers</li> </ul>
<b>Attachments</b> may include:	<ul style="list-style-type: none"> <li>• dozer blade, machine guidance system, laser levelling equipment, ripper, slash</li> </ul>

Operator <b>maintenance</b> is to include:	<ul style="list-style-type: none"><li>• cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance personnel during maintenance and repair activities</li></ul>
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## Unit Sector(s)

Mobile Plant Operations

## Competency field

Refer to Unit Sector(s).

## Co-requisite units

Not applicable.

## R110HS202A Enter and work in confined spaces

### Modification History

Not applicable.

### Unit Descriptor

This unit covers the entering and working in confined spaces in resources and infrastructure industries. It includes planning and preparing for entry of confined spaces, entry and working in confined spaces, exiting confined spaces and cleaning up.

### Application of the Unit

This unit is appropriate for those working in confined spaces (enclosed or partially enclosed) for the purpose of carrying out work or inspections and also is appropriate for those performing sentry or stand-by person roles, at worksites within:

- Civil construction
- Coal mining
- Drilling
- Extractive industries
- Metalliferous mining
- General construction

### Licensing/Regulatory Information

Refer to Unit Descriptor.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range</p>
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	statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for entering and working in confined spaces	1.1. Access, interpret and apply <b>compliance documentation</b> relevant to entering and working in confined spaces 1.2. Obtain, confirm and apply <b>work instructions</b> relevant to the allotted task 1.3. Obtain, confirm and apply <b>safety requirements</b> relevant to the allotted task 1.4. Obtained authorisation ( <b>entry permit</b> ) to enter the <b>confined space</b> is in accordance with regulatory requirements 1.5. Confirm the emergency response procedure is with the stand-by person 1.6. Identify, obtain and implement <b>signage</b> and barrier requirements as required by the project plan 1.7. Select tools and equipment to carry out tasks that are consistent with the requirements of the job and check them for serviceability and rectify or report any faults 1.8. Identify, confirm and apply to the allotted task the <b>environmental protection requirements</b> from the project environmental management plan 1.9. Position rescue equipment as required by the entry permit close to the point of entry
2. Enter and work in the confined space	2.1. <b>Gain access</b> to the confined space 2.2. Ensure that the atmosphere is tested and monitored for harmful elements in accordance with procedures 2.3. Apply tagging and lock-out procedures as required 2.4. Enter the confined space according to agreed procedure 2.5. Maintain <b>communication</b> with the stand-by

	<p>person</p> <p>2.6. Comply with entry permit requirements while carrying out designated work in confined space</p> <p>2.7. Monitor and adhere to allocated entry time</p>
3. Exit confined space	<p>3.1. Exit confined space according to agreed procedure</p> <p>3.2. Recover tools, equipment and materials from the confined space</p> <p>3.3. Conduct inspection of the confined space</p> <p>3.4. <b>Secure access</b> according to site procedures</p> <p>3.5. Remove tagging and lock-out according to site procedures</p> <p>3.6. Complete confined space entry permit</p>
4. Clean up	<p>4.1. Clear work area and dispose of or recycle materials in accordance with project environmental management plan</p> <p>4.2. Clean, check, maintain and store <b>tools and equipment</b> in accordance recommendations and standard work practices</p> <p>4.3. Remove, clean and store barriers and signs</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to enter and work in confined spaces:

- apply legislative, organisation and site requirements and procedures
- apply operational, maintenance and basic diagnostic procedures
- apply materials handling methods
- use atmospheric monitoring devices
- interpret JSAs/Safe work method statements

### Required knowledge

Specific knowledge is required to achieve the performance criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used.

<p>This includes knowledge of the following as required to enter and work in confined spaces:</p> <ul style="list-style-type: none"> <li>• site and equipment safety requirements</li> <li>• confined space entry and exit procedures, risks and regulations</li> <li>• air contaminants and toxic gases</li> <li>• breathing apparatus limitations</li> <li>• equipment types, characteristics, technical capabilities and limitations</li> <li>• site isolation and site control responsibilities and authorities</li> <li>• materials safety data sheets (MSDS)</li> <li>• project quality requirements</li> <li>• industry terminology</li> <li>• state and territory interpretations of a confined space</li> </ul>
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## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions for entering and working in confined spaces</li> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient completion for entering and working in confined spaces</li> <li>• working with others to undertake and complete the entering and working in confined spaces that meet all of the required outcomes</li> <li>• consistent timely completion of entering and working in confined spaces that safely, effectively and efficiently meets the required outcomes</li> </ul>
<b>Context of and specific</b>	<ul style="list-style-type: none"> <li>• This unit must be assessed in the context of the work environment. Where personal safety or</li> </ul>

<p><b>resources for assessment</b></p>	<p>environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</p> <ul style="list-style-type: none"> <li>• The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</li> <li>• Customisation of assessment and delivery environment to sensitively accommodate cultural diversity.</li> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular work sites may differ due to site circumstances.</li> <li>• Where applicable, physical resources should include equipment modified for people with disabilities.</li> <li>• Access must be provided to appropriate learning and/or assessment support when required.</li> </ul>
<p><b>Method of assessment</b></p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's:             <ul style="list-style-type: none"> <li>• implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes</li> <li>• consistently achieving the required outcomes</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• first hand testimonial evidence of the candidate's:             <ul style="list-style-type: none"> <li>• working with others to undertake and complete the entering and working in confined spaces</li> </ul> </li> </ul>
<b>Guidance information for assessment</b>	<ul style="list-style-type: none"> <li>• Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</li> </ul>

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<b>Relevant compliance documentation</b> may include:	<ul style="list-style-type: none"> <li>• legislative, organisation and site requirements and procedures</li> <li>• manufacturer's guidelines and specifications</li> <li>• Australian standards</li> <li>• code of practice</li> <li>• Employment and Workplace Relations legislation</li> <li>• Equal Employment Opportunity and Disability Discrimination legislation</li> </ul>
<b>Work instructions</b> may include:	<ul style="list-style-type: none"> <li>• plans</li> <li>• specifications</li> <li>• quality requirements</li> <li>• operational details</li> </ul>
<b>Safety requirements</b> may be included in:	<ul style="list-style-type: none"> <li>• site safety plans</li> <li>• organisational policies and procedures</li> <li>• statutory/regulatory authorities which may include:             <ul style="list-style-type: none"> <li>• federal</li> <li>• state and</li> <li>• local authorities</li> </ul> </li> <li>• verbal or written and graphical instructions</li> <li>• signage</li> <li>• work schedules/plans/specifications</li> <li>• work bulletins</li> </ul>



	<ul style="list-style-type: none"> <li>• charts and hand drawings</li> <li>• memos</li> <li>• maps</li> <li>• materials safety data sheets (MSDS)</li> <li>• diagrams or sketches</li> <li>• safe work procedures or equivalent related to working in confined spaces</li> <li>• regulatory/legislative requirements pertaining to working in confined spaces</li> <li>• manufacturer's specifications and instructions</li> <li>• organisation's work specifications and requirements</li> <li>• instructions issued by authorised organisational or external personnel</li> <li>• relevant Australian standards</li> </ul>
<p><b>Safety requirements</b> may include:</p>	<ul style="list-style-type: none"> <li>• OHS requirements</li> <li>• personal protective clothing and equipment as prescribed under legislation, regulation and workplace policies and practices</li> <li>• use of tools and equipment</li> <li>• workplace environment and safety</li> <li>• handling of materials</li> <li>• use of fire fighting equipment</li> <li>• use of First Aid equipment</li> <li>• hazard control and hazardous materials and substances</li> <li>• safe operating procedures including recognising and preventing hazards associated with working in confined spaces, working in proximity to others, worksite visitors and the public</li> <li>• hazards and risks may include but not be limited to fires, underground services, excavations, traffic, hazardous materials, contaminated atmosphere and toxic gases</li> <li>• risks associated with confined spaces may include but not be limited to restricted means of entry and exit, atmosphere which contains potentially harmful levels of contaminant, unsafe oxygen levels or engulfment</li> <li>• respiratory protection devices are to include but not be limited to air purifying respirators and may include self contained compressed air breathing apparatus, supplied airline breathing apparatus and escape breathing apparatus and</li> </ul>

	<p>atmospheric monitoring devices</p>
<p>Confined space <b>entry permit</b>, or work permits, may include:</p>	<ul style="list-style-type: none"> <li>• location of work</li> <li>• duration of work</li> <li>• size of work crew</li> <li>• atmospheric testing requirements</li> <li>• personal protective equipment</li> <li>• hot work</li> <li>• stand-by personnel</li> <li>• rescue arrangements</li> <li>• other precautions (signs, barriers)</li> <li>• authorisation</li> </ul>
<p><b>Confined spaces</b> may include:</p>	<ul style="list-style-type: none"> <li>• storage tanks, tank cars, process vessels, boilers, pressure vessels, silos and other tank-like compartments</li> <li>• open-topped spaces such as pits or degreasers</li> <li>• pipes, sewers, shafts, ducts and similar structures</li> <li>• shipboard spaces entered through a small hatchway or access point, cargo tanks, cellular double bottom tanks, duct keels, ballast and oil tanks and void spaces (but not including dry cargo holds)</li> </ul>
<p><b>Signage</b> may include:</p>	<ul style="list-style-type: none"> <li>• site safety signage</li> <li>• temporary signage for the benefit of motorists</li> <li>• pedestrians and barricades</li> </ul>
<p><b>Environmental protection requirements</b> may include:</p>	<ul style="list-style-type: none"> <li>• organisational/project environmental management plan</li> <li>• waste management</li> <li>• water quality protection</li> <li>• noise</li> <li>• vibration</li> <li>• dust</li> <li>• clean-up management</li> </ul>
<p><b>Gain access</b> may include:</p>	<ul style="list-style-type: none"> <li>• removing access cover</li> <li>• installing and securing ladder</li> </ul>
<p><b>Communications</b> may include:</p>	<ul style="list-style-type: none"> <li>• verbal instructions</li> <li>• fault reporting</li> <li>• 2-way radio</li> <li>• hand signals</li> <li>• mobile phone</li> <li>• site specific instructions</li> <li>• written instructions</li> </ul>

	<ul style="list-style-type: none"> <li>instructions related to job/task</li> </ul>
<b>Secure access</b> may include:	<ul style="list-style-type: none"> <li>replacing or closing off access cover</li> </ul>
<b>Tools and equipment</b> may include:	<ul style="list-style-type: none"> <li>harness and lifeline</li> <li>respirator apparatus</li> <li>atmospheric testing equipment</li> <li>signs</li> <li>barricades</li> <li>communication devices</li> <li>tools and equipment relevant to the work to be performed</li> </ul>

**Unit Sector(s)**

Occupational Health and Safety

**Competency field**

Refer to Unit Sector(s).

**Co-requisite units**

Not applicable.

## RIIOHS205A Control traffic with stop-slow bat

### Modification History

Not applicable.

### Unit Descriptor

This unit covers controlling of traffic with a stop-slow bat in resources and infrastructure industries. It includes: planning and preparing; coordinating traffic; operating radios; and cleaning up.

### Application of the Unit

This unit is appropriate for those working in a operational roles, at worksites within:

- Civil construction
- Coal mining
- Drilling
- Extractive industries
- Metalliferous mining

### Licensing/Regulatory Information

Refer to Unit Descriptor.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Plan and prepare</p>	<p>1.1. Access, interpret and apply <b>compliance documentation</b> relevant to controlling of traffic with a stop-slow bat</p> <p>1.2. Obtain, confirm and apply <b>work instructions</b> relevant to the allotted task</p> <p>1.3. Obtain, confirm and apply <b>safety requirements</b> from the site safety plan and organisational policies and procedures for the allotted task</p> <p>1.4. Identify, obtain and implement <b>signage and devices</b> requirements from the project traffic management plan</p> <p>1.5. Select <b>tools and equipment</b> to carry out tasks that are consistent with the requirements of the job; check them for serviceability and rectify or report any faults</p> <p>1.6. Identify, confirm and apply <b>environmental</b> protection requirements from the project environmental management plan</p>
<p>2. Coordinate traffic</p>	<p>2.1. Position or confirm temporary traffic signs and barriers in accordance with regulations</p> <p>2.2. Direct traffic in accordance with site traffic plan and away from services or areas of potential damage or danger</p> <p>2.3. Control vehicles and pedestrian traffic within the worksite to ensure safety of workers</p> <p>2.4. Monitor traffic, and make adjustments for changing <b>conditions</b>, and position waiting vehicles to allow for smooth traffic flow</p> <p>2.5. Use hand held stop/slow bats in accordance with regulatory authority approved procedures</p> <p>2.6. Use hand signals in accordance with regulatory authority approved procedures</p> <p>2.7. Report traffic offenders in accordance with regulatory authority approved procedures</p>

<p>3. Operate radio</p>	<p>3.1.Adjust <i>radio</i> controls for optimum reception/transmission results</p> <p>3.2.Transmit messages concisely and in accordance with operating procedures or best practice</p> <p>3.3.Maintain radio power supply</p> <p>3.4.Check radio contact after nominated period of non contact</p>
<p>4. Clean up</p>	<p>4.1.Remove or cover signs and devices sequentially to provide warning to motorists during shutdown</p> <p>4.2.Clean, check, maintain and store tools and equipment in accordance with recommendations and standard work practices</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to control traffic with a stop-slow bat:

- apply legislative, organisation and site requirements and procedures

### Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to control traffic with a stop-slow bat:

- site and equipment safety requirements
- traffic controlling
- traffic management plans
- traffic control signage and barricades
- radio operations
- equipment types, characteristics, technical capabilities and limitations
- operational and maintenance procedures for equipment
- site isolation and traffic control responsibilities and authorities

- affects of travel speed and vehicle mass on stopping distances
- quality requirements
- JSAs/Safe work method statement

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions for controlling traffic with a stop-slow bat</li> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient control of traffic with a stop-slow bat</li> <li>• working with others to control traffic with a stop-slow bat that meets all of the required outcomes</li> <li>• consistent timely control of traffic with a stop-slow bat that safely, effectively and efficiently meets the required outcomes</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<ul style="list-style-type: none"> <li>• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</li> <li>• Evidence for assessment is best gathered using the outcomes of products and processes of the workplace context.</li> <li>• The assessment environment should not</li> </ul>

	<p>disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</p> <ul style="list-style-type: none"> <li>• Customisation of assessment and delivery environment to sensitively accommodate cultural diversity.</li> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances.</li> <li>• Where applicable, physical resources should include equipment modified for people with disabilities.</li> <li>• Access must be provided to appropriate learning and/or assessment support when required.</li> </ul>
<p><b>Method of assessment</b></p>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's:             <ul style="list-style-type: none"> <li>• implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes</li> <li>• consistently achieving the required outcomes</li> </ul> </li> <li>• first hand testimonial evidence of the candidate's:             <ul style="list-style-type: none"> <li>• working with others to control traffic with a stop-slow bat</li> </ul> </li> </ul>
<p><b>Guidance information for assessment</b></p>	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>



## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b>Relevant compliance documentation</b> may include:</p>	<ul style="list-style-type: none"> <li>• legislative, organisation and site requirements and procedures</li> <li>• manufacturer's guidelines and specifications</li> <li>• Australian standards</li> <li>• code of practice</li> <li>• Employment and workplace relations legislation</li> <li>• Equal Employment Opportunity and Disability Discrimination legislation</li> </ul>
<p><b>Work instructions</b> may be received via verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, materials safety data sheets (MSDS) and diagrams or sketches and may include:</p>	<ul style="list-style-type: none"> <li>• plans</li> <li>• specifications</li> <li>• quality requirements</li> <li>• operational details</li> <li>• safe work procedures or equivalent</li> <li>• regulatory/legislative requirements</li> <li>• manufacturers' specifications and instructions</li> <li>• organisation work specifications and requirements</li> <li>• instructions issued by authorised organisational or external personnel</li> <li>• relevant Australian Standards</li> </ul>
<p><b>Safety requirements</b> may include:</p>	<ul style="list-style-type: none"> <li>• those included in compliance documentation</li> <li>• personal protective equipment</li> <li>• safe operating procedures, including recognising and preventing hazards associated with:                             <ul style="list-style-type: none"> <li>• uneven/unstable terrain</li> <li>• trees</li> <li>• pits</li> <li>• poles</li> <li>• trip hazards</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• dirt mounds</li> <li>• overhead services</li> <li>• underground services</li> <li>• bridges</li> <li>• surrounding buildings</li> <li>• obstructions</li> <li>• structures</li> <li>• facilities</li> <li>• fires</li> <li>• excavations</li> <li>• traffic</li> <li>• embankments</li> <li>• cuttings</li> <li>• hazardous materials</li> <li>• recently filled trenches</li> <li>• other machines</li> <li>• personnel</li> <li>• restricted access barriers</li> <li>• traffic control</li> <li>• working in proximity to others</li> <li>• worksite visitors and the public</li> <li>• safe parking practices, including:             <ul style="list-style-type: none"> <li>• ensuring access ways are clear</li> <li>• equipment/machinery is away from overhangs and refuelling sites</li> <li>• safe distance from excavations</li> <li>• secured from unauthorised access or movement</li> </ul> </li> </ul>
<p><b>Signage and devices</b> are to include:</p>	<ul style="list-style-type: none"> <li>• temporary warning signs</li> <li>• regulatory and traffic cones</li> </ul>
<p><b>Signage and devices</b> may include:</p>	<ul style="list-style-type: none"> <li>• vehicle mounted signs and flashing lights</li> <li>• guide signs</li> <li>• warning signs</li> <li>• barriers</li> <li>• hazard markers</li> <li>• bollards</li> <li>• arrow boards</li> </ul>
<p><b>Tools and equipment</b> are to include:</p>	<ul style="list-style-type: none"> <li>• radio</li> <li>• stop-slow bat</li> <li>• high visibility vest</li> </ul>

	<ul style="list-style-type: none"> <li>• traffic cones</li> <li>• signage</li> </ul>
<b>Tools and equipment</b> may include:	<ul style="list-style-type: none"> <li>• warning lights and beacons</li> <li>• arrow boards</li> </ul>
<b>Environmental</b> include the requirements of the organisational/ project environmental management plan, and may include:	<ul style="list-style-type: none"> <li>• waste management</li> <li>• water quality protection</li> <li>• noise, vibration and dust management</li> <li>• clean-up management</li> </ul>
<b>Traffic conditions</b> may include	<ul style="list-style-type: none"> <li>• congested urban environments</li> <li>• low traffic rural areas</li> <li>• off-road un-trafficked areas</li> <li>• buildings</li> <li>• parking sites</li> <li>• pedestrian areas</li> </ul>
<b>Radios</b> may include:	<ul style="list-style-type: none"> <li>• VHF and UHF</li> </ul>

## Unit Sector(s)

Occupational Health and Safety

## Competency field

Refer to Unit Sector(s).

## Co-requisite units

Not applicable.

## RIIOHS302A Implement traffic management plan

### Modification History

Not applicable.

### Unit Descriptor

This unit covers the competency required to implement a traffic management plans in the civil construction industry. It includes: planning and preparing; setting out, monitoring and closing down the traffic guidance scheme; and cleaning up.

### Application of the Unit

These traffic management plans include those for public and private roads, parking areas and restricted access construction sites. This unit is appropriate for those working in a operational roles, at worksites within:

- Civil construction

### Licensing/Regulatory Information

Refer to Unit Descriptor.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Plan and prepare</p>	<p>1.1. Access, interpret and apply <b>compliance documentation</b> relevant to implement a traffic management plans</p> <p>1.2. Obtain, confirm and apply <b>work instructions</b> relevant to the allotted task</p> <p>1.3. Obtain, confirm and apply <b>safety requirements</b> from the site safety plan and organisational policies and procedures to the allotted task</p> <p>1.4. Identify, obtain and implement <b>signage and devices</b> requirements from the project traffic management plan</p> <p>1.5. Select <b>tools and equipment</b> to carry out tasks that are consistent with the requirements of the job, check them for serviceability and rectify or report any faults</p> <p>1.6. Identify, confirm and apply <b>environmental</b> protection requirements from the project environmental management plan to the allotted task</p> <p>1.7. Check the designated traffic controllers' training and qualifications for currency as per legislation</p> <p>1.8. Advise traffic controllers of the traffic flow requirements for the site</p>
<p>2. Set out the traffic guidance scheme</p>	<p>2.1. Select traffic guidance scheme to suit site <b>conditions</b>, traffic volumes and work activities</p> <p>2.2. Determine and ensure adherence to work schedule, maximum traffic delays, signals and site <b>communications</b></p> <p>2.3. Ensure signs and devices are correctly positioned on the approaches to the work area in accordance with the traffic management plan</p> <p>2.4. Ensure that signs and devices are positioned and displayed on each approach according to Road Authority requirements and the traffic management plan</p> <p>2.5. Ensure signs and devices are positioned</p>

	<p>laterally and displayed in accordance with Road Authority requirements</p> <p>2.6.Ensure traffic is controlled effectively to protect the work crew placing traffic control devices around the work area</p>
3. Monitor traffic guidance scheme	<p>3.1.Ensure traffic flow is monitored and effectiveness of guidance scheme determined</p> <p>3.2.Monitor work activities and provide guidance to adjust scheme</p> <p>3.3.Apply process for dealing with traffic controllers when they fail to adhere to the approved procedures</p> <p>3.4.Apply procedures to deal with offending motorists</p>
4. Close down traffic guidance scheme	<p>4.1.Ensure traffic is controlled to protect work crew removing traffic control devices from the work area</p> <p>4.2.Ensure signs are removed in sequence to provide maximum warning during removal of traffic control devices</p> <p>4.3.Ensure guidance scheme details are recorded to organisational and or Road Authority requirements</p> <p>4.4.Ensure incidents are reported as required by the organisation and/or Road Authority</p>
5. Clean up	<p>5.1.Ensure work area is cleared in accordance with the project environmental management plan</p> <p>5.2.Ensure tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly

for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to implement a traffic management plan:

- apply legislative, organisation and site requirements and procedures

**Required knowledge**

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to implement a traffic management plan:

- site and equipment safety requirements
- state and territory traffic management legislation
- requirements set down by the Manual for Uniform Traffic Control Devices
- potential hazards
- traffic controlling
- traffic management plans
- basic signalling
- signs and devices
- radio operations
- equipment types, characteristics, technical capabilities and limitations
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- processes for the calculation of travel speed
- quality requirements
- civil construction terminology
- JSAs/Safe work method statement

**Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:

- knowledge of the requirements, procedures and

	<p>instructions for implementing of traffic management plans</p> <ul style="list-style-type: none"> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient implementing of traffic management plans, which are to include:             <ul style="list-style-type: none"> <li>• complying with State/Territory regulations on three separate live traffic projects, and</li> <li>• one project controlling site construction vehicles</li> </ul> </li> <li>• working with others to undertake and complete the traffic management plans that meet all of the required outcomes</li> <li>• consistent timely implementation of traffic management plans that safely, effectively and efficiently meets the required outcomes</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<ul style="list-style-type: none"> <li>• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</li> <li>• The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</li> <li>• Customisation of assessment and delivery environment to sensitively accommodate cultural diversity.</li> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances.</li> <li>• Where applicable, physical resources should include equipment modified for people with disabilities.</li> <li>• Access must be provided to appropriate</li> </ul>



	learning and/or assessment support when required.
<b>Method of assessment</b>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's:             <ul style="list-style-type: none"> <li>• implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes</li> <li>• consistently achieving the required outcomes</li> </ul> </li> <li>• first hand testimonial evidence of the candidate's:             <ul style="list-style-type: none"> <li>• working with others to implement traffic management plans</li> </ul> </li> </ul>
<b>Guidance information for assessment</b>	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b>Relevant compliance documentation</b> may include:</p>	<ul style="list-style-type: none"> <li>• legislative, organisation and site requirements and procedures</li> <li>• manufacturer's guidelines and specifications</li> <li>• Australian standards</li> <li>• code of practice</li> <li>• Employment and workplace relations legislation</li> </ul>

	<ul style="list-style-type: none"> <li>• Equal Employment Opportunity and Disability Discrimination legislation</li> </ul>
<p><b>Work instructions</b> may be received via verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, materials safety data sheets (MSDS) and diagrams or sketches and may include:</p>	<ul style="list-style-type: none"> <li>• specifications</li> <li>• quality requirements</li> <li>• operational details</li> <li>• safe work procedures or equivalent</li> <li>• regulatory/legislative requirements</li> <li>• manufacturers' specifications and instructions</li> <li>• organisation work specifications and requirements</li> <li>• instructions issued by authorised organisational or external personnel</li> <li>• relevant Australian standards</li> </ul>
<p><b>Safety requirements</b> may include:</p>	<ul style="list-style-type: none"> <li>• those included in compliance documentation</li> <li>• personal protective equipment</li> <li>• safe operating procedures, including recognising and preventing hazards associated with:             <ul style="list-style-type: none"> <li>• uneven/unstable terrain</li> <li>• trees</li> <li>• pits</li> <li>• poles</li> <li>• trip hazards</li> <li>• dirt mounds</li> <li>• overhead services</li> <li>• underground services</li> <li>• bridges</li> <li>• surrounding buildings</li> <li>• obstructions</li> <li>• structures</li> <li>• facilities</li> <li>• fires</li> <li>• excavations</li> <li>• traffic</li> <li>• embankments</li> <li>• cuttings</li> <li>• hazardous materials</li> <li>• recently filled trenches</li> <li>• other machines</li> <li>• personnel</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• restricted access barriers</li> <li>• traffic control</li> <li>• working in proximity to others</li> <li>• worksite visitors and the public</li> <li>• safe parking practices, including:             <ul style="list-style-type: none"> <li>• ensuring access ways are clear</li> <li>• equipment/machinery is away from overhangs and refuelling sites</li> <li>• safe distance from excavations</li> </ul> </li> <li>• secured from unauthorised access or movement</li> <li>• emergency procedures</li> </ul>
<b>Signage and devices</b> are to include	<ul style="list-style-type: none"> <li>• temporary warning signs</li> <li>• regulatory and traffic cones</li> </ul>
<b>Signage and devices</b> may include:	<ul style="list-style-type: none"> <li>• vehicle mounted signs and flashing lights</li> <li>• guide signs</li> <li>• warning signs</li> <li>• barriers</li> <li>• hazard markers</li> <li>• portable traffic signals</li> <li>• bollards</li> <li>• arrow boards</li> </ul>
<b>Tools and equipment</b> are to include:	<ul style="list-style-type: none"> <li>• high visibility vests</li> <li>• cones</li> <li>• signage</li> <li>• notebooks</li> <li>• pens</li> <li>• radios</li> <li>• stop-slow bats</li> <li>• delineators</li> <li>• barricades</li> <li>• barriers</li> <li>• bollards</li> <li>• warning lights and beacons</li> <li>• arrow boards</li> <li>• signalling devices</li> </ul>
<b>Environmental</b> include the requirements of the organisational/project environmental management plan, and may include:	<ul style="list-style-type: none"> <li>• waste management</li> <li>• water quality protection</li> <li>• noise, vibration, dust management</li> <li>• clean-up management</li> </ul>

<p><b>Conditions</b> may include:</p>	<ul style="list-style-type: none"> <li>• varying terrain</li> <li>• all weather conditions</li> <li>• varying road surfaces</li> <li>• all vehicle types</li> <li>• rural, urban or residential localities</li> <li>• all times of day</li> <li>• varying traffic volumes</li> <li>• varying road types</li> <li>• congested urban environments</li> <li>• low traffic rural areas</li> <li>• off-road un-trafficked areas</li> <li>• buildings</li> <li>• parking sites</li> <li>• pedestrian areas</li> <li>• civil construction site</li> <li>• road where civil construction work is conducted</li> </ul>
<p><b>Communications</b> is to include:</p>	<ul style="list-style-type: none"> <li>• verbal instructions</li> <li>• fault reporting</li> </ul>
<p><b>Communications</b> may include:</p>	<ul style="list-style-type: none"> <li>• 2-way radio</li> <li>• hand signals</li> <li>• mobile phone</li> <li>• site specific instructions</li> <li>• written instructions</li> <li>• instructions related to job/task</li> </ul>

**Unit Sector(s)**

Occupational Health and Safety

**Competency field**

Refer to Unit Sector(s).

**Co-requisite units**

Not applicable.

## SIRXADM001A Apply retail office procedures

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to apply retail office procedures. It involves processing mail, operating office equipment, filing and retrieving documents, establishing contact with customers and preparing simple correspondence.

### Application of the Unit

This unit applies to sales and administrative staff who operate and maintain office equipment, receive and dispatch correspondence in a variety of formats, file and retrieve documents, communicate with internal and external customers, and prepare simple correspondence according to store policy and procedures.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Process incoming and outgoing mail.	<p>1.1. <b><i>Sort and dispatch incoming mail</i></b> to nominated recipients or locations.</p> <p>1.2. Collect and check outgoing mail to ensure all items are correctly prepared for dispatch.</p> <p>1.3. Record mail according to <b><i>store policy and procedures</i></b>.</p> <p>1.4. Dispatch mail within designated time limits.</p>
2. Process bulk mail.	<p>2.1. Collate documents as required.</p> <p>2.2. Sort and batch envelopes according to Australia Post specifications.</p> <p>2.3. Lodge batched items for delivery.</p>
3. Operate office equipment.	<p>3.1. Identify appropriate <b><i>equipment</i></b> for intended application.</p> <p>3.2. Operate equipment according to manufacturer instructions.</p> <p>3.3. Identify and rectify equipment faults or report to <b><i>relevant personnel</i></b>.</p> <p>3.4. Follow opening and shutdown processes according to store procedures.</p> <p>3.5. Apply maintenance program for equipment to ensure down time is minimised.</p>
4. File and retrieve documents.	<p>4.1. <b><i>File documents</i></b> according to store policy.</p> <p>4.2. Identify and retrieve documents as requested.</p> <p>4.3. Update and modify existing records.</p> <p>4.4. Remove, process and store designated inactive files according to store policy.</p>
5. Establish contact with internal and external customers.	<p>5.1. Use telephone system functions according to store policy.</p> <p>5.2. Obtain and accurately record telephone and fax number or email <b><i>address</i></b>.</p> <p>5.3. Answer incoming calls promptly and according to store policy.</p> <p>5.4. Establish and clearly convey purpose of <b><i>contact</i></b>.</p> <p>5.5. Transfer or place calls on hold as required.</p> <p>5.6. Keep customers informed of delays and action being taken.</p> <p>5.7. Record messages accurately and promptly return calls if</p>

required.

- |                                   |  |
|-----------------------------------|--|
| 6. Prepare simple correspondence. | 6.1. Prepare and present correspondence for approval or signature according to set timeframes.<br>6.2. Write text using clear, concise language.<br>6.3. Use correct spelling, punctuation and grammar.<br>6.4. Use standard form letters according to store policy. |
|-----------------------------------|--|

## Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

### Required Skills

- technical skills to operate a range of office technology
- planning and organising skills to complete tasks in a set timeframe
- literacy and numeracy skills to:
  - process, record and document information
  - generate a range of retail documents
- interpersonal communication skills to:
  - report equipment faults
  - answer telephone calls and keep customers informed of delays and action being taken through clear and direct communication
  - ask questions to identify and confirm requirements
  - share information
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication

### Required Knowledge

- store policy and procedures in regard to:
  - store administration and clerical systems
  - receiving and dispatching incoming and outgoing mail
  - processing information
  - reporting problems and faults
- relevant regulatory and licensing requirements, such as:

- Work Health and Safety (WHS)
- privacy policies

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- applies procedures for the processing of mail, including bulk mail
- operates and maintains office equipment according to store policy and procedures
- files and retrieves documents according to store policy and procedures
- follows procedures for establishing contact with internal and external customers
- applies procedures for the preparation of simple correspondence.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a real or simulated work environment
- relevant documentation, such as:
  - store policy and procedures manuals
  - manufacturer instructions and operation manuals
- a range of retail equipment.

### **Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a role play
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

### **Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:



- SIRXICT001A Operate retail technology
- SIRXFIN002A Perform retail finance duties.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

- Procedures to ***sort and dispatch incoming mail*** may relate to:
- internal systems
  - Australia Post
  - courier services.
- Store policy and procedures*** in regard to:
- store administration
  - clerical systems
  - operating and maintaining retail equipment.
- Equipment*** may include:
- fax machine
  - telephone system
  - photocopier
  - answering machine or voicemail
  - public address system
  - paging system
  - franking machine
  - typewriters
  - computers
  - calculators
  - adapted equipment for people with a disability, for example, talking calculators, computer hard and software, and TTY.
- Relevant personnel*** may include:
- supervisor
  - team leader
  - manager.
- Systems used to record or ***file documents*** may be:
- manual
  - electronic.
- Contact*** may be established by:
- telephone
  - fax
  - email
  - letter
  - face-to-face contact.

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Administration

## SIRXADM002A Coordinate retail office

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to coordinate a retail office. It involves maintaining office procedures, processing data in response to information requests, composing reports and correspondence, maintaining recording and filing systems and maintaining digital storage media and computer filing systems.

### Application of the Unit

This unit applies to team member who coordinate a retail office, responding accurately and appropriately to requests for information and maintaining records and filing systems, including computerised records, according to store policy and procedures. Those with managerial responsibility undertake this unit.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Maintain office procedures.	<p>1.1. Monitor, record and <b><i>order</i></b> office supplies as required according to <b><i>store policy and procedures</i></b>.</p> <p>1.2. Implement store policy and procedures in regard to <b><i>special requests and requirements</i></b>, according to set timeframes.</p>
2. Process data in response to information requests.	<p>2.1. Document requests for information and identify responses according to store policy.</p> <p>2.2. Identify <b><i>relevant external information sources</i></b>.</p> <p>2.3. Obtain <b><i>access to identified sources</i></b>.</p> <p>2.4. Access and extract <b><i>relevant information</i></b>.</p> <p>2.5. Identify and offer <b><i>options and alternatives</i></b> where available information does not match defined needs.</p> <p>2.6. Accurately copy or summarise extracted information.</p> <p>2.7. Compile and update appropriate records required for regulatory compliance to maintain security and confidentiality of contents.</p>
3. Compose reports and correspondence.	<p>3.1. Collate relevant information and edit as required.</p> <p>3.2. Use clear, concise, easily understood language when writing text.</p> <p>3.3. Use correct spelling, punctuation and grammar.</p> <p>3.4. Draft and set out correspondence and reports according to store policy.</p> <p>3.5. Produced edited report and dispatch to <b><i>relevant personnel</i></b>.</p> <p>3.6. Copy and securely file final report according to store policy.</p>
4. Maintain existing recording and filing systems.	<p>4.1. Maintain <b><i>recording and filing systems</i></b> according to store policy.</p> <p>4.2. Allocate new documents to designated category.</p> <p>4.3. Monitor the issue and return of documents to ensure the integrity of the system is maintained.</p> <p>4.4. Archive, remove and update documents to ensure appropriate space available for current records.</p> <p>4.5. Identify and locate required files and dispatch to nominated person or section within designated time limits.</p>

- 4.6. Monitor and record file and document movements.
  - 4.7. Maintain documents in good condition and in correct location.
  - 4.8. Separate confidential files from general files, with access available to nominated personnel only.
  - 4.9. Monitor security system to ensure issued files are traceable at all times.
5. Maintain computer storage media.
    - 5.1. Maintain storage media and filing system according to store policy and procedures.
    - 5.2. Format *digital storage media* using correct procedures.
    - 5.3. Create back up files to ensure safety, security and confidentiality of files is maintained.
    - 5.4. Store back up files in the designated manner and location.
    - 5.5. Regularly perform virus checks on the system and back up storage media.
    - 5.6. Store *hardware* according to manufacturer instructions.
    - 5.7. File and store software according to organisational procedures.
    - 5.8. Observe *Work Health and Safety (WHS) guidelines* relating to screen based equipment and ergonomic work stations.
  6. Maintain computer filing system.
    - 6.1. Determine document filing requirements.
    - 6.2. Create a filing system that reflects the size, nature and complexity of the workplace.
    - 6.3. Implement security checks where necessary.
    - 6.4. Add file names to the filing system as required.
    - 6.5. Update the filing system regularly by deleting or archiving old files.
    - 6.6. Exit programs according to screen prompts to preserve data.

## Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

### Required skills

- literacy and numeracy skills to:
  - process, record and document information
  - write reports
  - use various computer software packages
- interpersonal communication skills to:
  - deal with information requests through clear and direct communication
  - ask questions to identify and confirm requirements

- share information
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication

### Required knowledge

- store policy and procedures in regard to:
  - store administration and financial systems
  - systems and methods for organisation of work routine
  - appropriate clerical or office systems
  - mail procedures
  - transport procedures, including cab charge and courier systems
  - systems and procedures for processing information
- types and functions of records management systems
- types and functions of office technology, including:
  - computer
  - printer
  - software packages
  - installation of hardware and software packages
  - software licensing requirements
- relevant WHS requirements in relation to the retail office
- principles and techniques in interpersonal communication skills

### Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- consistently implements workplace office procedures
- responds accurately and appropriately to requests for information according to store policy
- consistently applies procedures for maintaining records and filing system, including computerised records.

#### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- sample policy and procedures in regard to:
  - store administration and clerical or office systems
  - processing of information

- format and technical vocabulary
- WHS legislation and codes of practice
- a range of office equipment, including:
  - computer
  - printer
  - software packages
  - a work team.

### Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

### Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

***Ordering*** procedures may include:

- fax
- phone
- email
- internet.

***Store policy and procedures*** in regard to:

- store administration and clerical systems
- document format and technical vocabulary.

***Special requests and requirements*** may include:

- mail
- ordering of stock
- bill payment
- taxation paperwork
- courier service
- transport, e.g. taxi, cab charge
- special mail procedures.

***External information sources***

- distributors

may include:

- suppliers
- manufacturers
- technical support personnel
- maintenance personnel.

Modes of *access to identified sources* may include:

- contact person
- contact details.

*Relevant information* may include:

- orders
- files
- letters
- correspondence
- warranties.

*Options and alternatives* may be limited by:

- regulatory requirements
- cost-effectiveness
- store policy.

*Relevant personnel* may include:

- relevant managers
- supervisor
- team leader.

*Recording and filing systems* may be:

- paper-based
- electronic.

*Digital storage media* may include:

- floppy disk
- USB drive
- zip disk
- CD-ROM
- DVD-ROM
- digital tape
- external hard drive.

*Hardware* may include:

- computer
- keyboard or typewriter
- printer
- scanner
- monitor
- mouse
- storage media.

*OHS guidelines* may include:

- lighting
- seating
- posture
- ventilation
- glare and reflection
- keyboard equipment and radiation
- eye strain



- setting up work stations.

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Administration

## SIRXCCS201 Apply point-of-sale handling procedures

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release Date	Comments
First Release:	This is a revised unit, based on and equivalent to SIRXCCS001A Apply point-of-sale handling procedures.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to operate point-of-sale equipment, apply store policy and procedures to a range of transactions, interact with customers, and package or wrap an item for transportation.

It covers demonstration of the ability to operate a range of point-of-sale equipment in order to complete sales, returns and exchange transactions, and process a number of methods of payment, according to store policies.

### Application of the Unit

This unit applies to frontline service personnel.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Operate point-of-sale equipment.	<p>1.1. Open and close point-of-sale terminal according to <b><i>store policy and procedures</i></b>.</p> <p>1.2. Clear point-of-sale terminal and transfer tender according to store procedure.</p> <p>1.3. Handle cash according to store security procedures.</p> <p>1.4. Maintain supplies of change in point-of-sale terminal according to store policy.</p> <p>1.5. Attend active point-of-sale terminals according to store policy.</p> <p>1.6. Complete records for transaction errors according to store policy.</p> <p>1.7. Maintain adequate supplies of dockets, vouchers and <b><i>point-of-sale documents</i></b>.</p> <p>1.8. Inform <b><i>customers</i></b> of delays in the point-of-sale operation where required.</p>
2. Ensure accuracy of transactions.	<p>2.1. Identify and perform <b><i>numerical calculations</i></b> to ensure accurate pricing and collection of money.</p> <p>2.2. Collect numerical information from various sources and calculate accurately with or without the use of a calculator.</p>
3. Perform point-of-sale transactions.	<p>3.1. Complete <b><i>point-of-sale transactions</i></b> according to store policy.</p> <p>3.2. Identify and apply store procedures in respect of cash and non cash transactions.</p> <p>3.3. Identify and apply store procedures in regard to exchanges and returns.</p> <p>3.4. Move goods through point-of-sale area efficiently and with attention to fragility and packaging.</p> <p>3.5. Enter information into <b><i>point-of-sale equipment</i></b>.</p> <p>3.6. State price or total and amount of cash received verbally to customer.</p> <p>3.7. Tender correct change.</p>

4. Complete sales.
  - 4.1. Complete customer order forms, invoices and receipts and process any loyalty card transactions.
  - 4.2. Identify and process customer delivery requirements according to set timeframes.
  - 4.3. Process sales transactions or direct customers to point-of-sale terminals according to store policy without undue delay.
  - 4.4. Acknowledge and thank customer in line with store policy and procedures.
5. Wrap and pack goods.
  - 5.1. Maintain and request adequate supplies of ***wrapping and packaging materials***.
  - 5.2. Select appropriate wrapping or packaging material.
  - 5.3. Wrap merchandise neatly and effectively where required.
  - 5.4. Pack items safely to avoid damage in transit, and attach labels where required.
  - 5.5. Arrange transfer of merchandise for parcel pick up or other ***delivery methods*** if required.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication and interpersonal skills to:
  - ask questions to identify and confirm requirements
  - inform customers of delays
  - listen actively
  - request adequate supplies of wrapping material or bags through clear and direct communication
  - share information
  - state price or total and amount of cash received
  - use and interpret non-verbal communication
  - use language and concepts appropriate to cultural differences
- self-management skills to:
  - deal with different types of transactions
  - follow set routines and procedures
- literacy and numeracy skills to:
  - document sales and delivery information
  - render change
  - undertake work functions, including addition, division, multiplication, percentages and subtraction

## Required knowledge

- cash and non-cash handling procedures, including:
  - balancing point-of-sale equipment
  - calculating non-cash documents
  - change required, denominations of change and tendering change
  - clearance of terminal and transference of tender
  - counting cash
  - maintenance of cash float
  - opening and closing point-of-sale terminal
  - recording takings
  - security of cash and non-cash transactions
- functions and procedures for operating point-of-sale equipment, including:
  - calculators
  - electronic scales
  - numerical display board
  - registers
- merchandise handling techniques, including wrapping and packaging techniques
- range of services provided by the store
- relevant legislation and statutory requirements, including:
  - industry codes of practice
  - work health and safety (WHS)
  - Australian consumer law
  - scanners
- store policy and procedures in relation to:
  - allocated duties and responsibilities
  - bag checking
  - customer service
  - exchanges and returns
  - handling, packing and wrapping goods or merchandise
  - point-of-sale transactions
- stock availability
- key features of a calculator

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- operates point-of-sale equipment according to manufacturer instructions and store policy and procedures
- applies store policy and procedures in regard to cash handling and point-of-sale transactions
- interprets, calculates and records numerical information accurately
- processes sales transaction information responsibly and accurately according to store policy and procedures
- applies store policy and procedures in regard to the handling, packing, wrapping and delivery of goods or merchandise.

**Context of and specific resources for assessment**

Assessment must ensure access to:

- a real or simulated retail work environment
- relevant documentation, such as:
  - stock, inventory and price lists
  - financial transaction dockets and slips
  - lay-by, credit and product return slips
  - store policy and procedures manuals
- a range of point-of-sale equipment.

**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the work
- role play
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, work and job role is recommended, for example:

- SIRXCCS202 Interact with customers
- SIRXFIN201 Balance and secure point-of-sale terminal
- SIRXINV001A Perform stock control procedures
- SIRXRSK201 Minimise loss.

**Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the

performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

- Store policy and procedures*** in regard to:
- cash handling
  - financial transactions
  - handling techniques of stock
  - operation of point-of-sale equipment
  - sales transactions
  - security.
- Point-of-sale documents*** may include:
- credit slips
  - lay-by slips
  - message pads
  - order forms
  - product return slips
  - promotional materials.
- Customers*** may include:
- customers with routine or special requests
  - internal and external contacts
  - new or repeat contacts
  - people from a range of social, cultural and ethnic backgrounds
  - people with varying physical and mental abilities.
- Numerical calculations*** may include:
- addition and subtraction
  - calculations of cash amounts and change
  - calculations of discount amounts
  - estimation of quantities
  - measurement
  - multiplication and division
  - percentages.
- Point-of-sale transactions*** may include:
- cheques
  - credit cards and store cards
  - EFTPOS
  - exchanges
  - gift vouchers
  - lay-by
  - returns
  - smart cards
  - travellers cheques.
- Point-of-sale equipment*** may include:
- cash drawer
  - cash register
  - EFTPOS terminal
  - electronic scales
  - numerical display board

***Wrapping and packaging materials*** may include:

- scanner
- security tagging.
- adhesive tape
- bags
- boxes
- bubble wrap
- gift wrapping
- paper
- ribbon
- string.

***Delivery methods*** may include:

- courier
- domestic or international delivery
- freight
- parcel pick-up
- post or express post.

## **Unit Sector(s)**

Cross-Sector

## **Competency Field**

Client and Customer Service



## SIRXCCS202 Interact with customers

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release Date	Comments
First Release:	This is a revised unit, based on and equivalent to SIRXCCS002A Interact with customers.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to deliver service to customers. It involves being able to communicate effectively with customers, respond to their complaints, receive and process sales orders, and identify special customer requirements.

The unit covers the consistent application of store policies and industry codes of practice to provide a quality service environment by treating customers and team members in a courteous and professional manner through all stages of the service and sales procedure, and to identify and resolve customer complaints.

### Application of the Unit

This unit applies to frontline service personnel.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

## Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

#### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Deliver service to customers.	<p>1.1. <b><i>Communicate</i></b> with <b><i>customers</i></b> in a professional, courteous manner according to store policy.</p> <p>1.2. Meet <b><i>customer needs</i></b> and reasonable requests or refer to supervisor, according to store policy and <b><i>legislative requirements</i></b>.</p> <p>1.3. Record customer details and information where necessary.</p> <p>1.4. Identify and anticipate possible problems and take action to minimise the effect on customer satisfaction.</p> <p>1.5. Recognise and act upon opportunities to deliver additional levels of <b><i>service</i></b> beyond the customer's immediate request.</p> <p>1.6. Maintain contact with customer until sale is completed according to store policy.</p> <p>1.7. Use verbal and non-verbal communication to develop rapport with customers during service delivery.</p> <p>1.8. Encourage repeat customers by promotion of appropriate services or products according to store policy.</p> <p>1.9. Farewell customer appropriately and courteously according to store policy.</p>
2. Respond to customer complaints.	<p>2.1. Convey a positive, helpful attitude to customers when handling <b><i>complaints</i></b>, according to store policy.</p> <p>2.2. Handle complaints sensitively, courteously and with discretion.</p> <p>2.3. Establish and confirm with customer nature of complaint by active listening and questioning.</p> <p>2.4. Take action to resolve complaint to customer's satisfaction wherever possible.</p> <p>2.5. Promptly refer unresolved customer dissatisfaction or</p>

- complaints to supervisor.
- 2.6. Take the opportunity to turn incidents of customer dissatisfaction into a demonstration of high-quality service to customer according to store policy.
  - 2.7. Complete documentation regarding customer dissatisfaction or complaints accurately and legibly.
  - 2.8. Take **follow-up action** as necessary to ensure customer satisfaction.
3. Receive and process sales orders.
    - 3.1. Record customer details and information accurately.
    - 3.2. Promptly refer customers to appropriate area as required.
    - 3.3. Provide customers with information in clear, concise manner.
    - 3.4. Process, record and act upon sales orders according to store policy.
    - 3.5. Process customer returns or refunds according to store policy and procedures.
  4. Identify special customer requirements.
    - 4.1. Promptly identify customers with special needs or requirements by observation and questioning.
    - 4.2. Verbally and non-verbally convey a willingness to assist.
    - 4.3. Promptly service, refer or redirect customers' needs as required.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication and interpersonal skills to:
  - build rapport and understanding
  - clarify and feed back information
  - deal with difficult customers
  - listen to customers' needs
  - negotiate with and persuade customers to buy
  - promote products and services
  - respond to complaints effectively and politely
- literacy and numeracy skills to:
  - calculate costs and discounts
  - document sales, stock and delivery information
  - follow procedures for recording customer orders that are placed in person, by telephone or by electronic means

- handle legal tender
- take messages in person or by telephone
- write records of complaints
- weigh and measure goods
- observation and analysis skills to anticipate customer behaviour
- self-management skills to follow set routines and procedures

### Required knowledge

- add-on selling concepts
- conflict-resolution strategies
- functions and procedures for operating the store telephone system and other communication equipment, and the relevant numbers
- greeting and farewelling techniques
- location of store departments
- merchandise and service range of store departments
- non-verbal cues indicating customer behaviour
- questioning and active listening techniques
- relevant legislation and statutory requirements, including work health and safety (WHS)
- store policy and procedures in regard to:
  - customer service
  - dealing with customer complaints
  - allocated duties and responsibilities
  - customer returns and refunds
  - lay-by, gift voucher and rain-check procedures
- strategies for handling difficult or abusive customers

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- accesses, records and processes sales orders accurately and responsibly, according to store policy and procedures
- identifies the nature of customer complaints, resolves complaints and provides service to customers according to store policies
- collaboratively works within a team to meet customers' needs

- applies store policy and procedures and industry codes of practice in regard to customer service
- provides a quality service environment by treating customers and team members in a courteous and professional manner through all stages of the service and sales procedure
- uses effective questioning, active listening and observation skills to identify special customer requirements.

**Context of and specific resources for assessment**

Assessment must ensure access to:

- a real or simulated retail work environment
- relevant documentation, such as:
  - sales order forms
  - complaint and return forms
  - stock, inventory and price lists
  - store policy and procedures manuals
- a range of customers with different requirements
- point-of-sale equipment and materials
- a communication system or a range of communication equipment.

**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- role play
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXCCS201 Apply point-of-sale handling procedures
- SIRXFIN201 Balance and secure point-of-sale terminal
- SIRXINV001A Perform stock control procedures
- SIRXRSK201 Minimise loss.

**Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility

of the item, and local industry and regional contexts) may also be included.

**Communication**

techniques may include:

- face-to-face or telephone contact with customers
- non-verbal communication
- speaking clearly and concisely
- using appropriate language
- using open and inclusive language.

**Customers** may include:

- customers with routine or special requests
- internal and external contacts
- new or repeat contacts
- people from a range of social, cultural and ethnic backgrounds
- people with varying physical and mental abilities.

**Store policy** may relate to:

- cash handling
- customer service
- dealing with customer complaints
- processing sales orders.

**Customer needs** may include:

- information regarding store facilities and services
- location of specific items within the store
- product information
- returns or refunds.

**Legislative requirements** may include:

- liquor licensing regulations
- lottery legislation
- sale of second-hand goods
- sale of X and R-rated products
- tobacco laws
- Trade Practices Act
- trading hours
- transport, storage and handling of goods.

**Service** may include:

- all store activities
- internal and external customers
- follow-up in event of delays in service provision.

**Complaints** may relate to:

- prices
- products
- service.

**Follow-up action** may require:

- communication with:
  - customers
  - staff
  - supervisors and management
  - suppliers
- recommendations to supervisor regarding policy and procedure development or alteration.

## **Unit Sector(s)**

Cross-Sector

## **Competency Field**

Client and Customer Service

## SIRXCLM001A Organise and maintain work areas

### Modification History

Not applicable.

### Unit Descriptor

#### Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to maintain and organise work areas in a retail environment. It involves applying personal hygiene practices and the organised use of equipment and chemicals to keep the workplace tidy, clean and safe.

### Application of the Unit

#### Application of the unit

This unit requires the team member to demonstrate and apply knowledge of workplace policies, legislative requirements and manufacturer instructions in order to utilise tools, chemicals and equipment for the safe and efficient cleaning, organisation and maintenance of work areas. Frontline service personnel are responsible for this function.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

#### Prerequisite units

Nil



## Employability Skills Information

**Employability skills** The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Organise work area.	<p>1.1 Maintain <b><i>work areas</i></b> in a safe, uncluttered and organised manner according to <b><i>store policy and procedures</i></b>.</p> <p>1.2 Carry out all <b><i>routines</i></b> safely, effectively and efficiently with minimum inconvenience to <b><i>customers</i></b> and <b><i>staff</i></b> according to store policy.</p> <p>1.3 Apply store policy and procedures for tidying work areas and placing items in designated areas.</p>
2 Clean work area.	<p>2.1 Apply store policy and procedures for personal hygiene.</p> <p>2.2 Apply store policy and procedures for cleaning of work area.</p> <p>2.3 Remove and dispose of waste promptly according to store policy and <b><i>legislative requirements</i></b>.</p> <p>2.4 <b><i>Report</i></b> spills, food, waste, or other potential hazards to <b><i>relevant personnel</i></b> and remove from floors according to store policy and legislative requirements.</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	2.5 Promptly display signage in regard to <i>unsafe areas</i> .
	2.6 Maintain equipment and consumable materials and store correctly after use.
	2.7 Use and clean <i>tools and equipment</i> (including guards) according to manufacturer instructions and legislative requirements.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- using and maintaining cleaning equipment
- using and storing chemicals, hazardous substances and flammable materials
- using electrical and other equipment safely
- literacy and numeracy skills in reading and understanding manufacturer instructions
- reading and understanding warning labels and instructions for the use of chemicals and hazardous substances.

The following knowledge must be assessed as part of this unit:

- store policy and procedures in regard to:
  - housekeeping
  - use and maintenance of store cleaning equipment
  - personal hygiene
  - waste disposal and environmental protection
  - reporting problems and faults
- relevant OHS regulations
- relevant labels to identify chemicals and hazardous substances, HAZCHEM labels
- manufacturer instructions for use of cleaning materials or hazardous substances
- manufacturer instructions for use of cleaning equipment
- relevant legislation and statutory requirements
- relevant industry codes of practice.

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- consistently applies housekeeping duties to work area, point-of-sale terminals, walkways, fixtures and display areas
- consistently applies safe working practices in the operation and maintenance of a range of cleaning and housekeeping equipment according to:
  - store policy and procedures
  - OHS legislation and codes of practice
  - industry codes of practice
  - manufacturer instructions and design specifications
- applies store housekeeping program for work area and reports faults and problems to relevant person or department
- reads, interprets and applies manufacturer instructions for cleaning products, tools and equipment
- completes tasks in set timeframe.

#### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a real or simulated work environment
- cleaning and store housekeeping equipment and materials
- relevant documentation, such as:
  - store policy and procedures manuals on housekeeping, cleaning and OHS
  - manufacturer instructions and operation manuals on cleaning equipment and materials
  - manual handling regulations and industry codes of practice
  - plant and equipment regulations.

## EVIDENCE GUIDE

### Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a role play
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXCOM001A Communicate in the workplace
- SIRXIND001A Work effectively in a retail environment
- SIRXOHS001A Apply safe working practices
- SIRXICT001A Operate retail technology.

### Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the

## **RANGE STATEMENT**

performance criteria is detailed below.

**Work areas** may include:

- counters
- benches
- sinks
- storage areas
- point-of-sale terminals
- point-of-sale areas
- preparation areas
- walkways and aisles
- displays
- fixtures and working surfaces.

**Store policy and procedures** may relate to:

- housekeeping practices
- personal hygiene
- maintenance and storage of cleaning equipment
- use and storage of cleaning chemicals
- job descriptions and responsibilities
- OHS
- interaction with:
  - customers
  - other team members
  - supervision and management.

Handling and cleaning **routines** may vary according to:

- stock characteristics
- industry codes of practice.

**Customers** may include:

- new or repeat contacts
- internal and external contacts
- customers with routine or special requests
- people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities.

**Staff** may be:

- management
- other staff members

## RANGE STATEMENT

- full-time, part-time, contract or casual staff
  - from within or outside own work team
  - from a range of social, cultural and ethnic backgrounds.
- Legislative requirements* may include:
- federal, state and local health and hygiene
  - waste removal
  - environmental protection
  - transport, storage and handling of goods
  - hazardous substances and dangerous goods
  - labelling of workplace substances
  - OHS
  - use of protective clothing and equipment.
- Reporting* may be conducted:
- face to face
  - by email
  - by phone
  - by fax.
- Relevant personnel* may include:
- manager
  - area supervisor
  - team leader
  - colleagues.
- Unsafe areas* may include:
- spills
  - sharp edges
  - loose wiring
  - customer and public areas
  - staff-only areas.
- Tools and equipment* may relate to:
- point of sale
  - cleaning
  - display and promotion
  - food preparation
  - storage.

## **Unit Sector(s)**

**Sector** Cross-Sector

## **Competency field**

**Competency field** Cleaning and Maintenance

## SIRXCLM402 Manage store facilities

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXCLM002A Manage store facilities.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to manage store facilities in a retail environment. It involves managing the store maintenance and housekeeping program, negotiating and monitoring maintenance contracts, and identifying and locating facilities requirements.

The unit covers the application of store policies and relevant legislation to the planning, coordination and implementation of activities associated with monitoring and maintaining premises, fittings, fixtures and equipment in a retail environment.

### Application of the Unit

This unit applies to staff with managerial responsibility in a retail environment.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.



## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

#### Element

#### Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

1. Manage store maintenance program.

- 1.1. Monitor and maintain premises, fittings, fixtures and equipment, according to *store policy and procedures* and *relevant legislation*.
- 1.2. Identify deficiencies in store maintenance procedures and take remedial action as required.
- 1.3. Obtain *expert or specialist advice* as required, according to store policy.
- 1.4. Initiate contingency plan within scope of authority in the event of maintenance problems.

2. Manage retail equipment maintenance.

- 2.1. Develop and implement procedures to ensure retail equipment is maintained according to store policy.
- 2.2. Monitor and implement maintenance program for retail equipment, according to manufacturer design specifications and store policy.
- 2.3. Identify and rectify equipment faults where possible, without undue delay.
- 2.4. **Report** equipment faults or failures, according to service agreements and store policy.

3. Negotiate maintenance contracts.

- 3.1. Negotiate maintenance *contracts* with contractors and suppliers according to store policy and procedures.
- 3.2. Negotiate and implement contract terms and conditions to maximise benefits for the store, and communicate to *relevant personnel*.
- 3.3. Monitor maintenance procedures to ensure products and tasks meet contract specifications.

4. Identify facilities and space requirements.

- 4.1. Identify facilities and space requirements to reflect business needs and volume, according to store policy and budget requirements.
- 4.2. Locate suitable facilities and space to facilitate expansion or change of use in line with store policy and procedures.
- 4.3. Consult, as required, with senior manager or business owner to determine optimum strategy for store space and location.

4.4. Maximise use of space, with consideration to existing configuration, to optimise the merchandising of existing and incoming stock.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication and interpersonal skills to:
  - ask questions to identify and confirm requirements
  - ensure listening and understanding
  - negotiate contracts and relay contractual requirements to staff
  - obtain expert or specialist advice
  - report faults
  - share information
  - use and interpret non-verbal communication
  - use language and concepts appropriate to cultural differences
- negotiation skills to negotiate maintenance contracts with contractors and suppliers
- literacy and numeracy skills to:
  - apply accounting processes and record data
  - develop, document and record procedures
  - estimate measurements and volumes
  - maintain records
  - read and interpret manufacturer instructions
  - work within a budget

### Required knowledge

- store policy and procedures in regard to:
  - maintenance of store facilities
  - maintenance of retail equipment
- maintenance contract terms and options
- contract specifications
- relevant legislation and statutory requirements relating to managing store facilities, including:
  - work health and safety (WHS) legislation
  - food safety legislation and regulations
- relevant industry codes of practice relating to managing store facilities
- principles and techniques in:

- monitoring performance of contracts
- negotiating, in particular contract negotiation
- interpersonal communication

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- plans, coordinates and implements activities associated with monitoring and maintaining premises, fittings, fixtures and equipment according to store policy and procedures
- initiates contingency plans in response to maintenance problems as required
- proactively negotiates, monitors and implements maintenance contracts according to store policy and procedures
- identifies and uses space and facilities effectively
- evaluates and reports on effectiveness of maintenance contracts.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
  - maintenance contracts
  - store policy and procedures on maintenance of facilities, and contract negotiation
  - relevant legislation and statutory requirements
  - WHS
  - legislation and industry codes of practice
- a team
- equipment and technology.

### **Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- case study or research report
- written or verbal questioning to assess knowledge and understanding

- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment** Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

- Store policy and procedures*** in regard to:
- store maintenance
  - facilities management
  - reporting mechanisms
  - WHS
  - food safety.
- Relevant legislation*** may include:
- federal, state or territory and local legislation
  - food safety regulations
  - WHS.
- Expert or specialist advice*** may be sought regarding:
- point-of-sale terminals
  - EFTPOS terminals
  - computers, scanners and printers
  - pricing equipment
  - electronic bar coding equipment
  - portable data entry
  - electronic ordering equipment
  - wrapping and packing equipment
  - equipment for carrying or moving merchandise
  - equipment for storage of merchandise, including refrigerators
  - weighing machines
  - thermometers
  - security tag systems
  - trolley return equipment
  - fixtures and fittings
  - food preparation equipment.
- Faults may be ***reported***:
- verbally
  - in writing
  - by email
  - to service personnel

- to contractors
  - to relevant managers
  - to supervisor.
- Contracts:**
- may be negotiated internally and externally
  - may involve:
    - quality standards
    - building maintenance services
    - cleaning
    - security
    - electrical services
    - plumbing services
    - equipment maintenance.
- Relevant personnel** may include:
- managers
  - supervisors
  - specialist staff.

## Unit Sector(s)

Cross-Sector

## Competency Field

Cleaning and Maintenance

## SIRXFIN201 Balance and secure point-of-sale terminal

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXFIN001A Balance point-of-sale terminal.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to balance and reconcile a register or terminal in a retail environment. It involves clearing the register, counting money, calculating non-cash transactions, and reconciling and recording takings.

The unit requires the application of store policy and procedures in undertaking those tasks.

### Application of the Unit

This unit applies to frontline retail staff working under some supervision.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

#### Element

#### Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |  |   |
|--|---|
| 1. Balance and secure takings from register or terminal. | 1.1. Perform <b><i>register or terminal</i></b> balance at designated times according to <b><i>store policy and procedures</i></b> .<br>1.2. Separate cash float from takings prior to balancing procedure and secure according to store policy.<br>1.3. Supply change to register or terminal according to store policy.<br>1.4. Obtain and interpret register or terminal reading or print-out.<br>1.5. Secure cash and <b><i>non cash documents</i></b> according to store security policy and procedures. |
| 2. Reconcile takings.                                    | 2.1. Count cash accurately.<br>2.2. Calculate non cash documents accurately.<br>2.3. Determine balance between register or terminal reading and sum of cash and non cash transactions.<br>2.4. Report discrepancies between register or terminal reading and sum of cash and non cash transactions to <b><i>relevant personnel</i></b> according to store policy.<br>2.5. Record store and individual department takings and file <b><i>records</i></b> according to store policy.                            |

### Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy and numeracy skills to:
  - balance the register or terminal
  - count cash
  - calculate non-cash transactions
  - calculate discrepancies between reported and actual takings
  - complete documentation

- interpret documentation
- report on takings
- planning and organising skills to complete tasks in a set timeframe
- technology skills to operate register or terminal

### Required knowledge

- cash and non-cash handling procedures, including:
  - balancing point-of-sale terminal
  - calculating non-cash documents
  - change required and denominations of change
  - clearance of terminal and transference of tender
  - counting cash
  - credit and returns
  - credit cards
  - EFTPOS
  - gift vouchers
  - lay-by
  - maintenance of cash float
  - opening and closing point-of-sale terminal
  - recording takings
  - security of cash and non-cash transactions
- store policy and procedures in regard to:
  - cash float
  - operation of equipment used at register or terminal
  - register or terminal balance
  - security of cash and non-cash transactions

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- operates register or terminal equipment according to manufacturer instructions and store policy
- applies store policy and procedures in regard to handling cash and removing takings from register or terminal
- applies store policy and procedures in regard to cash float



- applies store policy and procedures in regard to reading registers and recording information
- processes documentation and records responsibly and according to store policy and procedures
- reconciles takings according to store policy and procedures.

### Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail work environment
- relevant documentation, such as:
  - financial transaction dockets, slips and invoices
  - sample debit card and credit card vouchers
  - recording and tally sheets
  - store policy and procedure manuals in regard to register or terminal balance
- register or terminal and related equipment.

### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- role play
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

### Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXCCS201 Apply point-of-sale handling procedures
- SIRXRSK201 Minimise loss.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

- Register or terminal*** may be:
- cleared at intervals during or at close of trading
  - cleared by operator or specialist staff
  - electronic

- Store policy and procedures*** in regard to:
- manual.
  - cash handling
  - register or terminal balance
  - security.
- Non-cash documents*** may relate to:
- cash on delivery (COD)
  - cheques
  - credit cards
  - customer credit ratings
  - customer refunds
  - gift vouchers
  - hire-purchase
  - lay-by.
- Relevant personnel*** may include:
- manager
  - supervisor
  - team leader.
- Records*** may be:
- electronic
  - manual.

## **Unit Sector(s)**

Cross-Sector

## **Competency Field**

Finance

## SIRXFIN002A Perform retail finance duties

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to perform retail finance duties. It involves processing petty cash and non-cash transactions, preparing banking documents, reconciling invoices for payment and preparing invoices for debtors.

### Application of the Unit

This unit applies to team members who process petty cash, cash and non-cash transactions; reconcile and process banking; identify and rectify delivery and document discrepancies; and process invoices for creditors and debtors, according to store policy and procedures. These tasks are performed under some supervision.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Process petty cash transactions.	1.1. Check petty cash claims for approval, accuracy and authenticity before processing. 1.2. Check and balance transactions according to <i>store policy and procedures</i> . 1.3. Note irregularities and refer to <i>relevant personnel</i> for resolution. 1.4. Process and record petty cash transactions within designated time limits.
2. Prepare banking documents.	2.1. Balance cashbook entries against record of takings. 2.2. Compile and balance deposit entries. 2.3. List cash and <i>non cash transactions</i> on banking deposit forms, according to the banking institution's guidelines. 2.4. Process in store credit systems according to store policy.
3. Process non cash transactions.	3.1. Balance non cash transactions and present <i>documentation</i> to relevant personnel for checking. 3.2. Note irregularities and refer to relevant personnel for resolution.
4. Reconcile invoices for payment to creditors.	4.1. Identify discrepancies between invoices and delivery notes and report to relevant personnel or section for resolution. 4.2. Identify errors in invoice charges and report to relevant personnel or section for correction or resolution. 4.3. Rectify discrepancies and errors as directed. 4.4. Process corrected and authorised invoices for payment within designated time limits. 4.5. Resolve creditor enquiries or refer to relevant personnel or section for resolution.
5. Prepare invoices for debtors.	5.1. Perform <i>preparatory calculations</i> to produce accurate customer invoices. 5.2. Complete relevant documentation to ensure accuracy of contents. 5.3. Distribute documents to relevant personnel or section for certification prior to being dispatched. 5.4. Dispatch verified documents within designated time limits. 5.5. Copy and <i>file</i> documents for auditing purposes.

## Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

### Required skills

- self management skills to complete tasks within a set timeframe
- literacy skills to interpret documentation
- numeracy skills to:
  - process petty cash transactions
  - receive and process deliveries
  - perform sales transactions
  - balance cashbook entries and takings
  - generate invoices
- interpersonal skills to:
  - refer and report irregularities, discrepancies and errors in transactions to relevant personnel
  - resolve creditor enquiries or refer to relevant personnel through clear and direct communication
  - ask questions to identify and confirm requirements
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication

### Required knowledge

- store policy and procedures in regard to:
  - register or terminal balance
  - security of cash and non-cash transactions
  - petty cash
  - cash balances
  - banking procedures
  - purchase requisitions or orders
  - issuing of receipts
  - delivery dockets
  - credit notes
  - statements
  - remittance advices
  - cash register rolls
  - deposit books
  - change required and denomination of change
  - operation of equipment used at register or terminal

- processing delivery and delivery document discrepancies
- invoicing procedures for debtors and creditors
- payment and invoice procedures, including GST requirements
- cash and non-cash handling procedures, including:
  - opening and closing point-of-sale terminal
  - clearance of terminal and transference of tender
  - maintenance of cash balances
  - counting cash
  - calculating non-cash documents
  - customer credit ratings
  - balancing point-of-sale terminal
  - recording takings
  - change required and denominations of change
  - EFTPOS
  - credit cards
  - processing of cheques
  - gift vouchers
  - lay-by
  - cash on delivery (COD)
  - lay-by
  - credits and returns
  - customer refunds

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- consistently applies store policy and procedures in regard to petty cash and non-cash transactions, invoicing, banking processes and processing delivery and document discrepancies
- consistently applies skills related to the reconciliation and payments of invoices for creditors and debtors, according to store policy and procedures.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a real or simulated work environment

- relevant documentation, such as:
  - store policy and procedures manuals
  - financial transaction dockets, slips and invoices
  - banking deposit forms
- EFTPOS facilities and equipment
- registers and related equipment
- relevant financial management systems.

### Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a role play
- third-party reports from a supervisor
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

### Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXADM001A Apply retail office procedures
- SIRXICT001A Operate retail technology.

## Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

***Store policy and procedures*** in regard to:

- store financial systems.

***Relevant personnel*** may include:

- manager
- supervisor
- team leader
- specialist staff.

***Non-cash transactions*** may include:

- EFTPOS and credit cards
- customer credit ratings
- cheques
- hire-purchase
- lay-by

**Documentation** may include:

- cash on delivery (COD)
- customer refunds.
- purchase requisitions
- purchase orders
- invoices
- receipts
- delivery dockets and receipts
- credit notes
- statements
- remittance advices
- cash register rolls
- deposit books.

**Preparatory calculations** may include:

- application of prior credit
- discounting
- quantity
- calculation of GST.

Methods used to *file* documents may include:

- manual
- electronic.

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Finance



## SIRXICT001A Operate retail technology

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to operate a variety of retail equipment. It involves identifying the correct equipment required for a given task, maintaining retail equipment, applying keyboard skills and operating data entry equipment.

### Application of the Unit

This unit applies to frontline service personnel who operate and maintain a range of retail equipment, including point-of-sale systems, keyboards and data entry equipment, according to manufacturer instructions, design specifications, store policy and designated timeframes. This work is undertaken with some supervision and guidance.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Maintain retail equipment.	1.1. Identify purpose of <i>equipment</i> used in store or department. 1.2. Operate equipment, according to design specifications and <i>safety requirements</i> . 1.3. Identify equipment faults and report to <i>relevant personnel</i> . 1.4. Identify and apply maintenance program for retail equipment according to <i>store policy and procedures</i> .
2. Apply keyboard skills.	2.1. Operate keyboard using typing techniques within designated speed and accuracy requirements. 2.2. Enter and edit information accurately.
3. Operate data entry equipment.	3.1. Enter data using relevant equipment, according to store policy and procedures. 3.2. Operate price marking equipment, according to manufacturer instructions and store policy. 3.3. Enter data accurately and within designated time limits.

### Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

#### Required skills

- planning and organising skills to complete tasks in set timeframe
- problem solving skills to deal with different types of transactions
- literacy and numeracy skills to:
  - read store procedures for operating equipment
  - enter data
  - perform point-of-sale transactions
  - follow common fault-finding procedures

#### Required knowledge

- store policy and procedures in regard to:
  - the operation and maintenance of store retail equipment
  - reporting problems and faults
- relevant legislation and statutory requirements in regard to operating retail technology, including Work Health and Safety (WHS) requirements
- relevant industry codes of practice
- purpose and impact of using electronic technology
- licensing requirements for carrying and moving merchandise (if applicable)

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- operates a range of store retail equipment according to store policy and procedures and industry codes of practice
- operates and maintains a range of store retail equipment according to manufacturer instructions and design specifications
- applies store maintenance program and reports faults and problems
- consistently applies safe working practices in the operation and maintenance of store retail equipment according to OHS legislation and codes of practice
- reads and interprets operation manuals to solve routine faults and errors and maintains and uses equipment effectively
- uses keyboard skills to enter and edit data accurately
- completes tasks in set timeframe.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a real or simulated work environment
- relevant documentation, such as:
  - store policy and procedure manuals
  - manufacturer instructions and operation manuals
- a range of store retail equipment.

### **Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a role play
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

***Equipment*** may include:

- point-of-sale terminals
- electronic bar coding equipment for price labelling and stocktaking
- portable data entry
- printers
- EFTPOS terminals
- electronic ordering equipment
- wrapping and packing equipment
- equipment for carrying or moving merchandise
- equipment for storage of merchandise, including refrigerators
- weighing machines
- thermometers
- security tag systems
- trolley return equipment
- computers
- scanners
- numerical keyboard equipment, including calculators.
- hazard identification (e.g. workplace inspections)
- emergency, fire and accident procedures
- personal safety procedures
- stress management
- procedures for the use of personal protective clothing and equipment

***Safety requirements*** may include:

- Relevant personnel** may include:
- reporting incidents and accidents in the workplace.
  - supervisor
  - team leader
  - manager.
- Store policy and procedures** in regard to:
- store administration
  - clerical systems
  - operating and maintaining retail equipment
  - Work Health and Safety (WHS).

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Computer Operations and ICT Management

## SIRXINV002A Maintain and order stock

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to maintain and order stock in a retail environment. It involves monitoring receipt and dispatch of goods, maintaining stock records, coordinating stocktake, identifying stock losses, processing orders and following up on orders.

### Application of the Unit

This unit applies to retail staff who are responsible for monitoring and coordinating stock levels, storage, distribution and reorder cycles. It includes rostering staff, organising and coordinating stocktakes, maintaining accurate records and routinely reporting on inventory status to relevant personnel according to store policy and procedures.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance criteria
<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
<p>1. Monitor receipt and dispatch of goods.</p>	<p>1.1. Delegate responsibility for receipt and dispatch of goods to <b><i>appropriate staff</i></b>.</p> <p>1.2. Implement store procedures in regard to receipt, dispatch and secure storage of goods.</p> <p>1.3. Observe <b><i>staff</i></b> functions to ensure store procedures are followed and documentation is completed correctly.</p> <p>1.4. Implement store procedures to ensure goods inspected for quantity and quality on receipt.</p> <p>1.5. Act upon variations to quantity and quality of delivered goods, according to <b><i>store policy and procedures</i></b>.</p> <p>1.6. Supervise safe <b><i>handling and storage of goods</i></b>, according to store policy.</p>
<p>2. Maintain stock records.</p>	<p>2.1. Monitor and maintain stock levels at required levels.</p> <p>2.2. Maintain, monitor and adjust stock reorder cycles as required.</p> <p>2.3. Inform team members of their individual responsibilities in regard to recording of stock.</p> <p>2.4. Maintain stock storage and movement <b><i>records</i></b>, according to store policy.</p> <p>2.5. Record stock discrepancies and follow procedures according to store policy.</p> <p>2.6. Monitor stock performance and identify and <b><i>report</i></b> fast and slow selling items according to store policy.</p>
<p>3. Coordinate stocktake or cyclical count.</p>	<p>3.1. Interpret policy and procedures in regard to <b><i>stocktaking</i></b> and cyclical counts and explain to team members.</p> <p>3.2. <b><i>Roster</i></b> staff, according to allocated budget and time constraints.</p> <p>3.3. Allocate stocktaking tasks to individual team members.</p> <p>3.4. Provide team members with clear directions for the performance of each task.</p> <p>3.5. Allocate team members to ensure effective use of staff resources to complete task.</p> <p>3.6. Produce accurate reports on stocktake data, including discrepancies, for management.</p>

- |                           |   |
|---------------------------|---|
| 4. Identify stock losses. | 4.1. Identify, record and assess losses against potential loss forecast on a regular basis.                                     |
|                           | 4.2. Identify avoidable losses and establish reasons.   |
|                           | 4.3. Recommend and implement possible solutions.  |
| 5. Process orders.        | 5.1. Process and raise orders for stock as requested, according to store policy and procedures.                                 |
|                           | 5.2. Maintain <b>ordering and recording system</b> .  |
|                           | 5.3. Ensure availability of sample range, according to buying plan.   |
|                           | 5.4. Order pricing materials as required.   |
|                           | 5.5. Record negotiated purchase and supply agreements and file for retrieval.   |
| 6. Follow up orders.      | 6.1. Monitor delivery process to meet agreed deadlines.   |
|                           | 6.2. Handle routine supply problems or refer to management as required by store policy.   |
|                           | 6.3. Maintain ongoing liaison with buyers, store or departments, warehouse and <b>suppliers</b> to ensure continuity of supply. |
|                           | 6.4. Distribute stock, according to store or department allocation.   |

## Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

### Required skills

- technical skills to:
  - use store stocktaking systems
  - use electronic recording equipment
- interpersonal skills to:
  - inform team members of their responsibilities and give instructions
  - explain policies and procedures to staff
  - allocate tasks and provide directions for performance of tasks
  - liaise with buyers, store and departments, warehouse and suppliers through clear and direct communication
  - ask questions to identify and confirm requirements
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication
- management skills to coordinate stock takes
- negotiation skills to handle supply problems
- literacy and numeracy skills to:
  - prepare and present stock control reports and documentation



- process orders
- maintain delivery and supply records
- maintain stock distribution records
- maintain stock ordering and recording systems

### Required knowledge

- store policy and procedures in regard to:
  - stock control
  - store merchandising system
  - current and future stock levels
  - bar codes, labels and price tags
  - store stock recording system
  - stock replenishment and reorder procedures
  - inter- and intra-store and department transfers
  - reporting of stock discrepancies and damage
  - identifying and recording stock losses
  - identifying and recording discrepancies
  - existing suppliers
  - quality control procedures and requirements
  - receipt and dispatch of goods, including inspection for quality and quantity
- relevant licensing requirements for moving stock mechanically
- relevant legislation and statutory requirements
- relevant industry codes of practice
- relevant Work Health and Safety (WHS) legislation and codes of practice

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

**Critical aspects for assessment** Evidence of the following is essential:

**and evidence required to demonstrate competency in this unit**

- consistently implements and monitors store policy and procedures regarding receipt, dispatch and secure storage of goods
- regularly monitors staff implementation of store procedures and documentation in regard to receipt, dispatch and secure storage of goods
- monitors stock levels, storage, movement and reorder cycles on a regular basis.
- organises and coordinates stocktake according to store

policy and procedures

- consistently raises and processes stock orders and maintains record system according to store policy and procedures
- monitors delivery processes and distributes stock to ensure continuity of supply.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
  - store policy and procedures for receipt and dispatch of goods
  - store procedures for stocktake
  - WHS legislation and codes of practice
  - industry codes of practice
  - legislation and statutory requirements
  - store merchandising and marketing policy and procedures
  - inter- and intra-store and department transfer procedures
  - store quality control procedures and requirements.

### **Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

### **Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## **Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

***Appropriate staff*** may include:

- frontline staff
- relevant managers

- supervisor
  - team leader
  - specialist staff.
- Staff** may include:
- full-time, part-time, casual or contract staff
  - people from a range of social, cultural and ethnic backgrounds
  - people with varying degrees of language and literacy levels.
- Store policy and procedures** in regard to:
- stock control
  - stock control system
  - recording procedures
  - procedures for investigating discrepancies
  - store merchandise and marketing
  - pricing, labelling and packaging requirements
  - quality control policy and procedures.
- Handling and storage of goods** may vary according to:
- stock characteristics
  - industry codes of practice.
- Records** may be:
- manual
  - digital.
- Reports** for management may include:
- financial reports
  - business documents
  - informal reports
  - stocktake reports.
- Stocktaking** may be:
- cyclical
  - compliance driven.
- Roster** may include:
- varying levels of staff training
  - staffing levels
  - routine or busy trading conditions
  - full-time, part-time or casual staff
  - range of staff responsibilities.
- Ordering and recording system** may be:
- manual
  - digital.
- Suppliers** may include:
- existing contacts
  - new contacts
  - local suppliers
  - overseas supplies.

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Inventory

## **SIRXINV004A Buy merchandise**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit descriptor**

This unit describes the performance outcomes, skills and knowledge required to buy merchandise in a retail environment. It involves analysing the market, planning the product range, establishing supplier relationships, negotiating supply of goods, introducing the product range, maximising profit and rationalising stock.

### **Application of the Unit**

#### **Application of the unit**

This unit requires the consistent application of store policy and legislative requirements in regard to market analysis, planning merchandise and service ranges, procurement and rationalisation of stock, maintenance of supplier relations, quality control and staff merchandise training. The team member is required to recognise known and unknown loss and how it affects buying and ordering patterns, and to interpret and apply market trends to the store situation to create opportunities to improve sales and service while maximising profits.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

#### **Prerequisite units**

Nil

**Prerequisite units** Nil

## Employability Skills Information

**Employability skills** The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Analyse market.	<p>1.1 Identify and analyse <b><i>store merchandise and marketing policy and procedures</i></b>.</p> <p>1.2 Monitor <b><i>customer requirements</i></b> formally and informally in order to evaluate market trends and customer needs.</p> <p>1.3 Research new products and services.</p> <p>1.4 Identify, evaluate, implement and review opportunities to improve sales.</p> <p>1.5 Monitor <b><i>merchandise range</i></b> to identify the demand for individual items and seasonal variations.</p> <p>1.6 Monitor market competition.</p>

ELEMENT	PERFORMANCE CRITERIA
2 Analyse factors affecting stock levels and range requirements.	2.1 Apply mathematical calculations to measure analyse and report on existing and potential stock loss and dissipation and its <i>impact on business operations</i> . 2.2 Analyse store or department sales figures to determine contribution rates of product lines. 2.3 Determine store or department space requirements and brand product mix according to store policy. 2.4 Determine future directions for merchandise ranges according to store policy.
3 Plan merchandise ranges.	3.1 Develop and implement buying plan according to outcomes of analysis and store policy. 3.2 Determine future directions for merchandise ranges according to store policy. 3.3 Liaise with <i>relevant personnel</i> to coordinate promotional and marketing activities. 3.4 Analyse store or department sales figures to determine contribution rates of product lines. 3.5 Determine investment levels with reference to previous years' sales figures, predicted demand and projected gross profit. 3.6 Identify and act upon contribution improvement opportunities. 3.7 Determine store or department space requirements and brand product mix according to store policy. 3.8 Determine stock levels according to peak seasons, special events and supplier lead time. 3.9 Analyse, evaluate and amend merchandise range and sources of supply according to management, staff and customer <i>feedback</i> .
4 Establish supplier relations.	4.1 Develop cooperative relationships with supplier representatives according to store policy. 4.2 Continuously review existing suppliers in regard to quality, profitability, service and delivery status. 4.3 Identify new suppliers and delete existing suppliers according to <i>performance indicators</i> .

ELEMENT	PERFORMANCE CRITERIA
5 Negotiate supply of goods.	<p>5.1 <i>Negotiate</i> and implement arrangements with suppliers according to store policy and procedures, and communicate to relevant personnel.</p> <p>5.2 Authorise special <i>pricing arrangements</i> and customer payment agreements and communicate to relevant staff and management personnel according to store policy.</p> <p>5.3 Monitor records of suppliers and stock for accuracy and legibility and take appropriate action where necessary.</p> <p>5.4 Identify <i>market factors</i> affecting supply and communicate to relevant personnel.</p> <p>5.5 Convey complete and accurate records of negotiations and agreements to relevant personnel within designated timelines.</p> <p>5.6 Take immediate corrective action where potential or actual problems with supply are indicated.</p> <p>5.7 Identify and develop new suppliers to maintain and improve sales and service delivery.</p> <p>5.8 Analyse, evaluate and amend stock range and source of supply according to management, staff and customer feedback.</p>
6 Monitor quality control.	<p>6.1 Establish merchandise quality standards with suppliers according to <i>legal requirements</i>, customer requirements and store policy.</p> <p>6.2 Monitor and ensure quality of merchandise during supply, manufacture and delivery processes.</p> <p>6.3 Record and analyse stock return figures against target figure.</p>
7 Introduce product ranges.	<p>7.1 Inform relevant personnel of new product ranges and advise on preferred location of merchandise.</p> <p>7.2 Implement <i>staff training</i> in product knowledge to introduce product range.</p> <p>7.3 Demonstrate or display new ranges to <i>staff</i> according to store merchandising plan.</p>



ELEMENT	PERFORMANCE CRITERIA
8 Maximise profit.	8.1 Calculate or estimate individual product range contributions against budget and targets. 8.2 Develop and implement product range assessment checks against budget and targets. 8.3 Calculate or estimate overall selling space contributions according to store merchandising plan. 8.4 Maximise profit margins in negotiations with suppliers. 8.5 Determine store pricing policies according to stated net profit margin in store merchandising plan and consumer law. 8.6 Negotiate specifications for <i>terms of trade</i> .
9 Rationalise stock.	9.1 Review and update stock range at regular intervals. 9.2 Identify stock lines to be <i>deleted</i> and take action to minimise adverse effect on profit. 9.3 <i>Consolidate stock</i> as required to maximise sales potential.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- evaluating and analysing:
  - market trends and projections
  - sales figures and investment levels
  - space requirements
- negotiation skills
  - interpersonal communication skills to:
    - liaise with relevant personnel
    - establish supplier relationships, negotiate supply of goods
    - provide information and training on product range
    - provide feedback and coaching through clear and direct communication

## **REQUIRED SKILLS AND KNOWLEDGE**

- ask questions to identify and confirm requirements
- give instructions
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication
- group presentation skills
- report writing
- using and applying technology, including electronic data interchange
- literacy and numeracy skills in relation to:
  - developing pricing policies
  - calculating and estimating product range contributions
  - calculating the cost of stock loss and dissipation
  - analysing stock figures.

The following knowledge must be assessed as part of this unit:

- store policy and procedures in regard to:
  - marketing
  - buying
  - profit margins
  - quality control
  - stock inventory levels: current and future
  - stock location and allocated areas
- staff product knowledge training
- industry and store information, including:
  - market needs
  - range of merchandise available
  - market competition
  - existing and possible new suppliers
  - channels of distribution
- relevant legislation and statutory requirements
- relevant industry codes of practice
  - pricing procedures, including GST requirements.

## **Evidence Guide**

### **EVIDENCE GUIDE**

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- consistently applies store policy and procedures, industry codes of practice, statutory requirements and regulations in regard to buying, merchandising and marketing practices
- applies market analysis, planning, procurement and rationalisation of stock and merchandise and service ranges, maintenance of supplier relations and quality control
- interprets market trends and applies these to the store situation to create opportunities to improve sales and services, while maximising profits
- analyses market and plans the introduction of a product and service range
- identifies suppliers, negotiates supply of goods, rationalises stock and monitors quality control
- trains and communicates information to and from staff or team members in regard to stock and merchandise and service range.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- relevant information and documentation, including:
  - store policy and procedures
  - legislation and statutory requirements
  - industry codes of practice
  - merchandise and supplier data.

### **Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback

## EVIDENCE GUIDE

- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

### Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

***Store merchandise and marketing policies*** may include:

- store culture
- current market position
- target market.

***Customer requirements*** may be monitored by:

- questionnaires
- surveys
- observation.

***Merchandise range*** may include:

- existing stock
- new stock.

## RANGE STATEMENT

***Impact on business operations*** may include:

- buying
- ordering patterns
- planning
- budgeting.

***Relevant personnel*** may include:

- frontline staff
- relevant managers
- supervisor
- team leader
- specialist staff.

***Feedback*** may be sought and given:

- verbally
- in writing
- in groups
- individually.

***Performance indicators*** may include:

- price
- quality
- performance
- supply reliability
- merchandise range.

***Negotiation*** process may include:

- face-to-face
- correspondence
- meetings
- telephone or electronic media.

***Pricing arrangements*** may include:

- cash on delivery (COD)
- cheque
- credit card
- invoice
- GST.

***Market factors*** may include:

- fashion trends

## RANGE STATEMENT

- product availability
  - sales performance.
- Legal requirements* may include:
- sale of second-hand goods
  - Trade Practices and Fair Trading Acts
  - licence, patent or copyright arrangements
  - pricing procedures, including GST requirements.
- Staff training* may include:
- on-the-job
  - off-the-job
  - one-on-one coaching
  - any combination of the above.
- Staff* may include:
- full-time, part-time, casual or contract staff
  - people from a range of social, cultural and ethnic backgrounds
  - people with varying degrees of language and literacy levels.
- Terms of trade* may include:
- special buys
  - payment terms
  - promotional deals with supplier.
- Stock lines may be *deleted* due to:
- changes in store policy and culture
  - sales performance
  - customer requirements
  - fashion trends
  - product availability
  - problems with supply.
- Methods to *consolidate stock* may include:
- movement of stock between departments or stores.

## **Unit Sector(s)**

**Sector** Cross-Sector

## **Competency field**

**Competency field** Inventory

## SIRXINV005A Control inventory

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to control inventory in a retail environment. It involves managing receipt, dispatch and storage of merchandise, and managing stock control.

### Application of the Unit

This unit applies to team members at a supervisory level who plan, coordinate and implement activities associated with the receipt, dispatch, storage and movement of merchandise. This includes observing maintenance procedures for storage areas and equipment, according to store policy and procedures and relevant legislation.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.



## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

<b>Element</b>	<b>Performance criteria</b>
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Manage receipt, dispatch and storage of merchandise.	1.1. Receive, dispatch and store merchandise according to <b><i>store policy and procedures</i></b> . 1.2. Determine cost-effective and efficient methods for goods movement according to store policy. 1.3. Implement maintenance procedures for storage areas and <b><i>equipment</i></b> according to store policy.
2. Manage stock control.	2.1. Implement store policy and procedures in regard to <b><i>stock control</i></b> and inventories. 2.2. Establish and implement store procedures to monitor and control stock levels. 2.3. Maintain budgeted stock levels. 2.4. Establish and implement stocktaking procedures. 2.5. Establish and implement <b><i>contingency plans</i></b> in regard to stock delivery times. 2.6. Document and prepare accurate <b><i>reports</i></b> on stock inventories.

### Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

#### Required skills

- technical skills to use electronic recording equipment
- time management skills to maintain stock levels according to store policy and procedure requirements
- literacy and numeracy skills to:
  - maintain stock control reports and documentation
  - process orders
  - maintain delivery and supply records
  - maintain stock distribution records
  - maintain stock recording systems

- analyse data
- prepare and present reports

### **Required knowledge**

- store policy and procedures in regard to:
  - receipt of goods from suppliers
  - dispatch of goods
  - shrinkage prevention
  - waste controls
  - safety controls
  - secure storage in an appropriate environment
  - equipment used to move stock
- store systems and equipment for stock recording and control
- inventory control
- storage security
- licensing requirements for operating moving equipment (if applicable)
- relevant legislation and statutory requirements
- relevant industry codes of practice
- Work Health and Safety (WHS) legislation and codes of practice

### **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit** Evidence of the following is essential:

- plans, coordinates and implements activities associated with receipt, dispatch, storage and movement of merchandise according to store policy and procedures, including OHS policies and guidelines
- implements maintenance procedures for storage areas and equipment according to store policy
- plans, coordinates and implements activities associated with stock control, including:
  - monitoring and controlling stock levels
  - establishing and maintaining stocktaking procedures
  - documenting and reporting on inventories according to store policy and procedures.

**Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
  - store policy and procedures on inventory control
  - legislation and statutory requirements
  - industry codes of practice
  - WHS legislation and codes of practice
- access to:
  - a stock control system
  - stock control equipment
  - a team.

**Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

**Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

***Store policy and procedures*** in regard to:

- receipt of goods from suppliers
- dispatch of goods
- shrinkage prevention
- waste controls
- safety controls
- secure storage
- stock control and inventories.

***Equipment*** may include:

- electronic bar coding equipment
- weighing machines
- thermometers

- climate control
  - cold storage units
  - storage fixtures
  - trolley return equipment
  - portable data entry
  - cutting equipment
  - protective clothing.
- Stock control* may include:
- stocktaking
  - monitoring stock levels
  - cyclical counts
  - minimisation of out-of-date stock
  - quality control.
- Contingency plans* may include:
- breakdowns
  - delays
  - floods
  - breakages.
- Reports* may include:
- business documents
  - informal reports
  - stocktake reports.

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Inventory

## **SIRXMER004A Manage merchandise and store presentation**

### **Modification History**

Not applicable.

### **Unit Descriptor**

**Unit descriptor** This unit describes the performance outcomes, skills and knowledge required to manage merchandise and store presentation.

### **Application of the Unit**

**Application of the unit** This unit requires the team member to apply knowledge of store merchandising to plan and manage store advertising and promotions, manage store pricing policies and housekeeping. It includes interpretation of and compliance with store layout and visual merchandising policies, developing and implementing procedures to manage merchandise pricing, and managing all aspects of store housekeeping, including contingency procedures. This role applies to frontline retail managers.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

**Prerequisite units** Nil

## Employability Skills Information

**Employability skills** The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Manage store merchandising.	<p>1.1 Ensure layout and presentation support market position and promote customer flow according to store <b><i>visual merchandising policies and plans</i></b>.</p> <p>1.2 Develop and implement layout assessment checks.</p> <p>1.3 Define standards for visual presentations and displays and clearly communicate to all staff</p> <p>1.4 Consult floor staff to assess customer response to space allocations.</p>
2 Plan and manage store advertising and promotions.	<p>2.1 Manage and implement store policies and procedures, in regard to store <b><i>promotional activities</i></b>.</p> <p>2.2 Organise activities in line with anticipated or researched customer requirements.</p> <p>2.3 Manage <b><i>promotions</i></b> in order to achieve maximum customer impact.</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	2.4 Negotiate arrangements with suppliers in regard to special promotional activities.
	2.5 Coordinate store activities to complement shopping centre or retail complex promotions.
	2.6 Develop and implement assessment checks to measure effectiveness of promotions, including layout, visual impact and customer response.
	2.7 Document and report on promotional activities.
3 Manage store pricing policies.	3.1 Maintain store pricing according to <i>organisation pricing policies and procedures</i> in regard to pricing.
	3.2 Maintain accurate information on pricing trends and changes and communicate to relevant staff.
	3.3 Develop and implement procedures for pricing according to store policies and <i>legislative requirements</i> .
4 Manage housekeeping.	4.1 Develop and implement store policies and procedures in regard to <i>store housekeeping and maintenance</i> .
	4.2 Develop and manage rosters or schedules, ensuring store housekeeping standards are monitored and maintained.
	4.3 Initiate <i>contingency plan</i> in the event of merchandise or store presentation problems.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- providing feedback on performance
- interpersonal communication skills to:
  - communicate store standards and expectations to staff
  - consult floor staff
  - negotiate arrangements with suppliers, through clear and direct communication
  - ask questions to identify and confirm requirements

## **REQUIRED SKILLS AND KNOWLEDGE**

- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication
- roster development
- report writing
- literacy skills in regard to:
  - researching, analysing and interpreting a broad range of written material
  - preparing rosters
  - preparing reports
  - documenting results

The following knowledge must be assessed as part of this unit:

- store policies and procedures, in regard to:
  - layout and presentation
  - advertising and promotions
  - pricing or marking down of goods, including risk assessment
  - housekeeping for premises, fittings, fixtures and equipment
  - store merchandise and service range
  - store merchandising plan
  - range and availability of new products and services
  - customer demand and market trends
  - product quality standards
- OHS legislation and codes of practice
- relevant legislation and statutory requirements
- relevant industry codes of practice
- pricing procedures, including GST requirements
- principles and techniques in:
  - visual merchandising
  - project management

## **Evidence Guide**

### **EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.



## EVIDENCE GUIDE

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- collaboratively plans layout and presentation of merchandise according to store policies and procedures
- assesses effectiveness of layout and presentation according to sales targets or predetermined objectives
- collaboratively plans, coordinates and implements advertising and promotions activities according to store policies and procedures
- assesses and reports on effectiveness of advertising and promotions to staff and management according to store policies and procedures
- collaboratively plans, coordinates and implements pricing activities according to store policies and procedures
- collaboratively plans, coordinates and implements housekeeping activities according to store policies and procedures and OHS legislation, regulations and codes of practice.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
  - store policy and procedures manuals
  - store merchandising plan
  - legislation and statutory requirements
  - OHS legislation, regulations and codes of practice
- a work team.

### **Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge.

Holistic assessment with other units relevant to the

## EVIDENCE GUIDE

industry sector, workplace and job role is recommended.

### Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

***Visual merchandising policies and plans*** may include:

- target market
- market research
- store image
- store layout and space availability
- seasonal lines
- pricing policy.

***Promotional activities*** may involve:

- external and in-store activities
- corporate or locally based activities
- dealing with advertising agencies and consultants.

***Promotions*** may include:

- advertising
- catalogues
- newspapers
- posters

## RANGE STATEMENT

- Organisation pricing policies and procedures* may include:
- radio or TV
  - suppliers
  - internet
  - website.
  - marking down of slow moving stock
  - soiled or damaged goods
  - goods close to use-by date
  - end of season stock
  - pricing policies, including GST requirements.
- Legislative requirements* may include:
- Trade Practices and Fair Trading Acts
  - consumer law.
- Store housekeeping and maintenance* may include:
- store premises
  - fittings
  - fixtures
  - equipment.
- Contingency plan* may include:
- major spillages
  - flood, storm or cyclone
  - breakages
  - blackout
  - break-in.

## Unit Sector(s)

Sector Cross-Sector

## Competency field

Competency field Merchandising



## SIRXMER201 Merchandise products

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXMER001A Merchandise products.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to merchandise products within a retail store. It involves the consistent application of store policies and procedures in regard to displaying, merchandising, ticketing, labelling, pricing and storing stock. It also includes the application of correct manual handling, storage and display techniques according to stock characteristics, industry codes of practice, and relevant legislation.

### Application of the Unit

This unit applies to frontline retail personnel.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

#### Element

#### Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |  |   |
|--|---|
| 1. Place and arrange merchandise.        | <p>1.1.Unpack <b><i>merchandise</i></b> according to <b><i>store policy and procedures</i></b> and <b><i>legislative requirements</i></b>.</p> <p>1.2.Place merchandise on floor, fixtures and shelves in determined locations according to work health and safety (WHS) legislative requirements.</p> <p>1.3.<b><i>Display</i></b> merchandise to achieve a balanced, fully-stocked appearance and promote sales.</p> <p>1.4.Identify damaged, soiled or out-of-date stock and take corrective action as required according to store procedures.</p> <p>1.5.Place stock range in line with fixtures, ticketing, prices and bar codes.</p> <p>1.6.Rotate stock according to stock requirements and store procedure.</p> <p>1.7.Ensure stock presentation conforms to special <b><i>handling techniques</i></b> and other <b><i>safety requirements</i></b>.</p> |
| 2. Prepare and apply labels and tickets. | <p>2.1.Prepare <b><i>labels and tickets</i></b> for window, wall or floor displays according to store policy.</p> <p>2.2.Prepare tickets using electronic equipment or neatly by hand according to design specifications and store procedures.</p> <p>2.3.Identify soiled, damaged, illegible or incorrect labels and tickets and take corrective action according to store procedures.</p> <p>2.4.Use, maintain and store electronic ticketing and labelling equipment according to manufacturer's instructions and store procedures.</p> <p>2.5.Place labels and tickets visibly and correctly on merchandise.</p> <p>2.6.Replace labels and tickets according to store policy.</p>   |
| 3. Maintain displays.                    | <p>3.1.Reset or dismantle unsuitable or out-of-date displays and <b><i>special promotion areas</i></b> as directed.</p> <p>3.2.Assist supervisor in selection of merchandise for display.</p> <p>3.3.Arrange and face up merchandise as directed and according to layout specifications and load-bearing capacity of fixtures.</p> <p>3.4.Maintain correct pricing and information on merchandise according to store procedures, industry codes of practice and</p>   |

- legislative requirements.
- 3.5. Identify optimum stock levels and replenish stock according to store policy.
- 3.6. Remove excess packaging and maintain display areas in a clean and tidy condition.
4. Protect merchandise.
- 4.1. Identify and apply correct handling, storage and display techniques according to stock characteristics and legislative requirements.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- literacy and numeracy skills to:
  - prepare machine or manual labels and tickets
  - read and interpret store procedures and guidelines
  - read and interpret manufacturer instructions
- self-management skills to complete tasks in a set timeframe
- technology skills to operate and maintain manual and electronic labelling and ticketing equipment

### Required knowledge

- store policies and procedures in regard to:
  - availability and use of display materials
  - correct storage of stock
  - correct storage procedures for labelling and ticketing equipment and materials
  - location of display areas
  - merchandise range
  - merchandising, ticketing and pricing of stock
  - scheduling for building or rotating displays
  - stock replenishment
  - stock rotation
  - store promotional themes, including advertising, catalogues and special offers
- correct manual handling techniques for protection of self and merchandise
- principles of display
- elements and principles of design and trends in retail design
- relevant WHS regulations, including:
  - manual handling
  - hygiene and sanitation

- hazardous substances
- labelling of workplace substances
- relevant legislation and statutory requirements relating to merchandising product
- pricing procedures, including inclusion and exclusion of GST
- relevant industry codes of practice relating to merchandising product

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- applies store policies and procedures and legislative requirements in regard to displaying, merchandising, ticketing, pricing and storing stock
- displays merchandise on floor, fixtures, shelves and display areas, in determined locations, according to special manual handling techniques and other safety requirements
- prepares display labels and price tickets for merchandise with regard to store policies and procedures
- operates, maintains and stores a range of ticketing equipment according to:
  - store policy and procedures
  - industry codes of practice
  - manufacturer instructions and design specifications
- identifies damaged, soiled or out-of-date stock and takes corrective action as required by store procedures and legislative requirements
- maintains display areas and replenishes stock as required according to store procedures and legislative requirements
- performs correct manual handling, storage and display techniques.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a real or simulated retail work environment
- a range of ticketing and pricing equipment
- merchandise for display
- display materials and props



- cleaning materials
- relevant documentation, such as:
  - store policy and procedure manuals on housekeeping, merchandising and WHS
  - manufacturer instructions and operation manuals for electronic ticketing equipment
  - relevant legislation and industry codes of practice.

### **Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

### **Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXSLS201 Sell products and services
- SIRXSLS002A Advise on products and services.

## **Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

***Merchandise*** may be characterised by:

- type
- brand
- size
- customer needs
- colour
- price.
- merchandising of stock
- preparing and displaying labels and tickets
- maintaining displays.
- pricing requirements, including GST requirements

***Store policy and procedures*** in regard to:

***Legislative***

- requirements** may include:
- industry codes of practice
  - discounted items
  - Australian Consumer law.
- Display** may include:
- setting new displays
  - maintaining existing displays.
- Handling techniques** may vary according to:
- stock characteristics
  - store policy
  - legislative requirements
  - industry codes of practice.
- Safety requirements** may relate to:
- transport, storage and handling of goods
  - hazardous substances
  - labelling of workplace substances.
- Preparation of **labels and tickets** may involve:
- pricing gun
  - shelf tickets
  - shelf talkers
  - written labels
  - swing ticketing
  - bar coding
  - price boards
  - header boards.
- Special promotion areas** may be:
- permanent or temporary
  - interior or exterior
  - publicly accessible
  - windows
  - shelves
  - wall fixtures
  - on floor.

## Unit Sector(s)

Cross-Sector

## Competency Field

Merchandising

## SIRXMER202 Plan, create and maintain displays

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXMER005A Create a display.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to identify requirements for displays, develop display ideas, obtain approval from relevant personnel, and plan and build displays. It also covers maintaining displays to meet the requirements of the product, the audience and the organisation.

### Application of the Unit

This unit applies to floor and sales team members responsible for merchandise displays for a retail business.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Identify requirements for displays.	1.1. Identify <i>purpose, audience</i> and products for each display. 1.2. Identify organisational requirements and research <i>relevant information</i> where required. 1.3. Identify available budget and <i>resources</i> required to create the display. 1.4. Identify and consider <i>constraints or factors</i> that may affect the creation of the display.
2. Develop display ideas.	2.1. Generate ideas for the display using <i>creative thinking techniques</i> . 2.2. Test ideas against display and <i>organisational requirements</i> . 2.3. Discuss <i>display options</i> with relevant personnel. 2.4. Modify display ideas and refine according to <i>feedback</i> and confirm with <i>relevant personnel</i> .
3. Plan and build displays.	3.1. Develop ideas into simple <i>display plans</i> . 3.2. Source resources, materials and products to meet plan requirements. 3.3. Create displays following display plans. 3.4. Seek assistance from relevant personnel where required. 3.5. Review display and make refinements as required.
4. Maintain displays.	4.1. Regularly clean and tidy displays and replace products as necessary according to display plans. 4.2. Make changes or alterations to the display as appropriate.

### Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication and interpersonal skills to:

- communicate display ideas to others
- seek and accept feedback through clear and direct communication
- use and interpret non-verbal communication
- use language and concepts appropriate to cultural differences
- creative thinking and design skills to generate ideas for improving displays
- initiative and enterprise skills to ensure efficient and cost-effective use of resources
- observation skills to identify when display needs to be changed, updated or altered
- sketching and writing skills to represent ideas in a simple display plan

### Required knowledge

- audiences for and required effects of displays
- basic design principles, including:
  - colour
  - flow of product
  - shape
  - use of space
- organisational requirements, including:
  - environment, health and safety compliance
  - location of displays
  - visual merchandising standards
- visual merchandising display options

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- identifies the requirements for new displays
- creates display plans that meet the requirements of the product, audience and organisation
- plans and builds displays, according to plans
- maintains displays.

### Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail work environment
- relevant documentation, such as store policy and procedures manuals
- display space
- a range of display products and materials.

<b>Method of assessment</b>	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: <ul style="list-style-type: none"><li>• observation of performance in the workplace</li><li>• third-party reports from a supervisor</li><li>• customer feedback</li><li>• written or verbal questioning to assess knowledge and understanding.</li></ul>
<b>Guidance information for assessment</b>	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Purpose</i></b> of display may include:	<ul style="list-style-type: none"><li>• attracting customers into the store</li><li>• new products</li><li>• new range</li><li>• promotion</li><li>• sale.</li></ul>
<b><i>Audience</i></b> for display may include:	<ul style="list-style-type: none"><li>• internal and external foot or vehicular traffic</li><li>• new or repeat customers</li><li>• people from a range of social, cultural and ethnic backgrounds</li><li>• people with varying physical and mental abilities</li><li>• people of different ages</li><li>• people with varying degrees of language and literacy.</li></ul>
<b><i>Relevant information</i></b> may be sourced from:	<ul style="list-style-type: none"><li>• colleagues</li><li>• direct observation</li><li>• internet</li><li>• magazines</li><li>• marketing personnel</li><li>• technical personnel</li><li>• written reports.</li></ul>
<b><i>Resources</i></b> may include:	<ul style="list-style-type: none"><li>• equipment and technology</li><li>• fixtures and fittings</li></ul>

- labels and tickets
  - new or recycled materials
  - staff
  - time.
- Constraints or factors*** may include:
- availability of materials
  - budget
  - product characteristics
  - space
  - staff
  - time.
- Creative thinking techniques*** may include:
- brainstorming
  - creative writing
  - drawings
  - lateral thinking
  - mind mapping
  - product association
  - telling stories
  - using prompts
  - visualising.
- Organisational requirements*** may include:
- aesthetics
  - allocated space
  - branding
  - budget
  - work health and safety (WHS)
  - organisational standards
  - staff
  - store policy and procedures, including:
    - housekeeping and waste disposal procedures
    - WHS procedures.
- Display options*** may include:
- indoor or outdoor
  - lighting
  - sound
  - static or moving.
- Feedback*** may be sought and received:
- in groups
  - in writing
  - individually
  - verbally.
- Relevant personnel*** may include:
- external personnel with visual merchandising expertise
  - manager
  - team leader.
- Display plans*** may
- checklist of materials and equipment required

include:

- simple sketches of planned display.

## **Unit Sector(s)**

Cross-Sector

## **Competency Field**

Merchandising



## SIRXMER303 Coordinate merchandise presentation

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXMER002A Coordinate merchandise presentation.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to apply knowledge of store merchandising and pricing policy and standards to support and coordinate relevant frontline staff members and ensure that they arrange, present and label or price merchandise according to store requirements.

It also involves informing staff of store merchandise presentation requirements for sales, promotions and special events, and providing feedback to management in regard to improvement of store marketing and promotional activities.

### Application of the Unit

This unit applies to frontline visual merchandisers who supervise sales and other staff implementing and maintaining displays according to store merchandising standards.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Instruct and coordinate staff.	<p>1.1. Communicate and demonstrate store <i>display standards and requirements</i> to staff.</p> <p>1.2. Identify occurrence and timing of promotions and special events and inform staff.</p> <p>1.3. Identify items to be advertised or promoted, according to store merchandising policy and inform staff.</p> <p>1.4. Identify appropriate timing for dismantling and disposing of displays and inform staff.</p>
2. Supervise construction and maintenance of presentations.	<p>2.1. Plan and coordinate promotions and special events as directed by management.</p> <p>2.2. Plan and supervise construction and maintenance of <i>displays</i> in order to achieve balance and visual impact.</p> <p>2.3. Ensure product or service <i>display information</i> accurately depicts product or service being promoted.</p> <p>2.4. Ensure displays are completed according to required time schedule, with minimum disruption to <i>customer</i> service and traffic flow.</p> <p>2.5. Ensure displays are constructed and maintained in a safe and secure manner.</p> <p>2.6. Regularly monitor replenishment of merchandise and rotation of stock on store displays and take action as required.</p>
3. Implement merchandise pricing.	<p>3.1. Implement store policy and procedures in regard to pricing and ticketing.</p> <p>3.2. Identify current prices for products and services and amend according to store policy.</p> <p>3.3. Inform team members of price changes and current pricing policies.</p>
4. Review merchandise presentations.	<p>4.1. Evaluate promotions or special events against sales turnover and store presentation standards.</p> <p>4.2. Evaluate merchandise presentation against sales turnover and store presentation standards.</p> <p>4.3. Provide management with feedback in regard to improvement of</p>

store marketing and promotional activities.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication and interpersonal skills to:
  - give instructions
  - provide feedback to management through clear and direct communication
  - provide information to staff
  - share information
  - use and interpret non-verbal communication
  - use language and concepts appropriate to cultural differences
- literacy and numeracy skills to:
  - prepare machine or manual labels and tickets
  - present and price merchandise
  - read and interpret store policies and procedures
- observation skills to assess display and presentation compliance with visual merchandising standards
- technology skills to operate and maintain electronic labelling and ticketing equipment
- team leadership skills to:
  - instruct and support staff
  - supervise staff activities

### Required knowledge

- availability and use of materials
- correct storage procedures for labelling and ticketing equipment and materials
- load-bearing capacity of fixtures and display areas
- location of display areas
- manufacturer specifications for the use of electronic labelling and ticketing equipment
- occurrence and timing of store promotions, including advertising, catalogues and special offers
- pricing procedures, including GST requirements
- principles and techniques of interpersonal communication skills
- principles of display and design
- procedure for accessing information and implementing price changes
- relevant industry codes of practice relating to coordinating merchandise presentation
- relevant legislation and statutory requirements relating to coordinating merchandise presentation, including Australian Consumer Law

- relevant work health and safety (WHS) legislation and codes of practice
- store policies and procedures in regard to:
  - efficient use of resources
  - merchandise range
  - merchandising, pricing and ticketing
  - minimum stock levels required
  - stock rotation and replenishment
  - storage of stock
- store promotional themes

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- implements and instructs staff regarding store display, merchandising, ticketing and pricing policies and procedures
- coordinates and monitors display, promotion and presentation of merchandise according to store policies and procedures and legislative requirements
- identifies products to be advertised or promoted according to store merchandising policies
- coordinates construction and maintenance of displays within time schedule set in regard to advertising, catalogues, special offers and in-store promotions in a safe and secure manner
- informs staff of pricing policies, promotions, special events, display standards and requirements, and timing for dismantling and disposing of displays
- evaluates and reports effectiveness of store merchandising and promotional activities to management and staff as required by store policies and procedures.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a real or simulated retail work environment
- pricing and ticketing equipment
- merchandise for display
- display materials and props
- relevant documentation, such as:
  - store policy and procedures manuals on merchandising
  - WHS requirements

- manufacturer instructions and operation manuals on electronic ticketing equipment
- legislation and statutory requirements
- industry codes of practice
- a work team.

**Method of assessment** A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge.

**Guidance information for assessment** Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

***Display standards and requirements*** may include:

- maintaining existing displays
- safety
- setting up new displays
- ticketing and display signage.

***Staff*** may be:

- from a range of social, cultural and ethnic backgrounds
- from within or outside own work team
- full-time, part-time, casual or contract.

***Displays*** may be located in a variety of areas, including:

- fixtures on floor
- interior or exterior
- permanent or temporary
- publicly accessible areas
- shelves
- walls
- windows.

***Display information*** may include:

- discount information
- price

- product brand
- special guarantees
- product characteristics, such as:
  - size
  - weight capacity
  - materials.

*Customers* may include:

- internal and external contacts
- new or repeat contacts
- people from a range of social, cultural and ethnic backgrounds
- people with varying physical and mental abilities.

## **Unit Sector(s)**

Cross-Sector

## **Competency Field**

Merchandising

## SIRXMER406 Monitor in-store visual merchandising display

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXMER003A Monitor in-store visual merchandising display.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to interpret organisational visual merchandising plans and manuals and monitor in-store displays to ensure that they reflect and maintain current organisational visual merchandising directions.

It involves applying fundamental design principles, making decisions with regard to merchandise for display, and ensuring that displays contribute to the visual merchandising standards of the organisation and are constructed and located to ensure customer and staff safety.

### Application of the Unit

This unit applies to frontline visual merchandising team members and other staff with a responsibility for monitoring displays to ensure they reflect and maintain current organisational visual merchandising directions.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

<b>Element</b>	<b>Performance Criteria</b>
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Interpret a visual merchandising plan.	1.1. Identify <i>design requirements</i> of visual merchandising plan or manual. 1.2. Source <i>resources required</i> to implement plan. 1.3. Identify <i>factors that may affect the plan</i> . 1.4. Apply organisation's visual merchandising standards to the plan.
2. Monitor display requirements.	2.1. Regularly monitor display to ensure it meets the requirements of the <i>visual merchandising plan</i> . 2.2. Identify <i>damage or changes to the display</i> . 2.3. Take action to rectify unwanted changes to the display.
3. Maintain displays in line with organisational requirements and plan.	3.1. Maintain display so that it is clean and tidy. 3.2. Make additions or changes to display to ensure it consistently adheres to the visual merchandising plan. 3.3. Maintain organisation's requirements for visual merchandising in the display.
4. Contribute to the visual merchandising standards of the organisation.	4.1. Interpret visual merchandising standards of the organisation. 4.2. Identify opportunities for improving visual merchandising standards. 4.3. Make contributions to the visual merchandising standards as appropriate.

### Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

#### Required skills

- artistic interpretation skills to create displays according to visual merchandising standards
- communication skills to share ideas
- creative thinking skills to generate ideas for improving visual merchandising standards
- literacy skills to interpret visual merchandising manuals



- observation skills to identify damage to displays or deviations from visual merchandising standards
- practical skills to maintain and update displays according to the visual merchandising plan

### Required knowledge

- basic design principles
- basic principles of visual merchandising
- work health and safety (WHS) requirements relating to monitoring displays
- organisation's visual merchandising principles
- resources required to implement visual merchandising plans
- procedures for safe use of tools, equipment and materials used in visual merchandising displays

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- interprets and identifies the design requirements of a visual merchandising plan
- monitors the display closely and completes regular maintenance to ensure it meets the requirements of the visual merchandising plan and the organisation's visual merchandising standards
- contributes appropriately to the ongoing development of the organisation's visual merchandising standards.

### Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated retail visual merchandising work environment
- relevant documentation, such as:
  - store policy and procedures manuals
  - store visual merchandising standards.

### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge.

### Guidance information

Holistic assessment with other units relevant to the industry sector,

**for assessment** workplace and job role is recommended.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

### ***Design requirements***

may include:

- colours used
- functionality
- layout of display
- location of display in store
- merchandise for display
- size of display.

***Resources required*** may include:

- fixtures and fittings
- lights
- materials
- people
- supports
- time.

***Factors that may affect the plan*** may include:

- availability of display stands and structures
- availability of staff
- budget requirements
- merchandise availability
- store promotions
- time requirements.

***Visual merchandising plan*** may include:

- display location
- retail image
- store plan and design.

***Damage or changes to the display*** may include:

- changes in the appearance of the display
- damage to fixtures, fittings or display supports
- damage to items on display.

## Unit Sector(s)

Cross-Sector

# Competency Field

Merchandising

## SIRXMPR001A Profile a retail market

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to profile a retail market.

### Application of the Unit

This unit applies to personnel responsible for reviewing the image of the store, researching market demands, profiling store customers and implementing methods to attract customers to the store.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Review the image of the store.	1.1. Analyse the <b><i>components of the store image</i></b> . 1.2. Access and analyse relevant <b><i>store documentation</i></b> in relation to store image. 1.3. Promote the store image in an appropriate manner.
2. Research market demands for the store.	2.1. Select an <b><i>appropriate area for research</i></b> of market demands. 2.2. Use appropriate <b><i>market research techniques</i></b> according to <b><i>store policy</i></b> . 2.3. Plan market research according to store policy and procedures. 2.4. Collect, analyse and present <b><i>data</i></b> in an appropriate manner.
3. Profile the store's customers.	3.1. Research the demography of the store's <b><i>customers</i></b> . 3.2. Develop a demographic <b><i>profile</i></b> . 3.3. Access information about <b><i>changing trends</i></b> and relate to <b><i>customer demands</i></b> .
4. Implement methods to attract customers to store.	4.1. Access and analyse information about the customer. 4.2. Generate <b><i>ideas</i></b> to develop <b><i>methods for attracting customers</i></b> . 4.3. Select and develop a suitable idea in collaboration with others in the organisation. 4.4. Present and discuss the idea with <b><i>relevant personnel</i></b> . 4.5. <b><i>Evaluate</i></b> the idea to ensure that it meets the requirements for the target customers.

### Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

#### Required skills

- interpersonal skills to:
  - carry out market research
  - generate ideas and discuss with relevant personnel through clear and direct communication

- ask questions to identify and confirm requirements
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication
- collaborate with team members
- literacy and numeracy skills to:
  - interpret store policy and procedures
  - conduct research
  - analyse data
  - generate reports

### **Required knowledge**

- store policy and procedures in regard to:
  - accessing documentation
  - promoting store image
- market research methods
- evaluation methods
- creative thinking techniques
- techniques in interpersonal communication

### **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit** Evidence of the following is essential:

- analyses components of the store image by accessing relevant store documentation
- promotes the store image in an appropriate manner
- researches market demands using appropriate market research techniques
- accurately profiles store customers
- generates ideas for attracting customers to store
- selects and develops a suitable idea in collaboration with others
- presents and discusses idea with supervisor
- evaluates idea to ensure that it meets requirements for target customers
- implements the idea according to store policies and budgetary requirements.

**Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
  - store policy and procedures manuals
  - store documentation in relation to store image
  - market data.

**Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the candidate in the workplace
- third-party reports from a supervisor
- case studies
- research reports
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

**Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

***Components of the store image*** may include:

- logo
- products
- services
- layouts
- displays
- tickets
- visual merchandising
- promotional events and themes.

***Store documentation*** may include:

- sales reports
- customer surveys
- market research.

***Appropriate areas for research***

- location

may focus on:

- consumer
- product
- brand
- price
- layout
- advertising.

**Market research techniques**

may include:

- interviews
- observations
- surveys
- questionnaires.

**Store policy** may relate to:

- marketing
- market research.

**Data** may include:

- internal: customer orders, random surveys, complaints, returns
- external: ABS statistics, books, newspaper reports, supplier information.

**Customers** may include:

- new or repeat contacts
- external and internal contacts
- business customers or individuals
- customers with routine or special requests
- people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities.

Demographic **profile** may include:

- age
- buying power
- family structures
- employment patterns
- education levels
- tourism
- mobility
- occupations
- marital status
- cultural and ethnic background
- income levels
- population size.

**Changing trends** may include:

- tourism
- immigration
- technology
- selling approaches



**Customer demands** may vary according to:

- leisure time
- environmental issues
- discount operators
- quality demands
- advances in technology.
- preference
- health factors
- age
- cultural group
- dietary issues
- price.

**Ideas** may be generated using techniques such as:

- product association
- brainstorming
- visualising
- telling stories
- creative writing
- lateral thinking
- mind mapping, drawings
- using prompts.

**Methods for attracting customers** may include:

- advertising
- seasonal promotions
- new product launches
- public relations
- publicity.

**Relevant personnel** may include:

- team leader
- supervisor
- manager.

Methods used to **evaluate** ideas may include:

- developing checklists
- discussing the process with colleagues or supervisors
- writing a report of the outcomes.

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Marketing and Public Relations

## SIRXPRO007A Improve supply and distribution chains

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to identify, evaluate and implement ways to improve supply and distribution chains for a retail or wholesale business.

### Application of the Unit

This unit applies to personnel who are responsible for identifying, evaluating and implementing ways to continuously review and improve the supply and distribution of products or services for a retail or wholesale business. It includes maintaining continuity of supply whereby inventory can meet requirements for production, sales, distribution and service commitments provided to another business or directly to the end customer.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Confirm features of specific supply chains.	1.1. Determine position of the business in the supply chain. 1.2. Analyse features and impact of <b><i>business relationships</i></b> with <b><i>suppliers</i></b> to the business. 1.3. Establish <b><i>benchmarks</i></b> of supply chain efficiency.
2. Maintain information on suppliers.	2.1. Obtain and store <b><i>information on suppliers</i></b> of products and services to a retail or wholesale business according to <b><i>business policy and procedures</i></b> . 2.2. Update and regularly review information on suppliers of products and services to a business. 2.3. <b><i>Store information</i></b> on nature and feature of business relationship with suppliers to a retail or wholesale business and report, according to confidentiality, security, and business requirements.
3. Review distribution arrangements.	3.1. Review, compare and analyse sales, customer satisfaction and performance reports. 3.2. Review factors affecting supply of retail or wholesale products and services.
4. Devise policy and procedures for distribution and supply.	4.1. Establish policy and procedures for supply and distribution to business customers and end consumers. 4.2. Establish procedures to collect and analyse information on distribution chain management.
5. Forecast future contingencies affecting supply chain management.	5.1. Analyse forecasted market demand to confirm future requirements. 5.2. Communicate forward supply needs for the business to suppliers according to policy and contract provisions. 5.3. Confirm factors affecting forward purchasing and supply arrangements. 5.4. Set standards for supply of products and services to the business in qualitative and quantitative terms. 5.5. Communicate procedures for enforcing quality of supply to the business to relevant internal and external personnel.
6. Improve supply and distribution chain	6.1. Evaluate supply chain against agreed benchmarks and overall

- effectiveness. impact on business performance.
- 6.2. Benchmark comparative performance of supply chain against best in class or competitors.
  - 6.3. Assess *factors affecting future distribution and supply* of products.
  - 6.4. Make recommendations to relevant personnel to respond to opportunities for improvements in customer supply and distribution relationships.
  - 6.5. Confirm impact of proposed improvements to supply and distribution activities against budget and operational plans.
  - 6.6. Use prevailing trading terms to enhance supply and distribution chain management.
  - 6.7. Generate reports on business relationships with suppliers to the business using available business technology and agreed measures.
  - 6.8. Complete *reports* to *relevant personnel* (internal and external to operational unit) to promote recommended implementation of improvement to supply and distribution chain.

## Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

### Required skills

- interpersonal skills to:
  - communicate forward business needs to suppliers
  - communicate procedures to relevant internal and external personnel through clear and direct communication
  - ask questions to identify and confirm requirements
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication
- literacy and numeracy skills to:
  - interpret a range of workplace documentation
  - access and maintain information on suppliers
  - generate reports and recommendations for supply and distribution chain improvement to relevant personnel
- analytical skills to collect, organising and evaluate information
- management skills to:
  - implement benchmarks of supply chain efficiency
  - devise effective policy and procedures

## Required knowledge

- relevant business policy and procedures
- principles and techniques in analysis, assessment, development and implementation
- approval processes and key personnel
- supply cycle
- supply chain for business and typical supply chain models used in different industry sectors and businesses
- procedures for collecting and analysing distribution chain management
- position of the business in the supply chain
- factors affecting supply and distribution management
- work and team priorities
- current forecasts and trends
- market information and data collection
- sales plans
- principles and techniques for measuring supply chain efficiency and quality standards
- Work Health and Safety (WHS) aspects of job
- relevant commercial law and legislation

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit** Evidence of the following is essential:

- evaluates and seizes opportunities to improve supply chain for a product or service within an operational context
- identifies and understands a range of current and emerging supply chain management models
- applies tools to measure and quantify supply chain quality standards and efficiency for a retail or wholesale business
- develops clear and effective policy and procedures for wholesale or retail distribution or supply activities
- develops and implements realistic and measurable performance benchmarks for supply and distribution into a business.

**Context of and specific**

Assessment must ensure access to:

**resources for assessment**

- a retail or wholesale work environment
- relevant sources of supply chain information
- relevant documentation, such as:
  - policy and procedure manuals
  - supply and distribution reports
  - supplier records
- a range of suppliers.

**Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

**Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

***Business relationships*** may be influenced by:

- due diligence requirements
- risk sharing
- market position
- planning cycles and timing
- cost and price analysis
- terms and conditions agreed
- intellectual property and technology rights
- value management
- continuous improvement
- supply chain management
- infrastructural and capital outlay requirements
- organisational systems integration and compatibility.

***Suppliers*** may be:

- commercial companies

- public agencies or organisations
  - governments
  - community and not-for-profit organisations
  - internal.
- Benchmarks** may include:
- Australian standards
  - international standards
  - professional standards
  - industry standards
  - performance indicators
  - quality measures and criteria
  - planning milestones and timeframes
  - manufacturer and supplier standards.
- Information on suppliers** may include:
- representative's name and contact details
  - range of products and/or services
  - transaction records
  - contact history
  - account terms
  - prices
  - dispatch and shipping procedures
  - records of supplier performance
  - details of items supplied or returned.
- Business policy and procedures** may relate to:
- purchasing
  - supply and distribution of products or services
  - approval processes
  - storage and transport of goods.
- Methods used to **store information** may be:
- manual
  - electronic or digital.
- Factors affecting future distribution and supply** of retail or wholesale products and services may include:
- merchandise availability
  - transport availability
  - time requirements
  - budget requirements
  - logistics.
- Relevant personnel** may include:
- manager or supervisor
  - colleagues
  - business or area manager
  - specialist or technical personnel.
- Reports** may be delivered:
- verbally
  - in writing



- in groups
- individually.

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Product Management

## SIRXRSK002A Maintain store security

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
Second Release	Editorial updates

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to maintain store security in a retail environment. It involves implementing store policy and procedures to ensure store security, informing team members and providing ongoing supervision and training to facilitate awareness and detection of theft.

### Application of the Unit

This unit applies to team leaders and supervisors who interpret, apply and monitor security procedures according to store policy, industry codes of practice, relevant legislation and statutory requirements. A person undertaking this role maintains frontline security as well as reporting security concerns and providing ongoing supervision and training for staff on security procedures.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Monitor and maintain store security.	<p>1.1. Implement <i>store policy and procedures</i> to ensure store security is maintained.</p> <p>1.2. Monitor and review <i>security procedures</i>, according to store policy and <i>legislative requirements</i>.</p> <p>1.3. Implement procedures to minimise theft of easily stolen merchandise.</p> <p>1.4. Maintain security of cash, cash register and keys according to store policy.</p> <p>1.5. Implement store procedures in regard to <i>transactions</i>.</p> <p>1.6. Inform <i>team members</i> of store policy and procedures in regard to security.</p> <p>1.7. Provide team members with <i>feedback</i> in regard to implementation or non implementation of store security procedures.</p> <p>1.8. Provide staff with ongoing supervision and <i>training</i> to facilitate awareness and detection of theft.</p> <p>1.9. <i>Report</i> matters likely to affect store security, according to store policy.</p>
2. Facilitate awareness and detection of theft.	<p>2.1. Inform <i>team members</i> of store policy and procedures in regard to security.</p> <p>2.2. Provide team members with <i>feedback</i> in regard to implementation or non implementation of store security procedures.</p> <p>2.3. Provide staff with ongoing supervision and <i>training</i> to facilitate awareness and detection of theft.</p>

### Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

#### Required skills

- interpersonal skills to:
  - provide information, feedback and training to staff

- report relevant matters through clear and direct communication
- ask questions to identify and confirm requirements
- share information
- give instructions
- use and interpret non-verbal communication
- provide team leadership
- literacy skills to:
  - interpreting and applying Work Health and Safety (WHS) documents
  - reporting procedures
  - analytical skills to evaluate performance analysis

### **Required knowledge**

- store policy and procedures in regard to:
  - security
  - cash and non-cash transactions
  - external or internal theft
  - suspicious circumstances
  - armed robbery
  - staff security training
  - procedures for opening and closing premises
- relevant legislation and statutory regulations, particularly in relation to checking of customers' bags and purchases
- types of store alarm and security systems used in the retail industry

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit** Evidence of the following is essential:

- consistently applies store policy and procedures, industry codes of practice, relevant legislation and statutory requirements in regard to store security
- accurately applies relevant legislation and statutory regulations particularly in regard to checking of customers' bags and purchases
- interprets, applies and monitors security procedures in regard to:
  - cash handling, and cash and non-cash transactions

- internal or external theft or suspicious circumstances
- armed robbery
- opening and closing premises
- implements store policy and procedures in regard to:
  - reporting on matters related to store security
  - staff security supervision and training.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
  - store policy and procedures in regard to security
  - legislation and statutory requirements
  - WHS legislation
- relevant equipment such as:
  - alarm systems
  - point-of-sale equipment
  - communication equipment.

### **Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- third-party reports from a supervisor
- observation of performance in the workplace
- a role play
- customer feedback
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

### **Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIRXOHS002A Maintain store safety.

## **Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the

performance criteria is detailed below.

***Store policy and procedures*** in regard to:

- security
- checking bags
- cash and non-cash transactions
- surveillance of merchandise
- reporting problems and faults.

***Security procedures*** may deal with:

- customers
- staff or staff property
- visitors, sales representatives, contractors and vendors
- stock
- records
- cash and cash movement
- equipment
- premises
- opening and closing of premises
- theft
- armed robbery
- events likely to endanger customers or staff.

***Legislative requirements*** may include:

- privacy or confidentiality laws
- Trade Practices and Fair Trading Acts
- consumer law
- awards or agreements
- property offences
- credit laws
- reporting procedures
- criminal law.

***Transactions*** may include:

- cash
- EFTPOS
- cheques
- credit cards or store cards
- smart cards
- lay-by
- returns
- exchanges
- gift vouchers.

***Team members*** may include:

- small work teams
- store team
- corporate team

- full-time, part-time, casual or contract staff
- people with varying degrees of language and literacy
- people from a range of cultural, social and ethnic backgrounds
- people with a range of responsibilities and job descriptions.

**Feedback** may be given:

- verbally
- in writing
- in groups
- individually.

**Training** may include:

- mentoring or coaching
- off-the-job training
- on-the-job training.

**Report** may be:

- verbal
- written
- formal
- informal.

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Risk Management and Security

## SIRXRSK404 Control store security

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXRSK004A Control store security.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to control store security according to organisational policy and relevant legislation.

It involves developing and implementing security procedures for the prevention of theft, ensuring the safety of all personnel in the event of a robbery, and monitoring all security procedures.

### Application of the Unit

This unit applies to team members responsible for facilitating the detection and prevention of theft and stock loss and the safety and security of staff and customers in the event of robbery.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.



## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

#### Element

#### Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |   |  |
|---|--|
| 1. Develop store security procedures.               | <p>1.1. Consider store requirements and identify <i>security procedures</i> required to maximise safety of staff, customers and assets.</p> <p>1.2. Develop procedures to facilitate the detection and prevention of internal or external theft according to <i>organisational policy and procedures</i>.</p> <p>1.3. Develop procedures to ensure maximum safety and security of <i>staff</i> and customers in the event of robbery.</p> <p>1.4. Develop procedures for opening and closing premises and cash registers, cash security and <i>non cash transactions</i>.</p> <p>1.5. Finalise, document and process security procedures according to organisational policy.</p> |
| 2. Implement and monitor store security procedures. | <p>2.1. <i>Communicate security procedures</i> to staff according to organisational policy and procedures.</p> <p>2.2. Implement and monitor security procedures to facilitate the detection and prevention of internal or external theft according to organisational policy and procedures.</p> <p>2.3. Implement and monitor procedures to ensure maximum safety and security of staff and customers in the event of robbery.</p> <p>2.4. Develop and implement procedures for opening and closing premises and cash registers, cash security and non cash transactions.</p> <p>2.5. Monitor and maintain implementation of security procedures.</p>                           |
| 3. Minimise stock loss and dissipation.             | <p>3.1. Measure and analyse existing, and extrapolate potential, stock loss or dissipation through theft.</p> <p>3.2. Report on stock loss or dissipation through theft, its <i>impact on business operations</i> and possible solutions.</p> <p>3.3. Establish and implement <i>stock control procedures</i> to monitor, control and minimise stock loss through theft.</p>   |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication and interpersonal skills to:
  - ask questions to identify and confirm requirements
  - converse clearly and directly with staff
  - use and interpret non-verbal communication
- literacy and numeracy skills to:
  - access and interpret store policy documents
  - calculate the cost of stock loss
  - document security procedures
  - handle cash
  - maintain records
- research and analysis skills to:
  - analyse stock control data
  - develop procedures
- problem-solving skills to establish and implement stock control procedures

### Required knowledge

- organisational policy and procedures that relate to the development of store procedures for:
  - security
  - detection and apprehension of thieves
  - non-cash transactions
  - cash handling
  - stock control
- principles and techniques for:
  - detecting and preventing theft
  - ensuring safety of personnel in the event of robbery
- relevant codes of practice, legislation and statutory requirements, including:
  - industry codes of practice
  - retail case law or common law
  - state laws relating to property offences
  - work health and safety (WHS) legislation

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- develops and implements security procedures to facilitate the detection and prevention of theft
- develops and implements procedures to ensure safety and security of internal and external clients in the event of robbery
- calculates, analyses and reports on the cost and potential impact of identified loss and dissipation on:
  - buying
  - ordering patterns
  - planning
  - budgeting
- develops and implements procedures for:
  - opening and closing premises
  - cash security
  - non-cash transactions
  - stock control to minimise loss and dissipation
- communicates procedures to staff and monitors implementation.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
  - store policy and procedures on:
    - security
    - cash handling and non-cash transactions
    - stock control, including buying, ordering, planning and budgeting
  - relevant legislation and statutory requirements
  - industry codes of practice
  - WHS legislation and codes of practice
- a team
- a range of security equipment.

### **Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- role play
- case studies
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment** Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

***Security procedures*** may relate to:

- armed robbery
- cash and cash movement
- customers
- equipment
- events likely to endanger customers or staff
- opening and closing of premises
- premises
- records
- staff and staff property
- stock
- theft
- visitors, sales representatives and contractors.

***Organisational policy and procedures*** in regard to:

- cash handling
- non-cash transactions
- security
- stocktaking.

***Staff*** may include:

- full-time, part-time, casual or contract staff
- people from a range of cultural, social and ethnic backgrounds
- people with a range of responsibilities and job descriptions
- people with varying degrees of language and literacy
- small work teams

- store team.
  - cheques
  - customer refunds
  - EFTPOS and credit cards
  - gift vouchers.
  - mentoring and coaching
  - on-the-job or off-the-job training
  - posters and pamphlets
  - simulated events.
  - budgeting
  - buying
  - ordering patterns
  - planning.
  - minimising out-of-date stock
  - minimising theft
  - monitoring stock levels
  - quality control
  - stocktaking and cyclical counts.
- Non-cash transactions***  
may include:
- Techniques used to  
***communicate security***  
***procedures*** may include:
- Impact on business***  
***operations*** may include:
- Stock control***  
***procedures*** may include:

## **Unit Sector(s)**

Cross-Sector

## **Competency Field**

Risk Management and Security

## **SIRXSL S002A Advise on products and services**

### **Modification History**

The version details of this endorsed unit are in the table below. The latest information is at the top.

<b>Release</b>	<b>Comments</b>
Second Release	Editorial updates

### **Unit Descriptor**

This unit describes the performance outcomes, skills and knowledge required to apply a depth of specialist or general product knowledge and a need for experience and skill in offering advice to customers.

### **Application of the Unit**

This unit applies to team member who develop, maintain and convey detailed and specialised product knowledge to customers and other staff in accordance with store policy and relevant legislation. Specialist sales personnel undertake this function.

### **Licensing/Regulatory Information**

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### **Pre-Requisites**

Nil

### **Employability Skills Information**

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Develop product and service knowledge.	1.1. Develop and maintain <b><i>product knowledge</i></b> according to <b><i>store policy</i></b> and <b><i>legislative requirements</i></b> . 1.2. Convey product knowledge to other <b><i>staff</i></b> as required. 1.3. Research and apply comparisons between products and services. 1.4. Demonstrate knowledge of competitors' product and service range and <b><i>pricing structure</i></b> .
2. Recommend specialised products or services.	2.1. Evaluate merchandise according to <b><i>customer requirements</i></b> . 2.2. Demonstrate features and benefits of products and services to <b><i>customer</i></b> to create a buying environment. 2.3. Apply detailed specialised knowledge of product to provide accurate advice to customers.

### Required Skills and Knowledge

This section describes the essential skills and knowledge and their level, required for this unit.

#### Required skills

- interpersonal skills to:
  - convey product knowledge to staff
  - apply knowledge to provide advice to customers
  - handle difficult customers through clear and direct communication
  - ask questions to identify and confirm requirements
  - share information
  - use language and concepts appropriate to cultural differences
  - use and interpret non-verbal communication
- literacy skills in regard to:
  - use a range of communication and electronic equipment
  - access relevant product and service information
  - interpret product information
  - interpret store policies and procedures

- record information
- numeracy skills to:
  - estimate and calculate costs relevant to pricing products

### Required knowledge

- specialised product knowledge, including:
  - warranties
  - benefits and features
  - shelf life and use-by date
  - storage requirements
  - ingredients or materials contained in product
  - product and ingredient origins
  - care and handling of products
  - corresponding or complementary products and services
  - stock availability
- store and industry manuals and documentation
- stock and merchandise range
- service range
- store policies and procedures including:
  - procedures for taking orders
  - pricing procedures, including GST requirements
- relevant legislation and statutory requirements and industry code of practice relating to the retail industry

## Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit** Evidence of the following is essential:

- consistently applies store policies and procedures and industry codes of practice in regard to customer service and selling products and services
- develops, maintains and conveys product knowledge to customers and other staff
- applies detailed and specialised product knowledge to provide accurate advice according to the needs of the customer.

**Context of and specific**

Assessment must ensure access to:



**resources for assessment**

- a retail work environment
- a range of stock and merchandise
- relevant documentation, such as:
  - price lists
  - policy and procedures manuals
- a range of customers with different requirements
- a range of communication equipment.

**Methods of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the candidate in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

**Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

***Product knowledge*** may include:

- brand options
- product features and benefits
- warranties
- safety features
- use-by dates
- handling and storage requirements
- stock availability
- price.

***Product knowledge*** may be developed and maintained by:

- accessing the internet
- attending product launches
- attending product seminars
- discussions with staff
- accessing product information booklets and

- pamphlets.
- Store policy*** and procedures in regard to:
- interaction with customers
  - selling products and services.
- Legislative requirements*** may include:
- Trade Practices and Fair Trading Acts
  - tobacco laws
  - liquor laws
  - lottery legislation
  - industry codes of practice
  - WHS
  - sale of second-hand goods
  - sale of X and R rated products
  - trading hours
  - transport, storage and handling of goods.
- Staff*** may include:
- full-time, part-time or casual
  - under contract
  - people with varying degrees of language and literacy
  - people from a range of cultural, social and ethnic backgrounds
  - people with a range of responsibilities and job descriptions.
- Customer requirements*** may include:
- specific brand
  - sizing
  - quality
  - quantity
  - price range
  - usage.
- Customers*** may include:
- new or repeat contacts
  - external and internal contacts
  - customers with routine or special requests
  - people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities.
- Pricing structure*** may include:
- sales reductions
  - pricing procedures, including GST requirements
  - mark-downs.

## **Unit Sector(s)**

Cross-Sector

## **Competency field**

Sales

## SIRXSL S201 Sell products and services

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXSL S001A Sell products and services.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to sell products and services in a retail environment.

It involves the use of sales techniques and encompasses key selling skills, from approaching the customer to closing the sale.

It requires a basic level of product knowledge and the recognition and demonstration of verbal and non-verbal communication skills to determine customer requirements, sell the benefits of products and services, overcome objections and close sales.

Personal evaluation is used to maximise sales, according to industry codes of practice, relevant legislation and store policy.

### Application of the Unit

This unit applies to frontline sales personnel.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Develop and apply product knowledge.	<p>1.1. Develop <b><i>product knowledge</i></b> by accessing <b><i>relevant sources of information</i></b> and confirm with relevant staff.</p> <p>1.2. Apply knowledge of the use and application of relevant products and services in interactions with customers according to store policy and <b><i>legislative requirements</i></b>.</p> <p>1.3. Identify gaps in product knowledge and resolve by accessing relevant sources of information.</p>
2. Approach customer.	<p>2.1. Identify <b><i>customers</i></b> by name where possible.</p> <p>2.2. Develop knowledge of customer buying behaviour by accessing relevant sources of information.</p> <p>2.3. Determine and apply appropriate timing of customer approach according to store policy and customer behaviour.</p> <p>2.4. Initiate customer contact according to store policy.</p> <p>2.5. Convey a positive impression to encourage customer interest according to store policy.</p>
3. Gather and respond to information.	<p>3.1. Apply questioning techniques and listening skills to determine customer buying motives and requirements.</p> <p>3.2. Interpret and clarify non verbal communication cues.</p> <p>3.3. Direct customer to specific merchandise according to customer requirements and store policy.</p>
4. Sell benefits.	<p>4.1. Match customer needs to appropriate products and services.</p> <p>4.2. Communicate knowledge of product features and benefits clearly to customers.</p> <p>4.3. Describe product use and safety requirements to customers.</p> <p>4.4. Refer customers to appropriate product specialist as required.</p> <p>4.5. Answer <b><i>routine customer questions</i></b> about merchandise accurately and honestly or refer to senior sales staff.</p>

5. Overcome objections.
  - 5.1. Identify and acknowledge customer objections according to store policy.
  - 5.2. Categorise objections into price, time and merchandise characteristics and consider solutions.
  - 5.3. Offer solutions to customer objections according to store policy.
  - 5.4. Apply *problem solving* within personal scope of responsibilities to overcome customer objections or refer to senior staff.
6. Close sale.
  - 6.1. Monitor, identify and respond appropriately to customer buying signals.
  - 6.2. Encourage customer to make purchase decisions.
  - 6.3. Select and apply appropriate method of closing sale.
7. Maximise sales opportunities.
  - 7.1. Recognise and apply opportunities for making additional *sales* according to store policy.
  - 7.2. Advise customer of complementary products or services according to customer's identified need.
  - 7.3. Review personal sales outcomes and consider strategies to maximise future sales in consultation with relevant staff.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication and interpersonal skills to:
  - handle difficult customers
  - verbal and non-verbal communication skills to:
    - question, listen and observe
    - overcome objections and close sale
- literacy and numeracy skills to:
  - handle payments for goods
  - read product information
  - read store policies and procedures
  - record information
  - weigh and measure goods
- selling skills to use a range of selling techniques

### Required knowledge

- customer types and needs, including:
  - customer behaviour and cues

- customer buying motives
- demographics, lifestyle and income
- individual and cultural differences
- types of customer needs, such as:
  - functional
  - psychological
- relevant industry codes of practice, legislation and statutory requirements relating to the sale of products and services
- selling techniques, including:
  - add-ons and complementary sales
  - closing techniques
  - opening techniques
  - overcoming customer objections
  - recognising buying signals
  - using strategies to focus customer on specific merchandise
- specific product knowledge for area or section
- store merchandise and service range
- store policies and procedures in regard to:
  - allocated duties and responsibilities
  - selling products and services and sales performance

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- applies product knowledge and uses appropriate sales approach to sell the benefits of products and services, overcome objections and close sales
- uses questioning, listening and observation skills to determine customer requirements
- applies store policies and procedures in regard to selling products and services
- maximises sales opportunities according to store policies and procedures
- applies industry codes of practice, relevant legislation and statutory requirements in regard to selling products and services
- evaluates personal sales performance to maximise future

sales.

<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> <li>• a real or simulated retail work environment</li> <li>• relevant documentation, such as policy and procedures manuals</li> <li>• a range of customers with different requirements</li> <li>• a range of merchandise and products appropriate to the retail workplace</li> <li>• product labels and sources of product information.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the candidate in the workplace</li> <li>• customer feedback</li> <li>• answers to questions about specific skills and knowledge</li> <li>• review of portfolios of evidence and third-party workplace reports of on-the-job performance.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Product knowledge</i></b> may include:	<ul style="list-style-type: none"> <li>• features and benefits</li> <li>• handling and storage requirements</li> <li>• price</li> <li>• safety features</li> <li>• stock availability</li> <li>• use-by dates</li> <li>• warranties.</li> </ul>
<b><i>Relevant sources of information</i></b> may include:	<ul style="list-style-type: none"> <li>• demonstrations</li> <li>• internet</li> <li>• labels</li> <li>• product profiles</li> </ul>



- staff members
  - store or supplier product manuals
  - store tours
  - videos.
- Legislative requirements** may include:
- industry codes of practice
  - liquor laws
  - lottery legislation
  - work health and safety (WHS)
  - sale of second-hand goods
  - sale of X and R-rated products
  - tobacco laws
  - Australian consumer law and fair trading Acts
  - trading hours
  - transport, storage and handling of goods.
- Customers** may include:
- customers with routine or special requests
  - internal and external contacts
  - new or repeat contacts
  - people from a range of social, cultural and ethnic backgrounds
  - people with varying physical and mental abilities.
- Routine customer questions** may relate to:
- availability
  - features and benefits
  - price and price reductions
  - quality.
- Problem solving** may be affected by:
- resource implications
  - store policies and procedures.
- Sales transactions** may be completed:
- face-to-face
  - online
  - over the telephone.

## Unit Sector(s)

Cross-Sector

## Competency Field

Sales

## SIRXSL303 Build relationships with customers

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXSL004A Build relationships with customers.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop and maintain expert knowledge to provide accurate product information to customers, including post-sales support.

It also covers communication, analysis and sales techniques to plan and implement sales presentations, build positive relationships with customers, and resolve customer complaints to ensure positive business outcomes.

### Application of the Unit

This unit applies to senior sales personnel.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Develop relationships with customers.	<p>1.1. Establish rapport with <i>customers</i> and express genuine interest to <i>clarify customer requirements</i> and enhance <i>outcomes</i>.</p> <p>1.2. Maintain <i>professional ethics</i> with the customer to promote store image and credibility.</p> <p>1.3. Identify <i>customer needs and preferences</i> to maximise sales opportunities.</p> <p>1.4. Maximise sales opportunities by use of add-on and complementary <i>sales techniques</i>.</p> <p>1.5. Give customer space and time to evaluate purchase decision, while using time to maximum advantage for customer and store.</p> <p>1.6. Use effective methods to close sales.</p>
2. Apply expert knowledge.	<p>2.1. Provide customer with accurate information regarding product and service appraisals, correct statements and warranties according to <i>legislative requirements</i>.</p> <p>2.2. Provide detailed knowledge of supplier or manufacturer information according to customer needs and commercial confidentiality guidelines.</p> <p>2.3. Provide evaluation of product range, demonstrate features and benefits of products or services where appropriate, and make recommendations to the customer to maximise sales potential.</p> <p>2.4. Maximise customer interest in product or service through price negotiation where applicable and offer payment and credit options according to <i>store policy</i>.</p> <p>2.5. Calculate prices and discounts according to pricing determinants and store policy.</p>
3. Provide post-sales support.	<p>3.1. Provide evidence of ongoing support as sale is concluded.</p> <p>3.2. Explain <i>back-up service</i> and reassure customer according to legislative requirements and store policy.</p> <p>3.3. Provide customer with store or salesperson's contact details to ensure customer follow-up according to store policy.</p> <p>3.4. Enter customer and transaction details into <i>customer database</i> according to store policy.</p>

4. Plan sales presentations.
  - 4.1. Plan presentation to complement *product characteristics*.
  - 4.2. Select client group according to product characteristics and store merchandising policy.
  - 4.3. Access *promotional materials* where required and distribute to client group.
  - 4.4. Select and prepare a range of products or services for presentation to reflect store image, demographics and merchandising plan.
5. Implement sales presentations.
  - 5.1. Ensure sufficient numbers of adequately briefed support staff, where required, for presentation.
  - 5.2. Apply communication skills to effectively create interest, focus attention, and encourage customer interaction with individuals or groups.
  - 5.3. Demonstrate products or services to create a buying environment.
  - 5.4. Measure results of sales presentation according to predetermined criteria, review overall performance and results, and apply information to enhance future *sales presentations*, according to store sales policy.
6. Maintain and use a customer database.
  - 6.1. Maintain customer confidentiality as required by store policy and legislative requirements.
  - 6.2. Develop and maintain accurate *customer records* and store securely according to store policy and procedures.
  - 6.3. Identify and follow up regular customers according to store marketing policy.
  - 6.4. Use customer records to advise customers on products and services of possible interest.
  - 6.5. Implement *customer loyalty schemes* where required according to store promotional activities.
7. Deal with difficult customers.
  - 7.1. Acknowledge customer complaints and problems and reassuringly support difficult customers to produce positive outcome.
  - 7.2. Use questioning and active listening to encourage customer to verbalise issue and minimise customer frustration.
  - 7.3. Develop customer's confidence in the candidate and product or service to promote long-term trust and commitment to store.
  - 7.4. Establish mutually acceptable resolution of complaint.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication and interpersonal skills to resolve conflict
- literacy and numeracy skills to:
  - access and read relevant product information
  - calculate prices and discounts
  - read store policies and procedures
  - record client and sales information
- sales skills to apply selling techniques, including:
  - add-ons and complementary sales
  - identifying buying signals
  - opening and closing techniques
  - overcoming customer objections
  - presenting product information
  - promoting enhanced sustainability features of selected products and services
  - using strategies to focus customer on specific merchandise

### **Required knowledge**

- customer types and needs, including:
  - customer buying motives, customer behaviour and cues
  - functional and psychological needs
  - individual and cultural differences, demographics, lifestyle and income
- work health and safety (WHS) requirements relating to:
  - manual handling
  - plant and equipment
  - hazardous substances and dangerous goods
  - workers compensation
- relevant industry codes of practice, legislation and statutory requirements relating to building relationships with clients
- store policies and procedures in regard to:
  - efficient use of resources
  - establishing, maintaining and using customer records
  - methods of maintaining customer confidentiality and secure storage of customer details
  - price negotiation and payment and credit options
  - pricing, including GST requirements
  - resolving customer complaints
  - updating and maintaining customer mailing lists
- store and area merchandise and service range

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the following is essential:

- applies:
  - detailed knowledge of manufacturer and supplier supply, back-up service and warranty information to enhance customer support
  - industry codes of practice, relevant legislation and statutory requirements in regard to selling products and services
  - store policies and procedures in regard to selling products and services, dealing with customers, planning and implementing sales presentations, and providing after-sales support
- develops customer commitment to store and builds return customer base by establishing rapport and relationship with customer, maintaining professional ethics, and discerning customer buying motives, requirements and preferences
- establishes, records and maintains customer records and details, maintaining customer confidentiality, ensuring secure storage of data, and using customer records to maximise customer interest and create a buying atmosphere
- evaluates personal or team sales performance to maximise future sales
- maximises sales opportunities by using effective selling techniques, applying detailed product knowledge, and using an appropriate sales approach to sell the benefits of products, overcome objections and close sales
- plans, prepares and conducts sales presentations and briefs
- supports staff where required, to create a buying environment and maximise sales performance
- resolves customer complaints by acknowledging problems and supporting customer to produce positive outcomes and obtain mutually acceptable complaint resolution
- uses effective questioning, listening and observation skills to determine customer requirements.

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a retail work environment
- relevant sources of product information
- relevant documentation, such as:

- policy and procedures manuals
- industry codes of practice and relevant legislation
- WHS legislation and codes of practice
- a range of customers with different requirements
- an appropriate range of products and equipment
- a customer database system.

**Method of assessment** A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the candidate in the workplace
- customer feedback
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

**Guidance information for assessment** Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the individual, accessibility of the item, and local industry and regional contexts) may also be included.

**Customers** may include:

- a single customer, couples, families or groups
- customers with routine or special requests
- internal and external contacts
- new or repeat contacts
- people from a range of social, cultural and ethnic backgrounds
- people with varying physical and mental abilities.

**Clarification of customer requirements** may be achieved by:

- active listening
- appropriate questioning
- empathy
- observation
- reassurance and confirmation.

**Outcomes** may include:

- credibility of store
- customer commitment

- Maintaining *professional ethics* with the customer may include:
- customers' trust
  - increased return customer base.
  - confirmed appraisals of products and services
  - honesty
  - positive statements.
- Customer needs and preferences* may include:
- brand
  - customer physical needs
  - price
  - product characteristics
  - product type
  - size.
- Sales techniques* will include:
- add-on and complementary products and services
  - selling up or down
  - suggestive selling
  - variety of methods of closing sales.
- Legislative requirements* may include:
- environmental protection legislation
  - health and welfare law specific to local government, state and federal legislation
  - liquor laws
  - WHS
  - pricing procedures, including GST requirements
  - privacy laws
  - sale of second-hand goods
  - tobacco laws
  - Australian Consumer Law and fair trading Acts
  - transport, storage and handling of goods.
- Store policy* and procedures in regard to:
- dealing with difficult customers
  - maintaining and using client records
  - promotional, marketing, discounting and reward programs
  - resolving customer complaints
  - selling products and services.
- Back-up service* may include:
- delivery specifications
  - financial products and services
  - installation
  - returns policies
  - technical support
  - warranties and guarantees.
- Customer database* may be:
- computer-based
  - manual.



- Product characteristics*** may include:
- features and benefits
  - price range
  - supplier or manufacturer information
  - target group.
- Promotional materials*** may include:
- brochures
  - business cards
  - pamphlets
  - posters
  - promotional merchandise
  - vouchers.
- Sales presentations*** may be:
- at client site
  - in-house
  - verbal
  - visual.
- Customer records*** may include:
- anniversaries and special dates
  - details of items bought or returned
  - name and contact details
  - personal preferences
  - transaction records.
- Customer loyalty schemes*** may include:
- credit or discount facilities
  - customer clubs
  - customer reward schemes
  - special offers.

## **Unit Sector(s)**

Cross-Sector

## **Competency Field**

Sales

## SIRXSL406 Manage sales and service delivery

### Modification History

The version details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
First Release	This is a revised unit, based on and equivalent to SIRXSL005A Manage sales and service delivery.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to monitor, maintain and improve sales and service delivery. It involves market research, developing new markets, and marketing products and services within the culture of the overall store policy.

The unit requires the team member to develop and maintain excellence in sales and service delivery by ensuring the provision of a well-resourced working environment for fellow staff. The team member is required to proactively pursue the continuous improvement of operations by seeking, evaluating and reporting feedback from customers and colleagues on sales and service delivery and working conditions; and locating and negotiating adequate supply of stock and other necessary resources according to store policy.

### Application of the Unit

This unit applies to staff with managerial responsibility.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
1. Establish and respond to customer requirements.	<p>1.1. Plan and develop strategies to enhance provision of customer service according to store policy.</p> <p>1.2. Research and <b><i>analyse customer needs</i></b> in regard to local geographic and cultural issues.</p> <p>1.3. Resolve <b><i>customer</i></b> complaints referred by <b><i>staff</i></b>, according to store policy.</p> <p>1.4. Monitor sales and service targets and plans to ensure that customer requirements are met, and take appropriate remedial action if required.</p> <p>1.5. Encourage staff to take responsibility for meeting customer requirements.</p> <p>1.6. Seek and use feedback from customers to improve future operations.</p>
2. Monitor, maintain and improve sales and service delivery.	<p>2.1. Implement, communicate and review <b><i>policies and procedures for sales and service delivery</i></b> on a regular basis.</p> <p>2.2. Maintain adequate <b><i>resource</i></b> allocation for client service provision in line with <b><i>store policy and procedures</i></b>.</p> <p>2.3. Ensure sales and service targets and plans are consistent with quality and functional <b><i>specifications</i></b>.</p> <p>2.4. Communicate sales and service targets and plans to <b><i>relevant personnel</i></b> according to implementation schedules.</p> <p>2.5. Provide <b><i>feedback</i></b> to staff on operations and outcomes.</p> <p>2.6. Take corrective measures to minimise <b><i>factors that may cause disruption to operations</i></b>.</p> <p>2.7. Monitor and evaluate effectiveness of corrective actions for future operational planning.</p> <p>2.8. Ensure current and accurate <b><i>records</i></b> on sales are available to authorised personnel.</p>

- 2.9. Interpret and act on relevant reports as required.
3. Negotiate supply of goods.
- 3.1. *Negotiate* and implement *arrangements with suppliers*, according to store policies and procedures, and communicate to relevant personnel.
- 3.2. Authorise and communicate special pricing arrangements and customer payment agreements to relevant staff and management personnel according to store policy.
- 3.3. Monitor records of suppliers and stock for accuracy and legibility and take appropriate action where necessary.
- 3.4. Identify and communicate market factors affecting *supply* to relevant personnel.
- 3.5. Convey complete and accurate records of negotiations and agreements to appropriate personnel within designated time limits.
- 3.6. Take immediate corrective action where potential or actual *problems with supply* are indicated.
- 3.7. Identify and develop new suppliers to maintain and improve sales and service delivery.
4. Provide productive work environment.
- 4.1. Establish and maintain a sufficient supply of resources of the necessary quantity and quality to meet customer requirements.
- 4.2. Regulate and monitor access to and use of resources for maximum efficiency and sustainability.
- 4.3. Maintain staff working conditions to meet requirements of *relevant legislation* and store policy.
- 4.4. Ensure that maintenance frequency and use of equipment conform to recommended schedules and procedures.
- 4.5. Replace, repair or adapt resources that do not meet requirements as soon as practicable and with minimum disruption to work activity.
- 4.6. Communicate *recommendations* for improving conditions to relevant personnel within designated timeframe.
- 4.7. Maintain complete, accurate records and make them available to authorised personnel.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication and interpersonal skills to:
  - ask questions to identify and confirm requirements
  - communicate with staff through clear and direct communication
  - negotiate with suppliers and customers
  - present information
  - share information
  - use and interpret non-verbal communication
  - use language and concepts appropriate to cultural differences
- literacy and numeracy skills to:
  - calculate costs and pricing arrangements
  - document results
  - estimate volume
  - interpret and maintain data
  - prepare reports
  - research, analyse and interpret a broad range of written material
- technical skills to use new technology

### **Required knowledge**

- customer demand and market trends
- principles and techniques for:
  - interpersonal communication
  - purchasing and supply specifications
  - stock control
- product quality standards
- range and availability of new products and services, especially those with enhanced sustainability features
- relevant industry codes of practice applicable to the sales environment
- relevant legislation and statutory requirements, including work health and safety (WHS) requirements applicable to the sales environment
- store merchandise and service range
- store merchandising plan
- store policies and procedures in regard to:
  - efficient and sustainable use of resources
  - pricing procedures, including GST requirements
  - quality assurance and control
  - sales and service delivery
  - stock maintenance and control
  - supply specifications

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- maintains, monitors and evaluates sales and service delivery
- communicates sales and service targets and plans and provides feedback on operations and outcomes to relevant personnel according to store policy
- proactively improves sales and service delivery operations
- interprets and maintains data on sales and services delivery
- negotiates and arranges supply of goods according to store policy and procedures
- authorises pricing and payment agreements according to store policy and procedures
- maintains, monitors and evaluates supply of stock.

### Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
  - policy and procedures manuals
  - sales and service delivery targets and plans
  - records of sales and service
  - legislation and statutory requirements
  - industry codes of practice
  - WHS legislation and codes of practice
- suppliers
- a team.

### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the candidate in the workplace
- customer feedback
- research report
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

### Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Methods used to ***analyse customer needs*** may be:

- qualitative
- quantitative.

***Customer*** may include:

- customers with routine or special requests
- internal and external contacts
- new or repeat contacts
- people from a range of social, cultural and ethnic backgrounds
- people with varying physical and mental abilities.

***Staff*** may include:

- full-time, part-time, casual or contract staff
- people from a range of social, cultural and ethnic backgrounds
- people with varying degrees of language and literacy levels.

***Policies and procedures for sales and service delivery*** may involve:

- customer complaints
- customer service and sales training
- service standards
- staff induction
- staff presentation.

***Resource*** may include:

- equipment and technology
- finances
- materials
- people
- time.

***Store policy and procedures*** in regard to:

- interaction with customers
- interaction with other team members
- WHS
- quality assurance and control
- acquisition and sale of products and services.

***Specifications*** may include:

- customer agreements
- operational means for meeting agreements
- specific functional duties within the organisation.

***Relevant personnel*** may

- managers

- include:
- members of own or other work teams
  - supervisors.
- Feedback** may be sought and given:
- in groups
  - in writing
  - individually
  - verbally.
- Factors that may cause disruption to operations** may include:
- operational resources
  - quality of materials
  - supply.
- Records** may be:
- electronic
  - hard copy.
- Techniques used to **negotiate** with suppliers may include:
- correspondence
  - email
  - face-to-face contact
  - meetings
  - telephone.
- Arrangements with suppliers** may relate to:
- credit levels
  - delivery
  - partnerships and exclusivity
  - pricing.
- Sources of **supply** may include:
- external organisations
  - internal departments and teams
  - internal and external personnel.
- Problems with supply** may involve:
- cost
  - coverage or content
  - quality
  - quantity
  - time schedules or scales.
- Relevant legislation** may include:
- equal employment opportunity and anti-discrimination laws
  - federal, state and local legislation
  - WHS.
- Recommendations** may be communicated to:
- colleagues, specialists, staff from other departments
  - external organisations with a health, safety or environmental responsibility
  - government bodies
  - higher-level managers
  - subordinates.



## **Unit Sector(s)**

Cross Sector

## **Competency Field**

Sales

## SISXRES506A Undertake open-space planning

### Modification History

Not Applicable

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to undertake research to determine supply and demand for open spaces in order to develop and implement an action plan for open-space planning for sport and recreation programs and activities.

### Application of the Unit

This unit applies to those who work as operations managers or program managers who are responsible for planning, implementing and evaluating outdoor recreation programs and activities across a range of activity areas. Work would be undertaken autonomously with responsibility for management of resources.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Nil

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

#### Elements and Performance Criteria

##### ELEMENT

Elements describe the essential outcomes of a unit of competency.

##### PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent

**ELEMENT****PERFORMANCE CRITERIA**

with the evidence guide.

- |   |   |
|---|---|
| 1. Conduct research into open-space planning. | <ul style="list-style-type: none"> <li>1.1. Conduct a <i>feasibility study</i> to determine requirements for <i>open-space</i> planning.</li> <li>1.2. Establish goals and expected outcomes for open-space planning in consultation with appropriate personnel.</li> <li>1.3. Identify financial and human resource requirements for open-space planning.</li> <li>1.4. Gather <i>information</i> from <i>sources</i> and <i>stakeholders</i> according to <i>relevant legislation</i> and <i>organisational policies and procedures</i>.</li> <li>1.5. Analyse and document information gathered according to relevant legislation and organisational policies and procedures.</li> </ul> |
| 2. Assess supply of open space.               | <ul style="list-style-type: none"> <li>2.1. Identify existing open space and develop a classification system to assess the supply of open space.</li> <li>2.2. Establish <i>criteria</i> for evaluating the open space according to organisational policies and procedures.</li> <li>2.3. Assess and document requirements for upgrading and improving current open space.</li> </ul>   |
| 3. Assess demand for open space.              | <ul style="list-style-type: none"> <li>3.1. Develop a <i>demographic profile</i> of the open space and identify geographical and location issues.</li> <li>3.2. Determine usage patterns and identify target groups in consultation with user groups.</li> <li>3.3. Determine satisfaction levels of stakeholders and the community in relation to open-space areas.</li> <li>3.4. Analyse information gathered and identify demand.</li> </ul>   |
| 4. Develop and evaluate options.              | <ul style="list-style-type: none"> <li>4.1. Assess the adequacy of the supply of open space against perceived and latent demand.</li> <li>4.2. Identify shortfalls and surplus in open space in consultation with stakeholders.</li> <li>4.3. Develop alternative options where required according to organisational policies and procedures.</li> </ul>  |
| 5. Develop a work plan.                       | <ul style="list-style-type: none"> <li>5.1. Select preferred options according to organisational policies and procedures.</li> <li>5.2. Develop and document a <i>work plan</i> for open-space planning in consultation with stakeholders and according to relevant legislation.</li> <li>5.3. Develop and document <i>schedule of works</i>.</li> <li>5.4. Obtain necessary approval from appropriate</li> </ul>   |

ELEMENT	PERFORMANCE CRITERIA
6. Implement work plan.	<p>personnel according to organisational policies and procedures.</p> <p>5.5. Establish <i>evaluation procedures</i> for open-space planning according to organisational policies and procedures.</p> <p>6.1. Monitor effectiveness of plan and evaluate relevance to current situation.</p> <p>6.2. Seek feedback from stakeholders and the community.</p> <p>6.3. Make recommendations to appropriate personnel to improve the effectiveness of the plan according to organisational policies and procedures.</p>

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication skills to:
  - consult and liaise with stakeholders to gather information about usage patterns and demand for open space
  - seek approval for work plans from appropriate personnel
- literacy skills to:
  - research and gather information about the requirements, supply and demand for open planning
  - develop and document work plans
- numeracy skills to analyse financial requirements for open-space planning
- planning and organising skills to:
  - establish criteria to evaluate open spaces
  - prioritise work and set timeframes to develop a schedule of works
  - implement and monitor the effectiveness of the plan
- problem-solving skills to:
  - develop and select options for open-space planning
- evaluate effectiveness of implemented work plan and suggest improvements.

### Required knowledge

- legislation to enable the collection and use of information from stakeholders and the development of a work plan to effectively manage open spaces
- organisational policies and procedures to:

- collect information responsibly
- consult stakeholders
- evaluate options for open-space planning to enable effective open-space management of competing demands
- methodology to conduct feasibility studies to enable effective open-space planning
- research and data-collection techniques to enable the responsible collection and use of data
- goals and objectives of open-space planning in relation to outdoor recreation programs and activities
- open-space management techniques to enable the management and prioritisation of competing demands
- sources of information and resources to establish supply of and demand for open space.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- conducts a feasibility study in consultation with stakeholders to determine requirements and resources for open-space planning
- conducts research, planning and consultation to determine open-space supply and demand relevant to sport and recreation activities in own work environment, and analyses and evaluates information collected to develop a work plan
- prioritises competing demands for open space to develop, implement and monitor a work schedule and seeks feedback from users and stakeholders on the effectiveness of the work plan
- applies effective contingency-management techniques to deal with a range of problems and issues that may arise in relation to competing demands for open space.

#### Context of and specific resources for assessment

Assessment must ensure development and implementation of a work plan for open-space planning which reflects local requirements and is of sufficient

breadth to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- a regional open space
- resources and information on the location
- target groups with open-space demands
- appropriate persons to gain approvals
- resources to undertake the open-space planning
- organisational documentation relevant to open-space planning.

### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of interacting with a range of target groups to establish open-space needs
- oral and or written questioning to assess knowledge of research and data-collection techniques to conduct a feasibility study
- portfolio containing evidence of work plans for open-space planning, feasibility study and research and demographic profiles for open spaces
- third-party reports from a supervisor detailing appropriate work performed by the candidate.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SISXRES505A Achieve sustainable land management.

### Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Feasibility study*** may include:

- current and previous expenditure patterns
- user satisfaction levels
- usage patterns.

- Open space*** may include:
- facilities
  - car parks
  - natural elements
  - greenfields area.
- Information*** may include:
- planning studies
  - political environment of organisations
  - issues papers
  - demographic profiles.
- Sources*** may include:
- grants
  - schools
  - service sporting clubs and associations
  - corporate sponsors
  - bequests
  - developer and organisation joint ventures
  - community groups.
- Stakeholders*** may include:
- government bodies
  - community groups
  - participants.
- Relevant legislation*** may include:
- occupational health and safety
  - environmental protection
  - privacy
  - anti-discrimination
  - local laws and by-laws.
- Organisational policies and procedures*** may include:
- ***occupational health and safety***
  - collection and use of information
  - evaluation criteria
  - aims and objectives of open-space planning.
- Criteria*** may include:
- access
  - geographical factors
  - environmental factors
  - location
  - quality and characteristics of open space
  - usage.
- Demographic profile*** may include:
- transport routes
  - distance between areas
  - topography
  - proximity to amenities
  - ecology.
- Work plans*** may include:
- objectives
  - tasks
  - timeframes

*Schedule of works* may include:

- budget
- consultation plan.
- priorities
- costs
- timeframes.
- community consultation
- surveys
- public meetings
- market research.

*Evaluation procedures* may include:

## **Unit Sector(s)**

Cross-Sector

## **Competency Field**

Resource Management



# SITTGDE101 Interpret aspects of local Australian Indigenous culture

## Modification History

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

Version	Comments
1.0	E Replaces and is equivalent to SITTGDE009A Interpret aspects of local Australian Indigenous culture. Wording simplified to more accurately reflect level at which skills are applied.

## Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to share information about a specific local Australian Indigenous culture. It is this localised focus that distinguishes this unit from SITTGDE306 Research and share general information on Australian Indigenous cultures.

The unit recognises that there is no single Australian Indigenous culture and emphasises the importance of local cultural knowledge, appropriate behaviour and local community consultation.

## Application of the Unit

This unit applies to those people who are able to share local Indigenous cultural knowledge with others. They may work at many different levels, as cultural knowledge has no direct relationship with workplace levels of responsibility.

The local cultural knowledge necessary to achieve competency in this unit may only be accessible to those individuals who identify as elders or who are authorised by local elders on behalf of their communities.

There are many different Indigenous language groups in Australia, therefore focus of cultural interpretation will vary and should ultimately be decided in consultation with elders on behalf of the local community.

## Licensing/Regulatory Information

Tour guides, residing anywhere in Australia, are required to undertake training and assessment prescribed by Parks Australia to guide within Kakadu and Uluru National Parks in the Northern Territory. This training is based on the following units:

- SITTGDE101 Interpret aspects of local Australian Indigenous culture
- SITTGDE306 Research and share general information on Australian Indigenous cultures.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |   |  |
|---|--|
| 1. Talk with the local Indigenous community.                    | <p>1.1 Talk to community members about cultural tourism activities, and the <b><i>ways that information can be used</i></b>.</p> <p>1.2 Prepare for and conduct activities according to the needs and wishes of the local Indigenous community.</p> <p>1.3 Identify potential conflicts within the local Indigenous community and seek solutions.</p>  |
| 2. Share information about local Australian Indigenous culture. | <p>2.1 Share information about <b><i>aspects of Australian Indigenous culture</i></b> with customers to an appropriate level.</p> <p>2.2 Advise customers about culturally appropriate behaviour.</p> <p>2.3 Show respect for Australian Indigenous cultures and values through appropriate personal behaviour during activities.</p> <p>2.4 Show customers traditional and contemporary practices when appropriate.</p> <p>2.5 Use local language and share with customers when appropriate.</p> <p>2.6 Invite customers to actively participate and share in the Australian Indigenous <b><i>cultural experience</i></b> when appropriate.</p> |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication skills to:
  - talk with others about Indigenous cultural issues
  - share information with people from other cultures.

### Required knowledge

- aspects of a specific local Australian Indigenous culture
- protocols for the sharing of information about specific local Australian Indigenous cultures
- copyright and intellectual property issues associated with providing information about local Australian Indigenous culture.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- talk with Indigenous community members about what information can be shared with customers
- provide cultural information in an appropriate and respectful manner
- demonstrate knowledge of the local Australian Indigenous culture appropriate to the region.

#### Context of and specific resources for assessment

Assessment must ensure use of:

- cultural sites and locations
- involvement of persons approved of by relevant local community elders in the assessment process.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge.

For this unit, methods should be chosen by relevant local community elders or those approved of by the elders.

**Guidance information for assessment**

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITXCCS101 Provide information and assistance.

**Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

*Ways that information can be used* may relate to:

- what information can be shared
- who can give information to whom
- who can receive the information
- what activities are appropriate
- who should be involved in activities.

*Aspects of Australian Indigenous culture* may relate to:

- art
- bush foods and medicine
- dance
- music
- storytelling
- tools and implements.

*Cultural experience* may take place in:

- cultural centres
- galleries
- natural sites.

**Unit Sector(s)**

Tourism

**Competency Field**

Guiding

## SITTGDE301 Work as a guide

### Modification History

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

Version	Comments
1.0	E Replaces and is equivalent to SITTGDE001B Work as a guide.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to work effectively as a guide. It covers key legal, ethical, safety, environmental and professional development issues that guides must consider in their day-to-day work.

When working in Queensland, all guides, regardless of their place of residence, are subject to the Queensland Tourism Services Act (2003).

### Application of the Unit

This unit applies to guides who may work across multiple industry sectors as employees or independent contractors. They could operate within a single site, or in a particular city, region or tourist precinct, but they often move across sites, cities and regions.

Guides apply discretion and judgement within established organisational procedures, and when on tour they take a lead role without supervision. Sometimes guides are the owner-operators of small tour operations.

### Licensing/Regulatory Information

No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |   |  |
|---|--|
| 1. Apply knowledge of the guiding sector.                           | <ul style="list-style-type: none"> <li>1.1 Conduct guiding activities in a manner that takes account of the roles and responsibilities of different types of guides.</li> <li>1.2 Identify key guide information sources and contacts.</li> <li>1.3 Use industry knowledge and guide networks to enhance the quality of guiding services provided to customers.</li> </ul>   |
| 2. Guide tours according to legal, ethical and safety requirements. | <ul style="list-style-type: none"> <li>2.1 Conduct guiding activities according to legal requirements governing the industry.</li> <li>2.2 Actively participate in <b><i>risk assessment</i></b> as an integral part of work activities.</li> <li>2.3 Take account of <b><i>ethical considerations</i></b> for particular contexts.</li> <li>2.4 Guide tours according to safety requirements.</li> <li>2.5 Support <b><i>sustainability</i></b> in work practices.</li> </ul>           |
| 3. Develop guiding skills and knowledge.                            | <ul style="list-style-type: none"> <li>3.1 Identify and use <b><i>opportunities</i></b> to update knowledge and skills required by guides.</li> <li>3.2 Maintain knowledge of <b><i>technologies</i></b> used by guides.</li> <li>3.3 Identify and access sources of guide support when required.</li> <li>3.4 Share knowledge with colleagues to enhance quality of service provided to customers.</li> </ul>   |
| 4. Communicate with tourism industry operators in English.          | <ul style="list-style-type: none"> <li>4.1 Articulate information using industry acceptable language.</li> <li>4.2 Achieve mutual understanding and agree on details relevant to guiding activities.</li> <li>4.3 Provide accurate information and explanations about customer requirements and special requests.</li> <li>4.4 Identify nature and key facts of operational problems and provide appropriate solutions by consulting with the <b><i>tourism operator</i></b>.</li> </ul> |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication skills to liaise with others on operational matters
- critical thinking skills to:
  - evaluate legal, ethical, safety and sustainability issues and requirements for guides
  - make decisions on appropriate behaviours and actions
  - contribute to risk assessment processes
- literacy skills to:
  - read and interpret industry codes of practice and regulations
- learning and self-management skills to maintain and enhance professional skills and knowledge
- technology skills to work with online information systems.

### Required knowledge

- tourism industry sectors and their interrelationship, in particular the tour operations and wholesaling sectors and the way that guiding fits into the tourism industry
- roles, responsibilities and career paths for different types of guides, including tour guides, tour managers, site guides, adventure guides, meet and greet guides, city hosts and driver guides
- role of the guide in the risk management process
- roles and services provided to guides by peak guiding bodies and industry associations
- industry and legal compliance requirements that affect guiding operations, including:
  - consumer protection laws
  - occupational licensing and industry accreditation
  - contents of various guiding codes of conduct or practice and the impacts of non-compliance
  - public liability and the guide's duty of care
  - environmental laws
  - permit requirements for operating in protected areas
  - Queensland Tourism Services Act (2003) requirements for guides when working in Queensland
- safety issues that affect guiding operations in particular contexts, particularly those related to customer safety in different environments
- sustainability considerations for professional guides, including those related to:
  - host community interactions, including Indigenous contexts
  - minimal impact practices
  - own professional development.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- provide guiding services that meet legal, ethical, safety and sustainability requirements
- communicate with industry colleagues in English and achieve mutual understanding on day-to-day operational requirements
- demonstrate knowledge of roles and responsibilities of different types of guides
- demonstrate knowledge of legal, ethical, safety and sustainability issues to be considered in specific guiding contexts.

#### Context of and specific resources for assessment

Assessment must ensure use of:

- environments in which guiding activities take place, e.g. at visitor sites, on-board various forms of transportation
- plain English documents that describe the legal requirements of the Queensland Tourism Services Act (2003), consumer laws and environmental management issues
- industry association membership information and codes of conduct
- other people to allow for oral communication in English on practical guiding matters.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- use of case studies and problem-solving activities to assess application of knowledge to different guiding situations and contexts, including analysis of ethical issues
- use of role-plays to assess the individual's ability to communicate in English on practical guiding issues, and to guide a tour
- written or oral questioning to assess knowledge of different guide roles, content of industry codes of conduct and relevant legal issues
- review of portfolios of evidence and third-party



workplace reports of on-the-job performance by the individual.

### Guidance information for assessment

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITTGDE303 Lead tour groups
- SITTGDE401 Coordinate and operate tours
- SITTIND201 Source and use information on the tourism industry
- SITTSL303 Sell tourism products and services.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Risk assessment*** activity may involve:

- dealing with inherent risks
- identifying hazards as part of normal operations
- making simple reports
- identifying need for a full risk assessment
- using risk assessment templates.

***Ethical considerations*** may relate to:

- compliance with industry codes of conduct
- cultural considerations
- dealings with local communities, including Indigenous communities
- provision of services as promoted or confirmed
- relationships with industry colleagues, customers and suppliers
- unconscionable conduct.

***Sustainability*** may be:

- economic:
  - business profitability
- environmental:
  - minimal impact
  - waste minimisation
- social:
  - interactions with host communities.

- Opportunities** may include:
- familiarisation tours
  - industry seminars
  - participation in industry accreditation schemes
  - participation or membership in professional guide associations
  - research
  - social networking
  - training courses.

- Technologies** may include:
- presentation technologies
  - RFID codes (for hand held devices)
  - social networking.

- Tourism operator** may be:
- inbound tour operators
  - other guides
  - retail outlets, including:
    - factory outlets
    - opal or souvenir outlets
    - tax free stores
  - suppliers of any tourism product or service that is a component of the touring itinerary, including:
    - accommodation providers
    - airlines
    - attraction or theme parks
    - coach companies
    - food and beverage outlets
    - tour operators and cruise operators.

## Unit Sector(s)

Tourism

## Competency Field

Guiding

## SITTGDE306 Research and share general information on Australian Indigenous cultures

### Modification History

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

Version	Comments
1.0	E Replaces and is equivalent to SITTGDE008A Research and share general information on Australian Indigenous cultures.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to research and share information about Australian Indigenous societies in a culturally appropriate way. It focuses on information that is widely available to the general community. The unit recognises that there is no single Australian Indigenous culture and emphasises the importance of culturally appropriate behaviour and local community consultation.

### Application of the Unit

This unit applies across many industry sectors. It is particularly relevant to cultural tourism operations and to individuals who work in customer service and guiding roles with differing levels of responsibility. Information could apply to Indigenous countries and cultures across Australia, or to a specific Indigenous country and culture.

### Licensing/Regulatory Information

Tour guides, residing anywhere in Australia, are required to undertake training and assessment prescribed by Parks Australia to guide within Kakadu and Uluru National Parks in the Northern Territory. This training is based on the following units:

- SITTGDE101 Interpret aspects of local Australian Indigenous culture
- SITTGDE306 Research and share general information on Australian Indigenous cultures.

### Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |  |  |
|--|--|
| 1. Research general information on Australian Indigenous cultures. | 1.1 Identify key information <i>sources</i> about Australian Indigenous cultures.  |
|  | 1.2 Select and use formal and informal research techniques to access current, accurate and relevant <i>information</i> about Australian Indigenous cultures. |
|  | 1.3 Obtain information in a culturally appropriate way.  |
|  | 1.4 Enhance cultural awareness and understanding by sharing information with others.   |
| 2. Share general information on Australian Indigenous cultures.    | 2.1 Identify and use Indigenous interpreters where possible.   |
|  | 2.2 Provide people with guidance on appropriate behaviour when interacting with Indigenous people.   |
|  | 2.3 Share clear and accurate information on Australian Indigenous cultures ensuring acknowledgment of the diversity of cultures.                             |
|  | 2.4 Share information in a manner respectful of local community values and customs.  |
|  | 2.5 Answer questions according to community wishes about what information can be shared.   |
|  | 2.6 Respond to culturally inappropriate customer behaviour in a manner that minimises the likelihood of offence being taken.                                 |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication skills to:
  - use cultural awareness when communicating with people from other cultures
  - share information clearly

- literacy skills to:
  - source information about Australian Indigenous cultures
  - interpret varied information on Australian Indigenous cultures.

### **Required knowledge**

- protocols for researching and sharing information about Australian Indigenous cultures
- fundamental Indigenous intellectual property issues, including:
  - strong links between intellectual property and cultural heritage
  - issues associated with the reproduction and sale of Indigenous cultural works
- Australian Indigenous cultures and their place in historical and contemporary Australia
- aspects of Australian Indigenous cultures relevant to the regional context.

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Overview of assessment**

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the ability to:

- follow protocols for researching and sharing information generally available about Australian Indigenous cultures
- demonstrate knowledge of Australian Indigenous cultures
- source different types of information covering multiple topics to ensure a breadth of knowledge.

#### **Context of and specific resources for assessment**

Assessment must ensure use of:

- people accepted by the local community in the assessment process (where information is specific to a community)
- information sources verified or supported by Indigenous communities.

## Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct observation of the individual sharing information about Australian Indigenous cultures
- questioning of group members about the individual's breadth of knowledge and ability to answer customer questions
- review of a portfolio of information prepared by the individual
- written or oral questioning to evaluate the process undertaken by the individual to source information
- written or oral questioning or to assess general knowledge of Australian and Indigenous cultures appropriate to the region
- use of case studies to assess ability to apply correct protocols to particular situations
- review of portfolios of evidence and third-party workplace reports of on-the-job performance by the individual.

## Guidance information for assessment

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITTGDE304 Prepare and present tour commentaries or activities.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

*Sources* may include:

- artworks
- events
- exhibitions
- experiences (of self or others)
- films
- images
- Internet

**Information** may cover:

- music
- other people:
  - Indigenous people
  - traditional owners
- performances
- presentations
- professional associations
- printed texts (books, journals, magazines, newspapers)
- technical information.
- Australian Indigenous cultures and countries in general
- specific topics:
  - art and music
  - bushcraft, bush food and bush medicine
  - contemporary Indigenous life and culture
  - cultural sites:
    - cultural centres
    - galleries
    - natural sites
    - occupation sites like middens
  - dance
  - history, pre and post-European contact
  - land ownership
  - tools and implements
  - traditional life and culture.

## **Unit Sector(s)**

Tourism

## **Competency Field**

Guiding

## SITTGDE307 Prepare specialised interpretive content on flora, fauna and landscape

### Modification History

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

Version	Comments
1.0	E Replaces and is equivalent to SITTGDE010A Prepare specialised interpretive content on flora, fauna and landscape. Corequisites removed.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to research specialised information on flora, fauna and landscape, and then critically analyse that information to develop interpretive themes and messages. It highlights the need for ongoing research to update and expand knowledge.

### Application of the Unit

This unit applies across many industry sectors and has particular application to guides who work in national parks, or who conduct tours with a strong focus on the natural environment. In this context, they work independently to research and prepare interpretive content.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.



## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |  |   |
|--|---|
| <p>1. Research specialised information on flora, fauna and landscape.</p>            | <p>1.1 Identify key <i>sources</i> of specialised information about flora, fauna and <i>landscape</i>.</p> <p>1.2 Evaluate the credibility and reliability of information sources.</p> <p>1.3 Use formal and informal research techniques to access current, accurate and relevant information.</p> <p>1.4 Make subjects of potential customer interest the focus of research activities.</p> |
| <p>2. Prepare specialised information on flora, fauna and landscape.</p>             | <p>2.1 Analyse information and develop interpretive themes and messages to meet customer needs.</p> <p>2.2 Organise information to support the ways in which it will be used and presented.</p>   |
| <p>3. Update knowledge of specialised information on flora, fauna and landscape.</p> | <p>3.1 Identify and use opportunities to maintain currency of knowledge about specialised topics.</p> <p>3.2 Proactively seek opportunities to enhance and expand own knowledge base.</p> <p>3.3 Incorporate updated knowledge into work activities.</p>  |

### Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

#### Required skills

- critical thinking and interpretive skills to:
  - establish an interpretive framework
  - evaluate and adapt a varied range of information for practical workplace purposes
  - create key messages, themes and storylines for audiences
- literacy skills to:
  - interpret potentially complex and detailed information on flora, fauna and landscape
- learning skills to proactively build own knowledge base
- technology skills to use the Internet as a research tool.

## Required knowledge

- understanding of the role of interpretation in creating a powerful customer experience
- current interpretive theory, methods and media
- sources of information on flora, fauna and landscape in the relevant geographic context
- landscapes of interest within a local region and their general characteristics
- key ecological terminology and concepts, including:
  - biotic and physical factors
  - populations
  - biodiversity and abundance
  - food web
  - community relations
  - life cycles
  - succession
  - zonation
  - carbon cycle
  - water cycle
  - energy flow
  - nutrient cycle
- interrelationships between parts of the ecosystem:
  - developmental processes related to the formation of the local landscapes, including:
    - geological formations and history
    - soil composition and its relation to plant and animal life and water catchment areas
- principles of Gondwana theory and the impact of Gondwana on plant and animal communities
- major species of flora and fauna within the landscape, including:
  - nature of species and where it is found
  - roles of individual species
  - characteristics
  - commonalities
  - interactions between species and the environment
  - nutrition and life cycles
  - species harmful to humans
- identification techniques for flora and fauna
- environmental influences that affect the landscape, including climate and fire
- nature of human impact on the landscape, including industrial impacts
- management regimes for the local landscape, including relevant authorities and codes of practice
- Australian Indigenous perspective on the landscape.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- demonstrate knowledge of flora, fauna and landscape as detailed under Required Knowledge
- develop coherent and interesting interpretations for presentation.

#### Context of and specific resources for assessment

Assessment must ensure use of:

- current specialised information sources
- current interpretive resources.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct observation of the individual using knowledge to deliver interpretive commentaries or activities
- questioning of group members about the individual's breadth of knowledge and ability to answer customer questions
- review of a research portfolio prepared by the individual
- written or oral questioning to assess the way in which the research process has been used
- written or oral questioning to assess aspects of specialised knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance by the individual.

#### Guidance information for assessment

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITTGDE303 Lead tour groups
- SITTGDE304 Prepare and present tour commentaries or activities
- SITTPPD402 Develop interpretive activities.

Assessment should also recognise the different ways that people acquire specialised knowledge, for example:

- specialised qualifications in the subject matter area
- cultural knowledge in Aboriginal or Torres Strait Islander societies.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

*Sources* may include:

- artworks
- events
- exhibitions
- experiences and observations (of self or others)
- films
- images
- Internet
- music
- objects
- other people:
  - local experts
  - traditional owners
- performances
- presentations
- professional associations
- printed texts (books, journals, magazines, newspapers)
- special interest groups:
  - geological societies
  - plant study groups
  - wildlife societies
- technical information.

*Landscape* may be:

- alpine
- coastal
- desert
- outback
- temperate
- tropical.

## **Unit Sector(s)**

Tourism

## **Competency Field**

Guiding

## **SITTGDE309 Prepare specialised interpretive content on cultural and heritage environments**

### **Modification History**

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

<b>Version</b>	<b>Comments</b>
1.0	E Replaces and is equivalent to SITTGDE012A Prepare specialised interpretive content on cultural and heritage environments. Corequisites removed.

### **Unit Descriptor**

This unit describes the performance outcomes, skills and knowledge required to research specialised information on cultural and heritage environments, and then critically analyse that information to develop interpretive themes and messages. It highlights the need for ongoing research to update and expand knowledge.

### **Application of the Unit**

This unit applies across many industry sectors and has particular application to guides who work in cultural centres, museums, galleries or historic sites, or who conduct tours in regions with strong cultural and heritage significance. In this context, they work independently to research and prepare interpretive content.

### **Licensing/Regulatory Information**

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |  |   |
|--|---|
| <p>1. Research specialised information on cultural and heritage environments.</p>            | <p>1.1 Identify key <i>sources</i> of specialised information about <i>cultural and heritage environments</i>.</p> <p>1.2 Evaluate the credibility and reliability of information sources.</p> <p>1.3 Use formal and informal research to access and obtain current and relevant information.</p> <p>1.4 Make subjects of potential customer interest the focus of research activities.</p> |
| <p>2. Prepare specialised information on cultural and heritage environments.</p>             | <p>2.1 Analyse information and develop interpretive themes and messages to meet customer needs.</p> <p>2.2 Organise information to support the ways in which it will be used and presented.</p>   |
| <p>3. Update knowledge of specialised information on cultural and heritage environments.</p> | <p>3.1 Identify and use opportunities to maintain currency of knowledge about specialised topics.</p> <p>3.2 Proactively seek opportunities to enhance and expand own knowledge base.</p> <p>3.3 Incorporate updated and expanded knowledge into work activities.</p>   |

### Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

#### Required skills

- critical thinking and interpretive skills to:
  - establish an interpretive framework
  - evaluate and adapt a varied range of information for practical workplace purposes
  - create key messages, themes and storylines for audiences
- literacy skills to:
  - interpret potentially complex and detailed information on cultural and heritage environments

- learning skills to proactively build own knowledge base
- technology skills to use the Internet as a research tool.

### **Required knowledge**

- understanding of the role of interpretation in creating a powerful customer experience
- current interpretive theory, methods and media
- sources of information on cultural and heritage environments
- the nature and significance of one or more cultural or heritage environments including:
  - how the environment developed and evolved
  - historically and culturally significant features, including details of any exhibits, displays or performances
  - individuals associated with the environment, their roles and impacts
  - role of the environment in the local community, both past and present
  - relationship of the environment to past and current Australian culture and history.

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Overview of assessment**

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the ability to:

- demonstrate knowledge of cultural and heritage environments as detailed under Required Knowledge
- develop coherent and interesting interpretations for presentation.

#### **Context of and specific resources for assessment**

Assessment must ensure use of:

- current specialised information sources
- current interpretive resources.

#### **Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct observation of the individual using knowledge to deliver interpretive commentaries or activities
- questioning of group members about the individual's breadth of knowledge and ability to answer customer questions
- review of a research portfolio prepared by the individual



- written or oral questioning to assess the way in which the research process has been used
- written or oral questioning to assess aspects of specialised knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance by the individual.

### **Guidance information for assessment**

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITTGDE303 Lead tour groups
- SITTGDE304 Prepare and present tour commentaries or activities
- SITTPPD402 Develop interpretive activities.

Assessment should also recognise the different ways that people acquire specialised knowledge, for example:

- specialised qualifications in the subject matter area
- cultural knowledge in Aboriginal or Torres Strait Islander societies.

## **Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

*Sources* may include:

- artworks
- events
- exhibitions
- experiences and observations (of self or others)
- films
- images
- Internet
- music
- objects
- other people:
  - local experts
  - traditional owners

*Cultural and heritage environments* may be natural or built and may include:

- performances
- presentations
- professional associations
- printed texts (books, journals, magazines, newspapers)
- special interest groups:
  - geological societies
  - plant study groups
  - wildlife societies
- technical information.
- Aboriginal art or occupation sites
- art galleries
- cultural centres
- heritage trails
- historic localities or regions
- historic theme parks
- museums
- prehistoric and fossil sites.

## **Unit Sector(s)**

Tourism

## **Competency Field**

Guiding

## SITTPPD402 Develop interpretive activities

### Modification History

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

Version	Comments
1.0	E Replaces and is equivalent to SITTPPD005A Plan and develop interpretive activities. Title simplified.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop interpretive activities for different customer groups. It requires the ability to establish educational, interpretive and commercial objectives, develop operational aspects and evaluate the success of the activity. The actual presentation of activities is covered in the unit SITTGDE304 Prepare and present tour commentaries or activities.

### Application of the Unit

This unit applies to many industry sectors and has particular relevance in tourism, sport and recreation and cultural contexts. Interpretive activities take place on historical, cultural, heritage or nature-based tours, in attractions and theme parks, in national parks or in locations such as museums, galleries, libraries, performing arts centres and zoos. Activities could be virtual.

Planning and development of interpretive activities may be for a series of activities within a venue or tour operation or for a one-off activity. It could be the responsibility of the person delivering the activity or be developed by senior operational or supervisory personnel. The planning role applies to those who work independently with limited guidance from others. This could include senior guides, activities coordinators, or owner-operators of small organisations.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |                                   |   |
|-----------------------------------|---|
| 1. Establish need for activities. | 1.1 Identify need for <i>interpretive activities</i> , based on customer, organisation and community needs.                       |
|                                   | 1.2 Establish educational, interpretive and commercial objectives in consultation with appropriate colleagues.                    |
| 2. Create activities.             | 2.1 Identify and evaluate a range of potential information and <i>resources</i> , including <i>other specialists</i> as required. |
|                                   | 2.2 Develop interpretive framework for activities.  |
|                                   | 2.3 Generate and select ideas for potential messages, themes and storylines.  |
|                                   | 2.4 Consider relationships between themes, storylines and the site.   |
|                                   | 2.5 Incorporate interpretive media that matches the site.   |
|                                   | 2.6 Conduct a risk assessment and incorporate controls into activity development.   |
|                                   | 2.7 Evaluate and integrate legal, ethical and sustainability considerations.  |
|                                   | 2.8 Develop resources to support activities.  |
|                                   | 2.9 Develop activity within budget to meet agreed objectives.   |
|                                   | 2.10 Promote activities according to organisational marketing objectives.   |
| 3. Evaluate activities.           | 3.1 Obtain formal and informal feedback from customers and colleagues during piloting or conduct of activities.                   |
|                                   | 3.2 Modify activities according to feedback received.   |
|                                   | 3.3 Establish and implement ongoing review mechanisms to ensure continuous improvement of activities in line with its objectives. |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication skills to consult with colleagues about development issues for interpretive activities
- critical thinking skills and research skills to evaluate wide ranging information and tease out creative themes and messages for activities
- literacy skills to:
  - analyse complex information and to interpret this for creative communication to customers
  - develop resources and information materials for the activities
- numeracy skills to calculate costs and work within established budgets
- planning and organising skills to coordinate creative and practical aspects of activities
- problem-solving skills to evaluate and adjust activities.

### Required knowledge

- subject matter around which activities are developed
- principles of interpretation, including work of Freeman Tilden
- physical and digital interpretive media
- practical processes that support activity development, including:
  - budgeting
  - evaluation
  - needs analysis
  - resource development
  - scheduling
- creative communication techniques for interpretive activities, including:
  - games
  - illustrated talks
  - role-playing
  - sensory awareness exercises
  - storytelling
  - use of apps, podcasts, near response codes, quick response codes
- safety requirements specific to activities
- risk assessment processes, including:
  - determining overall risk level
  - determining the exposure to the risk
  - estimating the probability of negative impacts
  - identifying the consequences that could result from the identified risk
- legal, ethical and sustainability considerations for activity development, including:

- cultural appropriateness
- duty of care
- minimal impact
- minimising waste and conserving resources.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- plan and develop multiple interpretive activities with varying themes and messages that meet the needs of different customer groups and commercial and operational constraints
- apply subject matter knowledge to the development of interpretive activities
- plan and develop interpretive activities for a number of different delivery environments.

#### Context of and specific resources for assessment

Assessment must ensure use of:

- a real or simulated environment for which interpretive activities can be planned and developed.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- evaluation of a project undertaken by the individual to develop and evaluate activities for a nominated customer group or organisation
- evaluation of activities by professional interpretation organisations
- written or oral questioning to assess knowledge of interpretation principles and activity development processes
- use of case studies to assess ability to tailor activities and information to suit particular customer needs
- review of portfolios of evidence and third-party workplace reports of on-the-job performance by the individual.

## Guidance information for assessment

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITTGDE304 Prepare and present tour commentaries or activities
- SITTGDE306 Research and share general information on Australian Indigenous culture
- SITTGDE307 Prepare specialised interpretive content on flora, fauna and landscape
- SITTGDE308 Prepare specialised interpretive content on marine environments
- SITTGDE309 Prepare specialised interpretive content on cultural and heritage environments.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

### *Interpretive activities:*

- may include:
  - guided site activities
  - guided walks
  - one or more activities that may be combined in an overall tour program
  - sporting activities
  - touring activities
  - virtual activities
- may relate to a range of subjects, including:
  - art
  - birds
  - built environment
  - culture
  - domestic and farm animals
  - festivals or seasonal themes
  - history and heritage
  - natural environment
  - sports

- wildlife.
- Resources** may include:
- actors and performers
  - apps and other digital content
  - costumes
  - guest speakers
  - handouts
  - information and communications technology
  - natural resources
  - props
  - professional organisations
  - special interest organisations.
- Other specialists** may include:
- actors and performers
  - creative designers
  - cultural advisers
  - designers
  - environmental educators
  - heritage specialists
  - historians
  - interpretation consultants
  - marketers
  - subject matter experts
  - technical experts.

## Unit Sector(s)

Tourism

## Competency Field

Planning and Product Development



# SITTPPD602 Develop environmentally sustainable tourism operations

## Modification History

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

Version	Comments
1.0	<p>E</p> <p>Replaces and is equivalent to SITTPPD006B Plan and develop ecologically sustainable tourism operations.</p> <p>Title changed to better reflect the intent and content of the unit Added innovation. Minor changes to structure for consistency.</p>

## Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to plan strategically for environmentally sustainable operations. It requires the ability to establish and operate a sustainable operation and to monitor its environmental impact.

The work involved in this unit is subject to a range of regulatory requirements that relate to environmental sustainability at land management agency and federal, state or territory, and local government level.

## Application of the Unit

This unit applies to all industry sectors, and to individuals with managerial responsibilities who have strategic planning and product development roles. Planning may be for a whole region or local area or for a particular venue, organisation, event or product. The unit applies to any operation with a strong focus on environmental sustainability.

## Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

## Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |  |   |
|--|---|
| 1. Plan for environmental sustainability.            | <ul style="list-style-type: none"> <li>1.1 Make environmental sustainability an integral part of product planning processes.</li> <li>1.2 Conduct <i>evaluations</i> prior to any decision to establish the operation.</li> <li>1.3 Consult <i>stakeholders</i> and incorporate their views into the planning process.</li> <li>1.4 Investigate <i>methods of managing impact</i>.</li> <li>1.5 Develop strategies that provide social and economic returns to communities.</li> <li>1.6 Proactively seek opportunities for new, innovative and more sustainable approaches.</li> <li>1.7 Develop strategies that balance environmental sustainability and economic viability.</li> </ul> |
| 2. Implement environmentally sustainable operations. | <ul style="list-style-type: none"> <li>2.1 Establish and integrate best practice environmental standards to limit <i>negative environmental impacts</i>.</li> <li>2.2 Evaluate and use technologies for environmental best practice.</li> <li>2.3 Develop environmentally friendly codes of practice for the operation and for customer use.</li> <li>2.4 Conduct operations according to environmentally sustainable practices, guidelines and legal requirements.</li> <li>2.5 Promote environmental awareness among stakeholders.</li> </ul>   |
| 3. Evaluate environmental impact.                    | <ul style="list-style-type: none"> <li>3.1 Monitor and assess environmental impacts as part of regular management reviews.</li> <li>3.2 Monitor compliance with codes of practice and legislative requirements.</li> <li>3.3 Initiate follow up action based on assessment of environmental impact and compliance.</li> </ul>   |

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- communication skills to consult with diverse stakeholders on potentially divisive and nuanced issues
- critical thinking skills to evaluate complex issues and information and develop strategic responses
- literacy skills to:
  - interpret materials describing environmental regulatory requirements and codes of practice
  - develop plans, systems and procedures for tourism operations
- numeracy skills to perform complex calculations to assess profitability considerations
- planning and organising skills to coordinate interrelated planning and operational processes
- problem-solving skills to respond to complex internal and external management challenges.

### Required knowledge

- current research trends in the area of ecologically sustainable operations
- global environmental issues, in particular a layperson's understanding of the science associated with:
  - climate change
  - energy
  - land management
  - waste and consumption
  - water
- relevance of particular environmental issues to the area or region of work including the specific features and vulnerabilities of the local environment
- consultation and communication mechanisms used by organisations in the product development process, including:
  - features
  - nature
  - objectives and outcomes
  - scope
  - time parameters
- strategic frameworks and operational systems and procedures that support environmentally sustainable operations, including those related to:
  - customers
  - equipment and supplies
  - staff

- ways of balancing ecological sustainability and the economic viability of an operation
- laws, regulations and land management requirements and guidelines, including:
  - need for permits in national parks or on land under control of traditional owners
  - restrictions on operations in relevant areas.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the ability to:

- develop and implement a plan for a tourism, hospitality or event operation that supports environmental sustainability and provides evidence of:
  - analysis of key environmental issues
  - consultation with key stakeholders
  - development of strategies and operational approaches that maximise positive impacts
  - integration of current legislation, regulations and industry codes
- demonstrate knowledge of current and emerging issues and trends for tourism and the environment.

#### **Context of and specific resources for assessment**

Assessment must ensure use of:

- a destination, location, organisation or event for which an environmentally sustainable operation can be established
- current information about environmental practices, such as legislation, guidelines and industry codes of practice
- stakeholders with whom consultations can take place
- current information and communications technology to support the research and planning process.

#### **Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- evaluation of a completed plan, including analysis of all evaluations that have been conducted
- evaluation of codes of practice developed by the

- individual for operations in particular locations
- use of case studies to assess ability to:
  - evaluate and respond to different commercial and environmental challenges
  - make suggestions for improving the environmental sustainability of existing tourism operations
- written or oral questioning to assess knowledge of industry codes of conduct, regulatory requirements, minimal impact techniques and methods of managing tourism impact
- review of portfolios of evidence and third-party workplace reports of on-the-job performance by the individual.

### **Guidance information for assessment**

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITTPPD601 Develop tourism products
- SITTPPD603 Develop culturally appropriate tourism operations
- SITXFIN501 Prepare and monitor budgets.

## **Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

*Evaluations* may involve:

- environmental impact study
- evaluation of organisational capacity to comply with:
  - environmental and community protection laws
  - industry and ecotourism codes of practice
- social sustainability
- site studies.

*Stakeholders* may include:

- consumer representatives
- host community
- investors
- government authorities
- land management agencies
- suppliers of environmentally-friendly products.

*Methods of managing impact* may include:

- community consultation and involvement
- education programs:
  - internal
  - external
- exclusion
- operational initiatives:
  - equipment selection
  - frequency of operation
  - group sizes
  - scheduling for optimal weather conditions and seasons
  - selection of most appropriate transport modes.

*Negative environmental impacts* may include:

- disturbance of flora and fauna
- introduction of exotic and feral species
- physical damage
- pollution
- visual impacts
- waste issues.

## **Unit Sector(s)**

Tourism

## **Competency Field**

Planning and Product Development

## SITXCCS201 Provide visitor information

### Modification History

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

Version	Comments
1.0	E Replaces and is equivalent to SITXCCS001B Provide visitor information. Re-worked Elements, Performance Criteria, Required Skills and Knowledge to more fully articulate content.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to access general information on facilities, products and services available in the local area and to provide this to visitors.

### Application of the Unit

This unit applies to a range of tourism, travel, hospitality, event, entertainment and cultural sectors.

It applies to frontline service personnel who routinely respond to visitor requests for general local area information. They may be working independently or with guidance from others in restaurants, hotels, wineries, attractions, entertainment venues, tour operations, visitor information centres and at tour desks.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |  |   |
|--|---|
| 1. Access and update visitor information.  | 1.1 Identify and access <i>sources of visitor information</i> .<br>1.2 Obtain general information on different local facilities, products and services to meet different customer needs.<br>1.3 Share information with colleagues to support the efficiency and quality of service.<br>1.4 Identify and use <i>opportunities</i> to update and maintain local area knowledge. |
| 2. Provide information to visitors.        | 2.1 Identify the specific information and assistance needs of the customer.<br>2.2 Provide an appropriate scope and depth of information to meet customer needs.<br>2.3 Promote <i>internal products and services</i> .   |
| 3. Seek feedback on information provision. | 3.1 Proactively seek visitor feedback to ensure all required information has been provided.<br>3.2 Follow procedures for any formal customer evaluation.<br>3.3 Provide internal feedback on visitor information services.  |

### Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to:
  - interact in a friendly and courteous way with customers
  - promote local products and services
- learning skills to continuously update local area knowledge
- literacy skills to:
  - read and comprehend product and local area information
  - research, sort and use relevant information
  - write simple notes on products and local services



- problem-solving skills to identify knowledge deficiencies and seek information to satisfy visitor enquiries
- teamwork skills to share local area information with colleagues and provide internal feedback.

### **Required knowledge**

- sources of information on the local area, facilities and general products available
- sources of information on organisational products and services
- major local attractions and events, transport options and general visitor facilities.

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Overview of assessment**

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the ability to:

- respond to multiple and diverse customer requests and provide local area information to meet their needs
- source accurate and current information on the local area
- integrate knowledge of the local area when providing general information.

#### **Context of and specific resources for assessment**

Assessment must ensure use of:

- a real or simulated tourism, hospitality or event industry environment where visitor information is sourced and provided to customers
- current information on the local area, facilities and general products available
- customers with whom the individual can interact.

#### **Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct observation, using role plays, to assess the individual's ability to use local knowledge to answer a variety of customer questions
- projects and activities to source and obtain current, accurate and relevant local information
- written or oral questioning to assess knowledge of sources of information on the local area, facilities and

general products available

- review of portfolios of evidence and third-party workplace reports of on-the-job performance by the individual.

### **Guidance information for assessment**

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITHACS201 Provide porter services
- SITHACS303 Provide accommodation reception services
- SITXCCS202 Interact with customers
- SITXCCS302 Provide club reception services
- SITXCOM201 Show social and cultural sensitivity.

## **Range Statement**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

*Sources* may include:

- brochures
- library
- local council
- local people, including local identities with specialised knowledge
- local visitor guide booklets
- maps
- online reservations systems
- organisation information
- organisation-designed information systems, e.g. inventory control database
- principal supplier of the product
- product library
- room directories
- social media websites
- state or territory government tourism authority information systems
- supplier of the product
- the Internet

*Visitor information* may include:

- timetables.
- accommodation options:
  - backpacker lodges
  - holiday parks and resorts
  - hotels
  - motels
- attractions:
  - animal parks
  - art galleries
  - museums
  - national parks
  - walks
  - wineries
  - zoos
- cruises
- dining options:
  - cafes
  - food halls
  - food markets
  - restaurants
- vehicle rental
- entertainment venues:
  - cinemas
  - theatres
  - performing arts centres
- events
- local facilities:
  - airline offices
  - banks
  - dentists
  - doctors
  - currency exchanges
  - hairdressers
  - hospitals
  - emergency services
  - post offices
  - travel agencies
- local shopping facilities:
  - centres
  - malls

- markets
- souvenir shops
- local transport options:
  - buses
  - ferries
  - taxis
  - trains
- organisation-specific information
- road conditions
- sporting facilities
- tours, local outings and trips
- travelling routes
- weather conditions.
- attending team meetings
- informal discussions with colleagues
- listening to radio
- ongoing contact with principal or supplier of the product or service
- participating in local familiarisation tours
- reading:
  - brochures
  - and internal newsletters
  - leaflets
  - local newspapers
  - staff noticeboards
- talking and listening to colleagues and customers
- using personal observation or exploration
- visiting the local information centre
- watching television, videos and films.
- accommodation
- activities
- general retail products and souvenirs
- products made by the organisation:
  - craft items
  - food
  - wine
- restaurant products
- tours.

*Opportunities* may include:

*Internal products and services* may include:

## **Unit Sector(s)**

Cross-Sector

## **Competency Field**

Client and Customer Service

## SITXCOM301 Address protocol requirements

### Modification History

The version details of this endorsed unit of competency set are in the table below. The latest information is at the top.

Version	Comments
1.0	E Replaces and is equivalent to SITXCOM006A Address protocol requirements. Re-worked Elements, Performance Criteria, Required Skills and Knowledge to more fully articulate content.

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to source and access information on protocol requirements to fulfil any sales or operational need. It requires the ability to identify appropriate information sources, access and interpret specific details of protocol requirements and to coordinate the use of protocol.

### Application of the Unit

This unit applies to many tourism, travel, hospitality and event sectors and is particularly relevant to events, function coordination, tour operations and tour guiding.

Protocol affects a broad range of business and government activity and the breadth and depth of protocol knowledge required will vary. This unit is not about having an in-depth knowledge of protocol requirements but focuses on the ability to collect and interpret protocol information.

This unit applies to a range of people working independently or with limited guidance including tour and event coordinators, and managers; tour guides and front of house or duty managers.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

### Pre-Requisites

Not applicable.

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

### Elements and Performance Criteria

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

- |  |   |
|--|---|
| 1. Source information on appropriate protocol. | 1.1 Assess the need for protocol to be followed for the <i>particular situation</i> .<br>1.2 Identify relevant <i>sources of protocol information</i> .<br>1.3 Liaise with customers to determine appropriate protocol.<br>1.4 Interpret relevant protocol information to inform work practice. |
| 2. Coordinate the use of protocol.             | 2.1 Identify <i>specific work activities</i> that require appropriate use of protocol.<br>2.2 Provide protocol briefings to staff and suppliers.<br>2.3 Coordinate the use of correct protocol for the delivery of <i>products and services</i> .   |
| 3. Update knowledge of protocol.               | 3.1 Identify and use <i>opportunities to update protocol knowledge</i> .<br>3.2 Share updated knowledge with customers and colleagues.  |

### Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

#### Required skills

- communication skills to:
  - liaise with customers, clients, their agents and personal assistants to ascertain protocol
  - address dignitaries and officials using appropriate language
- learning skills to continually seek information to enhance knowledge of protocol
- literacy skills to:
  - read and interpret unfamiliar and complex protocol information
  - research and analyse information on protocol
  - write correspondence to dignitaries and officials, invitations and team briefing papers
- self-management skills to take responsibility for meeting protocol requirements

- teamwork skills to share protocol information with team members to ensure protocol is followed.

### Required knowledge

- main types of civic functions held in Australia
- importance and role of protocol in different business situations
- key sources of information on protocol for:
  - Australian honours system, including order of precedence, ranks and forms of address, and wearing of honours and medals
  - involvement of Indigenous Australians and other cultural groups in business activities
  - correct use of national and state symbols, including flags, anthems and military salutes
  - forms of address for different VIPs and dignitaries, both for written correspondence and in oral communication
- protocols for different situations, including:
  - invitations to VIPs
  - arrival procedures, including for heads of state or government officials
  - introduction protocols and order of speakers
  - order of precedence for official guests
  - seating arrangements
  - dress styles.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- source accurate information on multiple and diverse protocol requirements
- use protocol for diverse oral and written purposes
- integrate knowledge of protocol when organising business activities.

#### Context of and specific resources for assessment

Assessment must ensure use of:

- current protocol information.

#### Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:



- direct observation, using roles plays, of the individual addressing and introducing dignitaries and officials
- activities to assess the individual's ability to:
  - source information on protocol
  - coordinate the use of correct protocol for the delivery of products and services
- evaluation of documents prepared by the individual which include use of protocol:
  - briefing papers
  - correspondence to dignitaries and officials
  - invitations
  - marketing materials
  - running sheets
- written or oral questioning to assess knowledge of key sources of information on protocol and protocols for different situations
- review of portfolios of evidence and third-party workplace reports of on-the-job performance by the individual.

### Guidance information for assessment

The assessor should design integrated assessment activities to holistically assess this unit with other units relevant to the industry sector, workplace and job role, for example:

- SITTGDE401 Coordinate and operate tours
- SITTTSL201 Operate an online information system
- SITXEVT401 Plan in-house events or functions
- SITXMPR401 Coordinate production of brochures and marketing materials.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Particular situation*** may involve:

- event organisation, including:
  - citizenship ceremonies
  - civic receptions
  - formal parades
  - freedom of city ceremonies

***Sources of protocol information*** may include:

- national day receptions
- private functions
- general business administration
- issuing marketing materials reflecting correct titles of dignitaries
- meeting the requirements of dignitaries and officials
- meeting the requirements of entertainers and masters of ceremony.
- Aboriginal Land Councils
- Australia Day Councils
- customers, clients, their agents and personal assistants
- federal, state or territory, and local government protocol departments
- Internet
- libraries
- Office of the United Nations.

***Specific work activities*** may involve:

- addressing and introducing dignitaries and officials
- correspondence to dignitaries and officials
- issuing invitations
- liaison with dignitaries and officials
- preparing:
  - briefing papers
  - marketing materials
  - running sheets
- providing various services during the conduct of an event, including on-site management and service of food and beverage.

***Products and services*** may include:

- accommodation
- events
- functions
- meetings
- tours.

***Opportunities to update protocol knowledge*** may include:

- informal networking with colleagues
- Internet research
- reading relevant journals.

## **Unit Sector(s)**

Cross-Sector

## Competency Field

Communication and Teamwork

## **SRXGOV001B Participate as a member of an effective Board of an organisation**

### **Modification History**

Not applicable.

### **Unit Descriptor**

**This unit has been developed for the Community Recreation, Fitness, Outdoor Recreation and Sport Industry Training Packages. This unit covers the skills required to be an active participant in the effective governance activities of an organisation. It does not cover any of the management skills required of staff of an organisation. This unit applies equally to both volunteer and paid directors of organisations.**

**This unit has been developed for the Community Recreation, Fitness, Outdoor Recreation and Sport Industry Training Packages. This unit covers the skills required to be an active participant in the effective governance activities of an organisation. It does not cover any of the management skills required of staff of an organisation. This unit applies equally to both volunteer and paid directors of organisations.**

### **Application of the Unit**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

Not applicable.

### **Elements and Performance Criteria Pre-Content**

Not applicable.

## Elements and Performance Criteria

### Elements and Performance Criteria

Element	Performance Criteria
1 Identify the core business and establish the strategic direction of the organisation	1.1 Identify the <b>core business of the organisation</b>
	1.2 Identify, explain and document the relationships between the organisation and other <b>stakeholders</b>
	1.3 Interact with key <b>stakeholders</b> to inform them of achievements and to ensure their input into the determination of strategic goals and directions
	1.4 Document the organisation's strategic direction and priorities
	1.5 Establish performance targets, that form the basis for evaluation of performance
2 Follow legal requirements when carrying out Board duties	2.1 Identify and refer to the relevant provisions of the <b>legal framework</b> under which the organisation was established
	2.2 Monitor relevant aspects of the appropriate federal, state and local <b>legislation</b> and by-laws for organisation compliance
3 Work within the structure of the organisation	3.1 Differentiate and document the member, governance and management issues of the organisation in the <b>organisation's governance policy guidelines</b>
	3.2 Identify, document and refer to the relationships between governance issues and management issues
	3.3 Identify and document the role of the Board in the <b>organisation's governance policy guidelines</b>
	3.4 Identify and document the role of the individual Directors in the <b>organisation's governance policy guidelines</b>
	3.5 Identify and document the role of the Chairperson in the <b>organisation's governance policy guidelines</b>
	3.6 Identify and document the role of the Secretary in the <b>organisation's governance policy guidelines</b>

- 3.7 Document delegations of the Board's authority
- 3.8 Undertake and evaluate duties outlined in job descriptions of Board members regularly as a whole **Board assessment** and an **individual Director assessment**
- 4 **Monitor trends and changes in the industry**
  - 4.1 Ensure the Board is aware of **emerging issues** in the industry that are likely to have an impact on the organisation's business
  - 4.2 Evaluate the identified **emerging issues** within a risk management and due diligence framework for their impact on the organisation
  - 4.3 Ensure those **emerging issues** requiring attention by the organisation are dealt with by the Board in an appropriate manner
  - 4.4 Demonstrate how the Board regularly reviews its policies and procedures to take account of the **emerging issues**
- 5 **Monitor the organisation's operations**
  - 5.1 Ensure preparation for meetings is adequate and timely
  - 5.2 Record meeting attendance and encourage effective participation by all Board members
  - 5.3 Utilise information provided in analysing the efficiency and effectiveness of the organisation in meeting its stated objectives and performance targets
  - 5.4 Review policies, procedures, operations and **workplace responsibilities** of the organisation and adapt accordingly
- 6 **Supervise the senior management of the organisation**
  - 6.1 Receive information and advice regularly from the senior management of the organisation to form the basis of informed decision-making
  - 6.2 Provide instructions to the senior management of the organisation to implement specific policy directions as required
  - 6.3 Seek feedback from senior management of the organisation in relation to the implementation of the specific policy directions

- 6.4 Assess the performance of the Chief Executive Officer (CEO) regularly in accordance with the **legal framework** under which they are engaged

## Required Skills and Knowledge

Not applicable.

## Evidence Guide

### Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competence for this unit. This is an integral part of the assessment of competence and should be read in conjunction with the Range Statements

### Critical aspects of evidence to be considered

Assessment must confirm sufficient knowledge of being an effective paid or unpaid member of the Board of a sport or recreation organisation in the work environment

Assessment of performance should be over a period of time covering all categories of the Range Statements that are applicable in the learner's environment

In particular, assessment must confirm the ability to

identify the core business and establish the strategic direction of the organisation

follow legal requirements when carrying out Board duties

work within the structure of the organisation

monitor trends and changes in the industry

monitor the organisation's operations

supervise the senior management of the organisation

### Interdependent assessment of units

This unit must be assessed after attainment of competency in the following unit(s)

Nil

This unit must be assessed in conjunction with the following unit(s)

SRXGOV002B Undertake the role of an individual Director of an organisation

For the purpose of integrated assessment, this unit may be assessed in conjunction with the following unit(s)

Nil

### **Required knowledge and skills**

#### Required knowledge

Knowledge of natural justice and fair process as it relates to the evaluation and assessment of the effectiveness and efficiency of a Board and individual Directors

Knowledge of the business and operations of the organisation as it relates to participating in the formulation of strategic directions

Knowledge of the legal framework under which the organisation operates and the Memorandum and/or Articles of Association of the organisation

Knowledge of roles and responsibilities of particular functions on the Board such as Chairperson, Secretary and Director

Knowledge of the role policies and procedures play in the effective running of an organisation

Knowledge of the separation of the governance (Board) and management (Chief Executive Officer) functions of the organisation and how the management issues are effectively functions of the Board that are delegated to the Chief Executive Officer (CEO)

Knowledge of performance measurement systems as they relate to the measurement of the efficiency and effectiveness of the organisation in meeting its stated performance targets



Knowledge of effective human resource management practices as they relate to the delegation, monitoring and evaluation of the Chief Executive Officer (CEO) and senior management

Knowledge of issues to do with Occupational Health and Safety (OH&S) as they relate to the employment of staff

#### Required skills

Literacy and numeracy skills as they relate to the reading, comprehension, evaluation and analysis of documentation that relates to the organisation's strategic direction, governance policy guidelines, undertaking of the function of Director and the monitoring of trends in industry

Research skills as they relate to the monitoring of trends in industry

Verbal communication skills as they relate to the presentation of cogent arguments within the Board processes

Written communication skills as they relate to the presentation of papers at a Board meeting

Negotiation skills as they relate to active participation in Board discussions and decision - making

Consultation skills as they relate to the meaningful engagement of relevant stakeholders in the organisation's operations

Policy development skills as they relate to the drafting of, consultation on and endorsement of policies and procedures for the effective operation of the organisation

#### Resource implications

Physical resources - assessment of this competency requires access to either real or simulated organisations and their respective Board processes

Human resources - assessment of this unit of competency will require human resources

consistent with those outlined in the Assessment Guidelines. That is, assessors (or persons within the assessment team) must

be competent in this unit but preferably be competent in the unit at the level above

be current in their knowledge and understanding of the industry through provision of evidence of professional activity in the relevant area

have attained the mandatory competency requirements for assessors under the Australian Quality Training Framework (AQTF) as specified in Standard 7.3 of the **Standards for Registered Training Organisations**

### **Consistency in performance**

Due to issues such as performing various duties as a member of a Board of an organisation, this unit of competency must be assessed over period of time in order to ensure consistency of performance over the Range Statements and contexts applicable to participating as a member of an effective Board of an organisation

### **Context for assessment**

This unit of competency must be assessed in the context of participating as a member of an effective Board of a sport or recreation organisation

Assessment of this unit of competence will usually include observation of processes and procedures, oral and/or written questioning on required knowledge and skills and consideration of required attitudes

Where performance is not directly observed and/or is required to be demonstrated over a "period of time" and/or in a "number of locations", any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons

## **KEY COMPET ENCIES**

Collect, Analyse & Organise Information	Communicate Ideas & Information	Plan & Organise Activities	Work with Others & in Teams	Use Mathematical Ideas & Techniques	Solve Problems	Use Technology
3	3	3	3	3	3	2

These levels do not relate to the Australian Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

The three levels of performance (1, 2 and 3) denote the level of competency required to perform the task:

Use routine approaches

Select from routine approaches

Establish new approaches

**Collecting, analysing**

**and  
organising  
informatio**

**n -**  
Collecting  
information  
on the core  
business of  
the  
organisatio  
n

**Communic  
ating ideas  
and  
informatio**

**n -**  
Reporting  
to the  
Board on a  
task that  
was  
allocated

**Planning  
and  
organising  
activities -**

Planning  
and  
organising  
regular  
Board  
meetings

**Working  
with teams  
and others**

- Working  
as a  
member of  
a Board of  
an  
organisatio  
n

**Using  
mathemati  
cal ideas  
and**

**techniques**

- Analysing financial documents for the organisation

**Solving****problems -**

Identifying the need to hold an extraordinary meeting

**Using****technology**

- Taking part in a teleconference

Please refer to the Assessment Guidelines for advice on how to use the Key Competencies.

## Range Statement

### Range Statements

The Range Statements provide advice to interpret the scope and context of this unit of competence, allowing for differences between enterprises and workplaces. The Range Statements relate to the unit as a whole and helps facilitate holistic assessment. In addition, the following variables may be present for this particular unit of competency

### RANGE STATEMENT

**Board assessment**

### CATEGORIES

[all categories]

the assessment of the Board as a whole could

be undertaken by four key issues

chat with the Chairperson

yes/no questionnaire

grading questionnaire

written questionnaire

the introduction of an effective process of Board assessment will involve

implementation over time

gaining commitment

careful preparation

deciding the issues to be covered by the Board assessment

defining measures of performance: organisation and Board

communicating performance

implementing changes

reviewing the process

### **Chief Executive Officer assessment**

[all categories]

the Chief Executive Officer (CEO) assessment should be

undertaken by the Board, as the Chief Executive Officer (CEO) is responsible to the Board as a whole, not just the Chairperson

part of a policy framework

based on objective performance criteria

reviewed as part of an organisation and Board performance review

linked to a remuneration policy which reflects objective performance

the aim of the performance evaluation is to align the long - term interests of the Chief Executive Officer (CEO) with the long - term interests of the organisation. This would require a three stage process of

the Board setting goals for/with the Chief Executive Officer

monitoring the performance of the organisation against the goals

responding to the difference between expected and actual outcomes

performance measures should be

valid

verifiable

controllable

global

communicable

### **Core business of the organisation**

[all categories]

that business that is consistent with the intent and purpose for which the organisation was established

that business that is consistent with the Memorandum and Articles of Association

### **Emerging issues**

[all categories]

the Corporate Law Economic Reform Bill (1998)

technology

information

### **Individual Director assessment**

[all categories]

the assessment of Directors who are currently on the Board can be undertaken by various means

chat with the Chairperson

chat with the Governance Committee

Director self-assessment

aggregated results to give Board profiles

qualitative peer assessment

the assessment of a Director prior to appointment should consider the following issues

the profile should be related to the goals of the organisation and the organisation and Board performance criteria

an external search process should be used to complement the probable likely suspects known to the Board

the appointment term should be considered relevant information should be discussed prior to the appointment

current Directors should meet the final candidate to ensure they are comfortable that the new Director will contribute the skills knowledge and experience sought in a team-like manner

a thorough induction process should be undertaken

## Legal framework

[all categories]

the legal context within which the organisation operates

association - Associations law

corporation - Corporation law

## Legislation

[all categories]

specific laws

Corporation law

the Corporations law, the complementary State legislation and the Ordinances of the relevant Territories

the Company Law Review Act (1998)

the Corporate Law Economic Reform Bill (1998)

Associations law

Trade Practices law

competition

consumer protection

Contract law



Environmental law

Taxation law

Regulatory compliance

laws relating to people

Industrial Relations/Workplace Relations Act

Occupational Health and Safety (OH&S) Acts

Employment

Equal Opportunity and Anti - Discrimination

Child Protection

Volunteer Workers Insurance

Public Liability

Workers compensation

Business specific laws

laws relating to business

Income Tax Act

Payroll Acts

Stamp duty Act

Liquor Licensing Acts

Landlord and Tenant

Goods and Services Tax (GST) Act

Copyright Act

Trade Marks Act

Business specific laws and Acts

**Organisation's governance policy guidelines**

[all categories]

would include policies and processes in the areas of

role of board

board structure

role of individual directors

role of chairperson

role of company secretary  
role of chief executive officer  
board meetings  
board meeting agenda  
board papers  
board minutes  
the board calendar  
committees  
delegation of authority  
monitoring  
strategy formulation  
service/advice  
contacts  
chief executive officer evaluation  
director protection  
board evaluation  
director development  
director selection and induction

## **Stakeholders**

[all categories]  
shareholders  
government Ministers  
government departments  
Departments of Consumer Affairs or Fair  
Trading government industry regulators  
Australian Competition and Consumer  
Commission  
Australian Securities and Investments  
Commission  
Departments of Consumer Affairs or Fair  
Trading  
  
Non-government industry regulators  
Australian Stock Exchange

employees

suppliers

customers

media

unions

the community

other organisations

**Workplace responsibilities**

[all categories]

employment of staff

Occupational Health and Safety (OH&S)

**Unit Sector(s)**

Not applicable.

# **SRXGOV004B Work effectively with the Board of an organisation**

## **Modification History**

Not applicable.

## **Unit Descriptor**

**This unit has been developed for the Community Recreation, Fitness, Outdoor Recreation and Sport Industry Training Packages.**

**This unit covers the skills required for senior staff of an organisation to work effectively with the Board or management committee of a recreation organisation or facility.**

**This unit has been developed for the Community Recreation, Fitness, Outdoor Recreation and Sport Industry Training Packages.**

**This unit covers the skills required for senior staff of an organisation to work effectively with the Board or management committee of a recreation organisation or facility.**

## **Application of the Unit**

Not applicable.

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

Not applicable.

## **Elements and Performance Criteria Pre-Content**

Not applicable.

## Elements and Performance Criteria

### Elements and Performance Criteria

Element	Performance Criteria
1 <b>Identify the roles of governance and management</b>	1.1 Differentiate and document the member, governance and management issues of the organisation in the <b>organisation's governance policy guidelines</b>
	1.2 Identify, document and refer to the relationships between governance issues and management issues
2 <b>Facilitate the development of an effective Board</b>	2.1 Provide information to enable the <b>Board</b> to analyse the efficiency and effectiveness of the organisation in meeting its stated objectives and performance targets
	2.2 Ensure new Directors understand the way that the <b>Board</b> operates and the <b>organisation's governance policy guidelines</b>
	2.3 Highlight continuing professional development opportunities to the attention of all Directors
	2.4 Monitor relevant aspects of the appropriate federal, state and local <b>legislation</b> and by-laws for organisation compliance and provide advice to ensure Directors follow legal requirements when carrying out <b>Board</b> duties
3 <b>Provide detailed information for the Board to deal with the right matters</b>	3.1 Ensure the <b>Board</b> is aware of <b>emerging issues</b> in the industry that are likely to have an impact on the organisation's business
	3.2 Evaluate the identified <b>emerging issues</b> within a risk management and due diligence framework for their impact on the organisation and provide this information to the <b>Board</b>
	3.3 Differentiate governance and management issues of the organisation to ensure the <b>Board</b> deals with the right matters
	3.4 Collate a well structured <b>Board</b> paper, containing all necessary information items and including a recommendation from management, for all agenda items

- 3.5 Ensure **Board** members receive the papers in sufficient time to study them before the meeting
- 3.6 Establish processes to source appropriate internal and external professional advice for Directors to inform their decision-making (where required)
- 3.7 Establish processes to deal with extraordinary matters that arise outside scheduled meetings
- 4 **Ensure that Board decisions are implemented properly**
  - 4.1 Ensure complete and accurate minutes are recorded and reported to the **Board**
  - 4.2 Identify and implement actions that flow from the decisions clearly
  - 4.3 Implement the appropriate policies and procedures to support the Board's decisions within agreed timeframes
  - 4.4 Advise the **Board** promptly of **issues** affecting the implementation of **Board** decisions
- 5 **Ensure regular communication with the Board**
  - 5.1 Provide information and advice regularly to the **Board** to foster informed decision-making
  - 5.2 Brief the Chairperson in great detail on all substantive issues at all times
  - 5.3 Seek clear instructions from the **Board** in order to implement specific policy directions (as required)
  - 5.4 Seek feedback from the **Board** in relation to the performance of staff regarding implementation of the specific policy directions

## Required Skills and Knowledge

Not applicable.

## Evidence Guide

### Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competence for this unit. This is an integral part of the assessment of

competence and should be read in conjunction with the Range Statements

**Critical aspects of evidence to be considered**

Assessment must confirm sufficient knowledge of working effectively with the Board of a recreation organisation or facility in the work environment

Assessment of performance should be over a period of time covering all categories of the Range Statements that are applicable in the learner's environment

In particular, assessment must confirm the ability to

differentiate between management and governance issues

ensure the Board follows the organisation's governance policy guidelines

facilitate the establishment of an effective Board team

arrange for the Board to deal with the right matters

provide sufficient documentation for the Board to reach informed decisions

ensure that the decisions are implemented properly

communicate regularly with the Board and ensure the Chairperson is well briefed on current issues affecting the organisation

**Interdependent assessment of units**

This unit must be assessed after attainment of competency in the following unit(s)

Nil

This unit must be assessed in conjunction with the following unit(s)

Nil

For the purpose of integrated assessment, this unit may be assessed in conjunction with the following unit(s)

Nil

## Required knowledge and skills

### Required knowledge

Knowledge of the business and operations of the organisation as it relates to the formulation of strategic directions

Knowledge of the legal framework under which the organisation operates and the Memorandum and/or Articles of Association of the organisation

Knowledge of roles and responsibilities of particular functions on the Board such as Chairperson, Secretary and Director

Knowledge of the role policies and procedures play in the effective running of an organisation

Knowledge of the separation of the governance (Board) and management (Chief Executive Officer) functions of the organisation and how the management issues are effectively functions of the Board that are delegated to the Chief Executive Officer (CEO)

Knowledge of human resource management practices as they relate to the development of effective working relationships between paid staff and volunteer Boards

### Required skills

Literacy and numeracy skills as they relate to the reading, comprehension, evaluation and analysis of documentation that relates to the organisation's strategic direction, governance policy guidelines and the monitoring of trends in industry

Research skills as they relate to the monitoring of trends in industry

Verbal communication skills as they relate to the presentation of information to the Board

Written communication skills as they relate to the presentation of papers at a Board meeting

Consultation skills as they relate to the



meaningful engagement of relevant Board members in the organisation's operations

Policy development skills as they relate to the drafting of, consultation on and endorsement of policies and procedures for the effective operation of the organisation

Facilitation and project management skills as they relate to the implementation of Board decisions

Leadership skills as they relate to demonstration of appropriate individual standards of performance, influencing others, making decisions, facilitating group decision - making and the utilisation of appropriate leadership styles

## Resource implications

Physical resources - assessment of this competency requires access to

either real or simulated organisations and their respective Board processes

Human resources - assessment of this unit of competency will require human resources consistent with those outlined in the Assessment Guidelines. That is, assessors (or persons within the assessment team) must be competent in this unit but preferably be competent in the unit at the level above

be current in their knowledge and understanding of the industry through provision of evidence of professional activity in the relevant area

have attained the mandatory competency requirements for assessors under the Australian Quality Training Framework (AQTF) as specified in Standard 7.3 of the **Standards for Registered Training Organisations**

## Consistency in performance

Due to issues such as the varied issues that are required to be discussed by a Board, this unit of competency must be assessed over period of time in order to ensure consistency of performance over the Range Statements and contexts applicable to working

effectively with the Board or management committee of a sport or recreation organisation

**Context for assessment**

This unit of competency must be assessed in the context of working effectively with the Board or management committee of a sport or recreation organisation

Assessment of this unit of competence will usually include observation of processes and procedures, oral and/or written questioning on required knowledge and skills and consideration of required attitudes

Where performance is not directly observed and/or is required to be demonstrated over a "period of time" and/or in a "number of locations", any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons

**KEY COMPETENCIES**

Collect, Analyse & Organise Information	Communicate Ideas & Information	Plan & Organise Activities	Work with Others & in Teams	Use Mathematical Ideas & Techniques	Solve Problems	Use Technology
3	3	3	3	3	3	2

These levels do not relate to the Australian Qualifications Framework. They relate to the seven areas of generic competency that

underpin  
effective  
workplace  
practices.

The three  
levels of  
performanc  
e (1, 2 and  
3) denote  
the level of  
competency  
required to  
perform the  
task:

Use routine  
approaches

Select from  
routine  
approaches

Establish  
new  
approaches

**Collecting,  
analysing  
and  
organising  
informatio  
n -**

Collecting  
information  
on the core  
business of  
the  
organisatio  
n

**Communic  
ating ideas  
and  
informatio  
n -**

Reporting  
to the  
Board on a  
task that  
was

allocated

**Planning  
and  
organising  
activities -**

Planning  
and  
organising  
regular  
Board  
meetings

**Working  
with teams  
and others**

- Working  
with mem-  
bers of a  
Board of an  
organisatio-  
n

**Using  
mathemati-  
cal ideas  
and**

**techniques**  
- Analysing  
financial  
documents  
for the  
organisatio-  
n

**Solving  
problems -**

Identifying  
the need to  
hold an  
extraordina-  
ry meeting

**Using  
technology**

- Taking  
part in a  
teleconfere-  
nce

Please refer  
to the

Assessment  
Guidelines  
for advice  
on how to  
use the Key  
Competenci  
es.

## Range Statement

### Range Statements

The Range Statements provide advice to interpret the scope and context of this unit of competence, allowing for differences between enterprises and workplaces. The Range Statements relate to the unit as a whole and helps facilitate holistic assessment. In addition, the following variables may be present for this particular unit of competency

#### RANGE STATEMENT

#### CATEGORIES

##### Board

[all categories]

refers to Boards or committees of management responsible for the governance of a recreation organisation or facility as distinct from the management operations

Board members may be paid Directors or volunteers

##### Emerging issues

[all categories]

may include but not limited to

the Corporate Law Economic Reform Bill (1998)

technology

information

##### Legislation

[all categories]

specific laws

Corporation law

the Corporations law, the complimentary State legislation and the Ordinances of the relevant Territories

the Company Law Review Act (1998)  
the Corporate Law Economic Reform Bill  
(1998)

Associations law  
Trade Practices law  
Competition  
consumer protection  
Contract law  
Environmental law  
Taxation law  
Regulatory compliance

laws relating to people  
Industrial Relations/Workplace Relations  
Act  
Occupational Health and Safety (OH&S)  
Acts  
Employment  
Equal Opportunity and Anti - Discrimination  
Child Protection  
Volunteer Workers Insurance  
Public Liability  
Workers compensation  
business specific laws

laws relating to business  
Income Tax Act  
Payroll Acts  
Stamp duty Act  
Liquor Licensing Acts  
Landlord and Tenant  
Goods and Services Tax (GST) Act  
Copyright Act  
Trade Marks Act

**Organisation's governance policy guidelines**

business specific laws and acts

[all categories]

would include policies and processes in the areas of

role of Board

Board structure

role of individual Directors

role of Chairperson

role of Company Secretary

role of Chief Executive Officer (CEO)

Board meetings

Board meeting agenda

Board papers

Board minutes

the Board calendar

committees

delegation of authority

monitoring

strategy formulation

service/advice

contacts

Chief Executive Officer (CEO) evaluation

Director protection

Board evaluation

Director development

Director selection and induction

**Unit Sector(s)**

Not applicable.

## **SRXGRO002A Deal with conflict**

### **Modification History**

Not applicable.

### **Unit Descriptor**

**This unit has been developed for the Community Recreation, Fitness, Outdoor Recreation and Sport Industry Training Packages.**

**This unit covers the knowledge and skills required to deal effectively with conflict in the workplace.**

**This unit has been developed for the Community Recreation, Fitness, Outdoor Recreation and Sport Industry Training Packages.**

**This unit covers the knowledge and skills required to deal effectively with conflict in the workplace.**

### **Application of the Unit**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

Not applicable.

### **Elements and Performance Criteria Pre-Content**

Not applicable.

### **Elements and Performance Criteria**

**Elements and Performance Criteria**



Element	Performance Criteria
1 <b>Identify conflict situations</b>	1.1 Identify (quickly) signs and possible causes of conflict 1.2 Determine accurately the stage of the conflict, with respect to progression and possible escalation 1.3 Take swift and tactful action to prevent escalation 1.4 Identify (quickly) situations where personal safety of clients or staff may be threatened and organise appropriate assistance (if required) 1.5 Identify factors within the individual or workplace environment which relate to the developing conflict
2 <b>Implement conflict resolution strategies</b>	2.1 Take responsibility for resolving the conflict within scope of individual responsibility 2.2 Clarify <b>factors and issues relevant to the conflict</b> 2.3 Demonstrate correct use of <b>conflict resolution techniques</b> to manage the conflict after consideration of the particular situation 2.4 Identify <b>options for resolution</b> of the conflict which allow for constructive responses to be negotiated and enable established work relationships to continue 2.5 Encourage, treat with respect, and accept (where appropriate) all points of view during negotiations and discussions
3 <b>Use effective interpersonal skills</b>	3.1 Demonstrate use of effective verbal and non verbal communication during negotiations (including body language, questioning, language style, active listening and reflection) 3.2 Provide assertive feedback, and receive feedback non-defensively during negotiations

## Required Skills and Knowledge

Not applicable.

## Evidence Guide

### Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competence for this unit. This is an integral part of the assessment of competence and should be read in conjunction with the Range Statements

### Critical aspects of evidence to be considered

Assessment must confirm sufficient knowledge of typical symptoms and causes of conflict in the work environment and conflict resolution techniques

Assessment of performance should be over the resolution of a minimum of three (3) different conflict situations, covering the prescribed number of categories from the Range Statements

Assessment must confirm the ability to apply this knowledge and appropriate techniques to identify sources of conflict in the workplace resolve a range of different conflict situations, using different options for resolution

use suitable communication skills to facilitate effective discussion between all parties and achieve resolution

### Interdependent assessment of units

This unit must be assessed after attainment of competency in the following unit(s)

Nil

This unit must be assessed in conjunction with the following unit(s)

Nil

For the purpose of integrated assessment, this unit may be assessed in conjunction with the following unit(s)

Nil

### Required knowledge and skills

Required knowledge

Signs and stages of conflict in the workplace

Possible causes/sources of conflict  
(ideational, status and power, goal conflict)

Functions of conflict (functional and  
dysfunctional)

Options for constructive responses to typical  
conflict situations

Required skills

Interpersonal skills

Participation in small informal work groups

Problem solving

Ability to gather, record, and convey  
information

## Resource implications

Physical resources - assessment of this unit  
of competency requires access to

real or simulated work group situations

access to information relevant to the  
workplace

Human resources - assessment of this unit of  
competency will require human resources  
consistent with those outlined in the  
Assessment Guidelines. That is, assessors (or  
persons within the assessment team) must

be competent in this unit but preferably be  
competent in the unit at the level above

be current in their knowledge and  
understanding of the industry through  
provision of evidence of professional activity  
in the relevant area

have attained the mandatory competency  
requirements for assessors under the  
Australian Quality Training Framework  
(AQTF) as specified in Standard 7.3 of the  
**Standards for Registered Training  
Organisations**

## Consistency in performance

Due to issues such as differences in conflict  
situations, this unit of competency must be

assessed over the resolution of a minimum of three (3) different conflict situations, to ensure consistency of performance over the Range Statements and contexts applicable to conflict arising in workplaces

**Context for assessment**

This unit of competency must be assessed in the context of responding to a conflict issue arising during a sport or recreation activity for a group of clients. For valid and reliable assessment the clients should be real, i.e., not peers, and the sport or recreation activity should be similar to those that occur in the learners work environment. The environment should be safe with the hazards, circumstances and equipment likely to be encountered in a real workplace

Assessment of this unit of competency will usually include observation of processes and procedures, oral and/or written questioning on required knowledge and skills and consideration of required attitudes

Where performance is not directly observed and/or is required to be demonstrated over a "period of time" and/or in a "number of locations", any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons

**KEY  
COMPET  
ENCIES**

Collect, Analyse&Organise Information	Communicate Ideas&Information	Plan&Organise Activities	Work with Others&in Teams	Use Mathematical Ideas&Techniques	Solve Problems	Use Technology
2	2	-	2	-	3	-

These levels do not relate to the Australian

Qualifications

Framework

. They relate to the seven areas of generic competency that underpin effective workplace practices.

The three levels of performance (1, 2 and 3) denote the level of competency required to perform the task:

Use routine approaches

Select from routine approaches

Establish new approaches

**Collecting, analysing and organising information -**

Collecting information objectively from all stakeholders involved in a conflict situation

**Communic**

**ating ideas  
and  
informatio**

n - Liaising  
with all  
stakeholder  
s and  
presenting  
solution-foc  
used ideas

**Planning  
and  
organising  
activities -**

Not  
applicable

**Working  
with teams  
and others**

-

Collaborati  
vely  
working  
with people  
and  
negotiating  
and  
consulting  
for a  
resolution

**Using  
mathemati  
cal ideas  
and  
techniques**

- Not  
applicable

**Solving  
problems -**

Resolving  
conflict  
and/or  
preventing  
conflict  
from  
arising in a

workplace  
situation

**Using  
technology**

- Not  
applicable

Please refer  
to the  
Assessment  
Guidelines  
for advice  
on how to  
use the Key  
Competenci  
es.

## Range Statement

### Range Statements

The Range Statements provide advice to interpret the scope and context of this unit of competence, allowing for differences between enterprises and workplaces. The Range Statements relate to the unit as a whole and helps facilitate holistic assessment. In addition, the following variables may be present for this particular unit of competency

### RANGE STATEMENT

#### Conflict resolution techniques

### CATEGORIES

[all categories]  
approaches to conflict resolution include  
withdrawal  
smoothing  
compromise  
forcing  
confrontation  
problem solving  
compromise  
majority vote  
arbitration

**Conflict situations**

[all categories]

situations may include

client complaints

conflicts among work colleagues

conflict between clients/participants

**Factors related to conflict**

[all categories]

factors contributing to conflict may include

opposing attitudes, values, beliefs

individual versus group goals

workload

stress

limited resources

**Interpersonal skills**

[all categories]

communication

verbal

non-verbal

questioning

listening

paraphrasing

negotiating

feedback

**Options for resolution**

[all categories]

win - win

win - lose

lose - lose

**Workplace environment**

[one category]

sectors of the sport and recreation industry

fitness

sport

community recreation



outdoor recreation

**Unit Sector(s)**

Not applicable.

## TAEDEL301A Provide work skill instruction

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the performance outcomes, skills and knowledge required to conduct individual and group instruction and demonstrate work skills, using existing learning resources in a safe and comfortable learning environment. The unit covers the skills and knowledge required to determine the success of both the training provided and one's own personal training performance. It emphasises the training as being driven by the work process and context.
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### Application of the Unit

<b>Application of the unit</b>	This unit supports a wide range of applications across any workplace setting and so can be used by any organisation. Its use is not restricted to training organisations.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Organise instruction and demonstration	1.1. Gather information about <i>learner characteristics</i> and learning needs 1.2. Confirm a <i>safe learning environment</i> 1.3. Gather and check <i>instruction and demonstration objectives</i> and seek assistance if required 1.4. Access and review relevant <i>learning resources</i> and <i>learning materials</i> for suitability and relevance, and seek assistance to interpret the contextual application 1.5. Organise access to necessary equipment or physical resources required for instruction and demonstration 1.6. Notify learners of <i>details</i> regarding the implementation of the learning program and/or delivery plan
2. Conduct instruction and demonstration	2.1. Use interpersonal skills with learners to establish a safe and comfortable learning environment 2.2. Follow the learning program and/or delivery plan to cover all learning objectives 2.3. Brief learners on any <i>OHS procedures</i> and requirements prior to and during training 2.4. Use <i>delivery techniques</i> to structure, pace and enhance learning 2.5. Apply <i>coaching</i> techniques to assist learning 2.6. Use communication skills to provide information,

ELEMENT	PERFORMANCE CRITERIA
	instruct learners and demonstrate relevant work skills 2.7. Provide opportunities for practice during instruction and through work activities 2.8. Provide and discuss feedback on learner performance to support learning
3. Check training performance	3.1. Use <i>measures</i> to ensure learners are acquiring and can use new technical and generic skills and knowledge 3.2. Monitor learner progress and outcomes in consultation with learner 3.3. Review relationship between the trainer/coach and the learner and adjust to suit learner needs
4. Review personal training performance and finalise documentation	4.1. Reflect upon personal performance in providing instruction and demonstration, and document strategies for improvement 4.2. Maintain, store and secure learner records according to organisational and legal requirements

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- verbal and non-verbal communication techniques, such as:
  - asking relevant and appropriate questions
  - providing explanations
  - demonstrating
  - using listening skills
  - providing information clearly
- safety skills to implement OHS requirements, by acting and responding safely in order to:
  - identify hazards
  - conduct prestart-up checks if required
  - observe and interpret learner behaviour that may put people at risk
- time-management, skills to:

**REQUIRED SKILLS AND KNOWLEDGE**

- ensure all learning objectives are covered
- pace learning
- reflection skills in order to:
  - identify areas for improvement
  - maintain personal skill development
- literacy skills to:
  - complete and maintain documentation
  - read and follow learning programs and plans
  - read and analyse learner information
- technology skills to operate audio-visual and technical equipment
- interpersonal skills to:
  - engage, motivate and connect with learners
  - provide constructive feedback
  - maintain appropriate relationships
  - establish trust
  - use appropriate body language
  - maintain humour
  - demonstrate tolerance
  - manage a group
  - recognise and be sensitive to individual difference and diversity
- observation skills to:
  - monitor learner acquisition of new skills, knowledge and competency requirements
  - assess learner communication and skills in interacting with others
  - identify learner concerns
  - recognise learner readiness to take on new skills and tasks

**Required knowledge**

- learner characteristics and needs
- content and requirements of the relevant learning program and/or delivery plan
- sources and availability of relevant learning resources and learning materials
- content of learning resources and learning materials
- training techniques that enhance learning and when to use them
- introductory knowledge of learning principles and learning styles
- key OHS issues in the learning environment, including:
  - roles and responsibilities of key personnel
  - responsibilities of learners
  - relevant policies and procedures, including hazard identification, risk assessment, reporting requirements, safe use of equipment and emergency

**REQUIRED SKILLS AND KNOWLEDGE**

procedures

- risk controls for the specific learning environment

**Evidence Guide****EVIDENCE GUIDE**

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

Assessment must address the scope of this unit and reflect all components of the unit. A range of appropriate assessment methods and evidence-gathering techniques must be used to determine competency. A judgement of competency should only be made when the assessor is confident that the required outcomes of the unit have been achieved and that consistent performance has been demonstrated.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Evidence of the ability to:

- carry out a minimum of three training sessions, involving demonstrating and instructing particular work skills for different groups; with each session addressing:
  - different learning objectives
  - a range of techniques and effective communication skills appropriate to the audience.

**Context of and specific resources for assessment**

Evidence must be gathered in the workplace wherever possible. Where no workplace is available, a simulated workplace must be provided.

**Method of assessment****Guidance information for assessment**

For further information about assessment of this and other TAE units, refer to relevant implementation guidance published on the IBSA website ([www.ibsa.org.au](http://www.ibsa.org.au)).

**Range Statement****RANGE STATEMENT**

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<b><i>Learner characteristics</i></b> may include:	<ul style="list-style-type: none"> <li>• language, literacy and numeracy levels</li> <li>• learning styles</li> <li>• past learning and work experiences</li> <li>• specific needs</li> <li>• workplace culture.</li> </ul>
<b><i>Safe learning environment</i></b> may include:	<ul style="list-style-type: none"> <li>• exit requirements</li> <li>• personal protective equipment</li> <li>• safe access</li> <li>• safe use of equipment.</li> </ul>
<b><i>Instruction and demonstration objectives</i></b> may include:	<ul style="list-style-type: none"> <li>• competencies to be achieved</li> <li>• generic and technical skills, which may be: <ul style="list-style-type: none"> <li>• provided by the organisation</li> <li>• developed by a colleague</li> <li>• individual or group objectives</li> <li>• learning outcomes.</li> </ul> </li> </ul>
<b><i>Learning resources</i></b> may include:	<ul style="list-style-type: none"> <li>• any material used to support learning, such as: <ul style="list-style-type: none"> <li>• learner and user guides</li> <li>• trainer and facilitator guides</li> <li>• example training programs</li> <li>• specific case studies</li> <li>• professional development materials</li> <li>• assessment materials</li> </ul> </li> <li>• a variety of formats</li> <li>• those produced locally</li> <li>• those acquired from other sources.</li> </ul>
<b><i>Learning materials</i></b> may include:	<ul style="list-style-type: none"> <li>• handouts for learners</li> <li>• materials sourced from the workplace, e.g. workplace documentation, operating procedures, and specifications.</li> </ul>
<b><i>Details</i></b> may include:	<ul style="list-style-type: none"> <li>• location and time</li> <li>• outcomes of instruction or demonstration</li> <li>• reason for instruction or demonstration</li> <li>• who will be attending instruction session.</li> </ul>

<b>RANGE STATEMENT</b>	
<i>OHS procedures</i> may include:	<ul style="list-style-type: none"> <li>• emergency procedures</li> <li>• hazards and their means of control</li> <li>• incident reporting</li> <li>• use of personal protective equipment</li> <li>• safe work practices</li> <li>• safety briefings</li> <li>• site-specific safety rules.</li> </ul>
<i>Delivery techniques</i> may include:	<ul style="list-style-type: none"> <li>• coaching</li> <li>• demonstration</li> <li>• explanation</li> <li>• group or pair work</li> <li>• providing opportunities to practise skills and solve problems</li> <li>• questions and answers.</li> </ul>
<i>Coaching</i> may include:	<ul style="list-style-type: none"> <li>• learning arrangements requiring immediate interaction and feedback</li> <li>• on-the-job instruction and 'buddy' systems</li> <li>• relationships targeting enhanced performance</li> <li>• short-term learning arrangements</li> <li>• working on a one-to-one basis.</li> </ul>
<i>Measures</i> may include:	<ul style="list-style-type: none"> <li>• informal review or discussion</li> <li>• learner survey</li> <li>• on-the-job observation</li> <li>• review of peer coaching arrangements.</li> </ul>

## Unit Sector(s)

<b>Unit sector</b>	Delivery and facilitation
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## Competency field

<b>Competency field</b>	
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## Co-requisite units

Co-requisite units		

## TLID2010A Operate a forklift

### Modification History

Not Applicable

### Unit Descriptor

#### Unit Descriptor

This unit involves the skills and knowledge required to operate a forklift, including checking forklift condition, driving the forklift to fulfil operational requirements, monitoring site conditions, and monitoring and maintaining forklift performance. Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory OH&S authority. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

### Application of the Unit

#### Application of the Unit

Operation of a forklift must be carried out in compliance with the licence requirements and regulations of the relevant state/territory authority.

Operation of a forklift is performed under some supervision, generally within a team environment. It involves the application of routine equipment operation principles and procedures to maintain the safety and operation of a forklift in a variety of operational contexts.

### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |   |  |
|---|--|
| <b>1 Check forklift condition</b>           | <p>1.1 Condition of forklift is checked for compliance with OH&amp;S and workplace requirements for warning devices, manufacturers specifications and the nature of the load shifting task</p> <p>1.2 Attachments are checked to ensure appropriate adjustment and operation</p> <p>1.3 Mirrors and seats are adjusted for safe operation by the driver</p> <p>1.4 Log books are checked and appropriate workplace documentation is completed in accordance with workplace requirements</p>  |
| <b>2 Drive the forklift</b>                 | <p>2.1 Forklift is started, steered, manoeuvred, positioned and stopped in accordance with regulations and manufacturers instructions</p> <p>2.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage</p> <p>2.3 Operational hazards are identified and/or anticipated and avoided or controlled through defensive driving and appropriate hazard control techniques</p> <p>2.4 Forklift is driven in reverse, maintaining visibility and achieving accurate positioning</p> <p>2.5 The forklift is parked, shut down and secured in accordance with manufacturers specifications, regulations and workplace procedures</p> |
| <b>3 Operate a forklift to handle loads</b> | <p>3.1 The lifting task to be undertaken is appropriately planned and the correct lifting truck and attachments are selected</p> <p>3.2 The load is lifted, carried, lowered and set down in accordance with OH&amp;S legislation, manufacturers specifications and company procedures</p>   |

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
<b>4 Monitor site conditions</b>	4.1 When selecting the most efficient route, hazards and traffic flow are identified and appropriate adjustments are made 4.2 Site conditions are assessed to enable safe operations and to ensure no injury to people or damage to property, equipment, loads or facilities occurs
<b>5 Monitor and maintain forklift performance</b>	5.1 Performance and efficiency of vehicle operation is monitored during use 5.2 Defective/irregular performance and malfunctions reported to relevant personnel 5.3 Forklift records are maintained/updated in accordance with workplace procedures and legislative requirements

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

#### Required knowledge:

- Relevant duty of care requirements pertaining to the operation of a forklift
- Relevant OH&S and environmental procedures and regulations
- Workplace operating procedures
- Forklift controls, instruments and indicators and their use
- Forklift handling procedures
- Procedures to be followed in the event of an operational emergency
- Engine power management and safe operating strategies
- Efficient driving techniques
- Operating hazards and related defensive driving and hazard control techniques
- Pre-operational checks carried out on forklift and related action
- Principles of stress management when driving a forklift
- Site layout and obstacles

#### Required skills:

- Communicate effectively with others when operating a forklift
- Read and interpret instructions, procedures, information and signs relevant to the operation of a forklift

**Required skills:**

- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the operation of a forklift
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when operating a forklift
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events when operating a forklift
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the operation of a forklift
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Identify points of balance and safe lifting positions on a range of loads when operating a forklift (including accessories)
- Monitor performance of forklift and its equipment and take appropriate action where required
- Ensure that a forklift and its equipment are maintained in terms of service schedule and standard operating procedures
- Check and replenish fluids and carry out lubrication processes in the course of work activities

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

**Critical aspects for assessment and evidence required to**

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the

## EVIDENCE GUIDE

### demonstrate competency in this unit

requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

### Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
  - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
  - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
  - relevant and appropriate materials and equipment, and
  - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

### Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
  - through activities in an appropriately simulated environment at the registered training organisation, and/or
  - in an appropriate range of situations in the workplace

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Types of forklift may include:

- counterbalance trucks
- reach trucks
- pallet trucks

## RANGE STATEMENT

Operations may be carried out in typical forklift operational situations, including:

- operations conducted at day or night
- typical weather conditions
- on the open road
- on a private road or worksite
- while at a workplace
- internal or external

Customers may be:

- large, medium or small worksites

Workplaces may comprise:

- restricted spaces
- exposed conditions
- controlled or open environments

Work may be conducted in:

- special precautions

Loads to be shifted may require:

Loads to be shifted may be:

- irregularly shaped
- packaged or unpackaged
- labelled or unlabelled
- palleted or unpalleted

Hazards in the work area may include exposure to:

- chemicals
- dangerous or hazardous substances
- movements of equipment, goods and materials

Personnel in the work area may include:

- workplace personnel
- site visitors
- contractors
- official representatives

Forklift handling procedures may include:

- starting a forklift
- steering and manoeuvring a forklift
- accelerating and braking
- positioning and stopping a forklift
- reversing a forklift
- operating forklift controls, instruments and indicators
- using defensive driving techniques
- managing engine performance

Pre-operational checks may include:

- visual check of forklift
- checking and topping up of fluid levels
- checks of tyres
- checks of operation of forklift lights and indicators
- checks of brakes

Hazards may include (examples only):

- wet and iced operating surfaces
- oil on operating surface

## RANGE STATEMENT

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- faulty brakes
- workplace obstacles and other operational equipment and vehicles
- damaged loads and pallets
- other personnel in work area
- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Personal protection equipment may include:

- gloves
- safety headwear and footwear
- safety glasses
- two-way radios
- high visibility clothing

Information/documents may include:

- goods identification numbers and codes, including IMDG markings and HAZCHEM signs
- manifests, bar codes, picking slips, merchandise transfers, stock requisitions, goods and container identification
- Australian Standard 2359 - Industrial Truck Code
- manufacturers specifications for forklift and associated equipment
- operations and service record book or log
- workplace procedures and policies for the operation of forklifts
- supplier and/or client instructions
- ADG Code and material safety data sheets
- regulatory requirements concerning the use of forklifts
- award, enterprise bargaining agreement, other industrial arrangements
- standards and certification requirements
- quality assurance procedures
- emergency procedures

Applicable procedures and codes may include:

- relevant state/territory regulations pertaining to the operation of forklifts
- relevant codes and standards, including Australian Standard 2359 - Industrial Truck Code
- relevant state/territory OH&S legislation
- relevant state/territory fatigue management regulations
- relevant state/territory environmental protection legislation



## Unit Sector(s)

Not Applicable

## Competency Field

Competency Field                      D - Load Handling

# TLID1001A Shift materials safely using manual handling methods

## Modification History

Not Applicable

## Unit Descriptor

### Unit Descriptor

This unit involves the skills and knowledge required to shift loads using manual handling methods, including assessing the risks associated with relocating the load, planning the relocation process and carrying out the relocation in accordance with the plan. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

## Application of the Unit

### Application of the Unit

Work must be carried out in compliance with the relevant OH&S regulations concerning the manual handling and movement of loads.

Work is performed under some supervision generally within a team environment.

Work involves the application of the basic principles for the safe manual handling techniques and movement of loads when shifting materials using manual handling methods as part of day-to-day work.

## Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

#### 1 Assess risks associated with the relocation of the load

- 1.1 Products, goods or materials to be relocated are identified and assessed for the appropriate method of relocation
- 1.2 Locations for storage are determined and potential routes to be followed are identified
- 1.3 Effect of load relocation on original load base is predicted
- 1.4 Points of balance are estimated
- 1.5 Required clearances are compared to available space and adjustments are made
- 1.6 Effects of moving contents which may be loose, liquid, dangerous or hazardous are considered
- 1.7 Potential risks in route(s) which may be followed are considered
- 1.8 Risks to self are identified arising from the required lifting, load carrying, set down or movement of the goods
- 1.9 Manual handling procedures for lifting, lowering and carrying, pushing and pulling are identified
- 1.10 Team lifting processes are considered for application
- 1.11 Appropriate personal protective equipment is worn
- 1.12 Size to weight ratio of items to be manually handled are identified

#### 2 Plan load relocation

- 2.1 Relocation of the load is planned consistent with the code of practice for manual handling
- 2.2 Process for relocating load is proposed including predicting and planning for potential difficulties
- 2.3 Proposed process is checked against code of practice and workplace procedures for compliance

**ELEMENT****PERFORMANCE CRITERIA****3 Relocate load**

- 3.1 Actions for lifting, lowering and carrying, pulling and pushing a load are in accordance with workplace procedures and OH&S requirements
- 3.2 Applications appropriate for team relocation of load are identified
- 3.3 Team lifting tasks are coordinated
- 3.4 Planned process and route are followed
- 3.5 Relocated materials are set down without damage to goods, personnel or equipment and checked for stability
- 3.6 Relocation is checked to see that it meets work requirements, with any variance(s) reported

**Required Skills and Knowledge****REQUIRED KNOWLEDGE AND SKILLS**

This describes the essential knowledge and skills and their level required for this unit.

**Required knowledge:**

- Relevant OH&S procedures and guidelines concerning the manual lifting and movement of loads
- Risks when manually lifting and handling materials and goods and related precautions to control the risk, including: the load on the spine during lifting; controlled actions on a movement during lifting; rotation and side movement of the spine during lifting; postures and positions during lifting; work layout; the type, weight and position of the load; frequency of shifting operations; distance over which load is to be shifted; and time allowed for the shifting of the load
- Workplace procedures and policies for manual handling
- Housekeeping standards procedures required in the workplace
- Site layout and obstacles

**Required skills:**

- Communicate effectively with others when manually lifting and handling materials and goods
- Read and interpret instructions, procedures and information relevant to the manual lifting and handling of materials and goods
- Interpret and follow operational instructions and prioritise work
- Work collaboratively with others when manually lifting and handling materials and goods

**Required skills:**

- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when manually lifting and handling materials and goods in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected situations that may occur when manually lifting and handling materials and goods
- Apply precautions and required action to minimise, control or eliminate risks that may exist when manually lifting and handling materials and goods
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in loads and materials in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of:
  - applying the underpinning knowledge and skills
  - interpreting manual handling risks
  - using correct manual handling practices
  - applying relevant legislation and workplace procedures

**Context of and specific resources for assessment**

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts

## EVIDENCE GUIDE

- Resources for assessment include:
  - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
  - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
  - relevant and appropriate materials and equipment, and
  - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

### Method of assessment

- As a minimum, assessment of knowledge must be conducted through appropriate assessments using written/practical/oral assessments
- Practical assessment must occur:
  - through activities in an appropriately simulated environment, and/or
  - in an appropriate range of situations in the workplace

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

The shifting operations may be conducted:

- in a range of work environments
- by day or night

Customers may be:

- internal or external

Workplaces may comprise:

- large, medium or small worksites

Work may be conducted in:

- restricted spaces
- exposed conditions
- controlled or open environments

Materials to be shifted may include:

- goods
- large luggage items
- baggage items

## RANGE STATEMENT

- equipment and tools
  - cleaning materials
  - components and parts of vehicles and equipment such as tyres, batteries, lifting gear, etc.
  - materials used in the course of work such as drums of fuel, raw materials, packaging, etc.
- Loads to be shifted may be:
- irregularly shaped
  - packaged or unpackaged
  - labelled or unlabelled
- Hazards in the work area may include exposure to:
- chemicals
  - dangerous or hazardous substances
  - movements of equipment, goods and materials
  - weight of items being handled
- Personnel in the work area may include:
- workplace personnel
  - site visitors
  - contractors
  - official representatives
- Communication in the work area may include:
- phone
  - electronic data interchange
  - fax
  - email
  - internet
  - radio
  - oral, aural or signed communications
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
  - enterprise procedures
  - organisational procedures
  - established procedures
- Personal protective equipment may include:
- gloves
  - safety headwear and footwear
  - safety glasses
  - two-way radios
  - high visibility clothing
- Information/documents may include:
- goods identification numbers and codes
  - manifests, bar codes, goods and container identification
  - manufacturers specifications for equipment/tools
  - workplace procedures and policies
  - supplier and/or client instructions
  - material safety data sheets
  - codes of practice including the National Standards for

## RANGE STATEMENT

Applicable regulations and legislation may include:

- Manual Handling and the Industry Safety Code
- relevant legislation, regulations and related documentation
  - award, enterprise bargaining agreement, other industrial arrangements
  - standards and certification requirements
  - quality assurance procedures
  - emergency procedures
  - relevant state/territory OH&S legislation
  - relevant state/territory environmental protection legislation
  - workplace relations regulations
  - workers compensation regulations
  - licence, patent or copyright arrangements
  - dangerous goods and air freight regulations
  - export/import/quarantine/bond requirements
  - marine orders

## Unit Sector(s)

Not Applicable

## Competency Field

Competency Field                      D - Load Handling



## TLID2022A Conduct weighbridge operations

### Modification History

Not Applicable

### Unit Descriptor

#### Unit Descriptor

This unit involves the skills and knowledge required to conduct weighbridge operations in accordance with regulatory requirements and workplace procedures, including setting up for weighbridge operations, weighing loaded vehicles, weighing unloaded vehicles, finalising weighbridge operations, and completing required records and documentation. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

### Application of the Unit

#### Application of the Unit

Work must be carried out in accordance with regulations and workplace requirements relevant to weighbridge operations.

Work is performed under some supervision, generally within a team environment.

Work involves the application of regulatory requirements and workplace procedures when conducting weighbridge operations in the transport, warehousing, distribution and/or storage industries.

### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |  |  |
|--|--|
| <b>1 Set up for weighbridge operations</b> | <p>1.1 Weighbridge systems, including equipment, computer and recording arrangements are checked for operational status</p> <p>1.2 Tests to confirm accuracy of weighbridge operation and related functions are conducted in accordance with workplace procedures, manufacturers instructions and relevant legislation</p> <p>1.3 Accurate reporting of the results of the inspection and testing is kept in accordance with statutory requirements, workplace policy and industry guidelines</p> <p>1.4 Faults/discrepancies in weighbridge operation are identified and action is undertaken in accordance with workplace procedures</p> |
| <b>2 Weigh loaded vehicles</b>             | <p>2.1 Vehicles likely to exceed weighbridge weight limit are turned away</p> <p>2.2 Vehicles are directed onto platform to obtain accurate weight</p> <p>2.3 Weight of loaded stationary vehicle is registered against vehicle and load identification</p> <p>2.4 Vehicle and load information is entered into workplace recording system and driver is issued with receipt and/or statement</p> <p>2.5 Areas of dispute are resolved or forwarded for further action undertaken in accordance with workplace procedures</p>  |
| <b>3 Weigh unloaded vehicles</b>           | <p>3.1 Vehicles are directed onto platform to obtain accurate weight</p> <p>3.2 Weight of unloaded stationary vehicle is registered against vehicle</p> <p>3.3 Proposed load weight is assessed for conformance to statutory requirements</p> <p>3.4 Where appropriate, loading operations are commenced in</p>  |

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	accordance with legal loading weight, customer requirements and workplace procedures with vehicle re-weighed to establish final load weight
	3.5 Vehicle and load information is entered into workplace recording system and invoice is issued to driver where appropriate
	3.6 Driver signatures on weighbridge documents, invoices or receipts are obtained in accordance with statutory and workplace requirements
	3.7 Areas of dispute are resolved or forwarded for further action to be undertaken in accordance with workplace procedures
<b>4 Complete weighbridge operations</b>	4.1 Weighbridge systems, including equipment, computer and recording arrangements are secured or made ready for next shift
	4.2 Record of operations is maintained and filed in accordance with workplace procedures and statutory requirements

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

#### Required knowledge:

- Regulations relevant to the conduct of weighbridge operations including Australian Dangerous Goods Code where applicable
- Relevant OH&S and environmental protection procedures and guidelines
- Workplace procedures and policies for the conduct of weighbridge operations
- Problems that may occur when conducting weighbridge operations and appropriate action that can be taken to resolve the problems
- Equipment applications, capacities, configurations, safety hazards and control mechanisms
- Records and documentation requirements for weighbridge operations
- Classification procedures
- Despatch procedures
- Calculation method and approaches for both metric and imperial systems
- Correct weighing procedures including statutory and workplace requirements
- Emergency response procedures
- Site layout

**Required skills:**

- Communicate effectively with others when conducting weighbridge operations
- Read and interpret instructions, procedures and information relevant to the conduct of weighbridge operations
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the conduct of weighbridge operations
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when conducting weighbridge operations
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, errors or malfunctions that may occur when conducting weighbridge operations in accordance with regulatory requirements and workplace procedures
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during the conduct of weighbridge operations
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Set up and maintain weighbridge equipment
- Identify, select and efficiently and effectively use weighbridge equipment
- Monitor performance of weighbridge equipment

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this**

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:

## EVIDENCE GUIDE

### unit

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

### Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
  - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
  - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
  - relevant and appropriate materials and equipment, and
  - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

### Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
  - through activities in an appropriately simulated environment at the registered training organisation, and/or
  - in an appropriate range of situations in the workplace

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Work may be conducted:

- in a range of work environments
- by day or night

Customers may be:

- internal or external

## RANGE STATEMENT

- Workplaces may comprise:
- large, medium or small worksites
- Workplace environment may include:
- movement of equipment, goods, products, materials and vehicular traffic
- Weighbridge operations may be:
- inclusive of a single operation involving the loading of vehicles and despatch functions
- Weighbridge operation may be:
- electro/mechanical
  - electronic
  - computerised
- Vehicles may include
- trucks
  - articulated road vehicles
  - trailers
  - wagons
- Calibration and/or testing of equipment may be:
- required prior to and during operations
- Hazards in the work area may include exposure to:
- chemicals and pesticides
  - dangerous or hazardous substances
  - stationary and moving equipment, parts and materials
  - noise, light, energy sources
  - electrical equipment
  - humidity, air temperature, radiant heat
  - faulty equipment
- Personal protective equipment may include:
- gloves
  - safety headwear and footwear
  - safety glasses
  - two-way radios
  - protective clothing
  - respirators and fume/dust masks
  - high visibility clothing
- Requirements for work may include:
- site restrictions and procedures
  - use of safety and personal protective equipment
  - communications/recording equipment
  - authorities and permits
  - breakdown procedures
  - emergency procedures
- Communication in the work area may include:
- phone
  - fax
  - email/internet
  - electronic data interchange (EDI)

## RANGE STATEMENT

Consultative processes may involve:

- RF systems
- oral, aural or signed communications
- workplace personnel
- supervisors and managers
- existing and potential customers/clients
- drivers
- suppliers and contractors
- union representatives
- industrial relations and OH&S specialists
- maintenance, professional or technical staff
- company procedures
- workplace procedures
- organisational procedures
- established or standard procedures

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

Information/documents may include:

- operations manuals, job specifications and procedures
- induction documentation
- competency standards and training materials
- manufacturers specifications and instructions for the operation of weighbridge equipment
- material safety data sheets
- workplace operating procedures and policies
- supplier and/or client instructions
- Australian and international standards, criteria and certification requirements
- codes of practice including the National Standards for Manual Handling and the Industry Safety Code
- relevant regulations including the ADG Code
- award, workplace bargaining agreement, other industrial arrangements
- OH&S procedures
- quality assurance procedures
- emergency procedures
- relevant codes and regulations pertaining to weighbridge operations
- traffic acts and road transport mass and loading regulations
- ADG Code and regulations pertaining to the storage and handling of dangerous and hazardous goods
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation
- relevant Australian and international standards and

Applicable regulations and legislation may include:

## **RANGE STATEMENT**

- certification requirements
- workplace relations regulations including equal opportunity, equal employment opportunity and affirmative action legislation
- workers compensation regulations

## **Unit Sector(s)**

Not Applicable

## **Competency Field**

**Competency Field**                      D - Load Handling



# TLIL5019A Implement and monitor transport logistics

## Modification History

Not Applicable

## Unit Descriptor

### Unit Descriptor

This unit involves the skills and knowledge required to implement and monitor transport logistics in accordance with relevant regulatory requirements and workplace procedures, including mobilising resources, coordinating multi-modal transport activities, monitoring consignment(s) tracking, and implementing a contingency management strategy. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

## Application of the Unit

### Application of the Unit

Work must be carried out in compliance with the relevant regulations, standards and codes of practice, including the ADG Code.

Work is under general guidance on progress and outcomes of work. It requires discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes within workplace policy and procedures.

A range of opportunities may be used to develop the work area and to support the development of work systems, innovative strategies to deal with contingencies and to encourage the achievement of the workplace's goals and key performance objectives by the work area and the individuals and teams within it.

The unit generally applies to those with responsibility for resource coordination and allocation and provides leadership of others individually or in teams.

## Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |  |   |
|--|---|
| <b>1 Mobilise resources</b>                          | <ul style="list-style-type: none"> <li>1.1 Optimal resource level is acquired to meet the requirements of the operational schedule</li> <li>1.2 Relevant regulatory and insurance requirements are determined and implemented</li> <li>1.3 Allocated resources are assessed and monitored to ensure operational effectiveness and efficiency</li> <li>1.4 Changes to resource allocation are undertaken (in accordance with enterprise procedures) where deficiencies or over-supply are apparent</li> </ul>          |
| <b>2 Coordinate multi-modal transport activities</b> | <ul style="list-style-type: none"> <li>2.1 Facilities, personnel and equipment are made ready to accommodate interchange functions</li> <li>2.2 Security arrangements are invoked as required</li> <li>2.3 Loading and unloading operations are conducted in accordance with operation schedule and applicable statutory requirements, codes of practice and enterprise procedures</li> <li>2.4 Relevant documentation is completed/updated to accord with operational schedule and reporting requirements</li> </ul> |
| <b>3 Monitor consignment(s) tracking</b>             | <ul style="list-style-type: none"> <li>3.1 Consignment tracking systems are monitored against workplace quality standards</li> <li>3.2 Variations from workplace quality standards are identified and appropriate action is initiated to rectify the identified problems</li> </ul>   |

**ELEMENT****PERFORMANCE CRITERIA**

or to institute any required improvements

**4 Implement contingency management strategy**

4.1 Operational schedule is continually reviewed in light of information updates, reports and feedback

4.2 The nature, extent and impact of any issues or incidents are identified and assessed against contingency management strategy

4.3 Relevant information is processed to establish priorities and responses for dealing with issues or incidents

4.4 Operations are redirected and controlled to meet changes in transport environment and tasks in accordance with enterprise procedures

4.5 Liaison is initiated and maintained with organisations/individuals affected by changed operational schedules

4.6 Actions undertaken are clearly documented and filed

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

#### Required knowledge:

- Relevant regulations, codes of practice and legislative requirements including local and international regulations relevant to transport logistics
- Relevant OH&S and environmental protection procedures and regulations
- Workplace procedures for the implementation and monitoring of transport logistics
- Problems that may occur during the implementation and monitoring of transport logistics and action that can be taken to resolve or report the problems
- Risks and hazards related to the implementation and monitoring of transport logistics and ways of controlling the risks involved
- Focus of operation of transport logistic systems, resources, management and workplace operating systems
- Transport and equipment applications, capacities, configurations, safety hazards and control mechanisms
- Code, regulatory, permit and licence requirements relevant to transport logistics
- Application of relevant Australian standards and associated certification requirements
- Business policies and plans including procedures for outsourcing components of operations and engaging additional resources

## REQUIRED KNOWLEDGE AND SKILLS

- Workplace policies including issue resolution and grievance procedures
- Resource availability including the competencies of individuals in the team/group
- The application of current competencies within functional activity
- Relevant workplace documentation procedures

### Required skills:

- Communicate effectively with others when implementing and monitoring transport logistics
- Read and interpret transport schedules, regulatory requirements, customer instructions, workplace procedures and manuals relevant to the implementation and monitoring of transport logistics
- Prioritise work and coordinate self and others in relation to transport logistics activities
- Complete documentation related to the implementation and monitoring of transport logistics
- Operate electronic communication equipment to required protocol
- Provide leadership and work collaboratively with others when implementing and monitoring transport logistics
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any problems identified when implementing and monitoring transport logistics in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unanticipated situations that may arise during the implementation and monitoring of transport logistics
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Apply fatigue management knowledge and techniques
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Select and apply appropriate application of technology, information systems and procedures
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

#### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
  - the underpinning knowledge and skills
  - relevant legislation and workplace procedures
  - other relevant aspects of the range statement

#### **Context of and specific resources for assessment**

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
  - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
  - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
  - relevant and appropriate materials and equipment, and
  - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

#### **Method of assessment**

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
  - through activities in an appropriately simulated environment at the registered training organisation, and/or
  - in an appropriate range of situations in the workplace

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- |  |   |
|--|---|
| Work may be undertaken:  | <ul style="list-style-type: none"> <li>• in various work environments in the sections of the warehousing, storage, transport and distribution industries involved in transport logistics</li> </ul>   |
| Customers may be:  | <ul style="list-style-type: none"> <li>• internal or external</li> </ul>  |
| Operations may be conducted:   | <ul style="list-style-type: none"> <li>• by day or night</li> </ul>   |
| The workplace environment may involve:   | <ul style="list-style-type: none"> <li>• twenty-four hour operation</li> <li>• single and multi-site locations</li> <li>• large, medium and small workplaces</li> </ul>   |
| Critical parameters for the evaluation of consignment loads may include but are not limited to:                              | <ul style="list-style-type: none"> <li>• type, capacity, compatibility and capability of load</li> <li>• agreed delivery times and destination</li> <li>• pick-up and drop-off points</li> <li>• waiting, loading and unloading times</li> </ul>  |
| Key requirements for the planning of transport logistics may include but are not limited to:                                 | <ul style="list-style-type: none"> <li>• collection and distribution destination</li> <li>• transport duration times</li> <li>• type and compatibility of load</li> <li>• transport mode(s) and capacity</li> <li>• return freight</li> <li>• fatigue management</li> <li>• use of designated routes</li> </ul> |
| Strategies to address identified deficiencies in operational capability and availability may include but are not limited to: | <ul style="list-style-type: none"> <li>• re-negotiation of collection and/or delivery times</li> <li>• alternate transport mode(s)</li> <li>• outsourcing components of operation</li> </ul>  |
| Consignments may be:   | <ul style="list-style-type: none"> <li>• palletised</li> <li>• containerised</li> <li>• packages or loose</li> <li>• and in gas, liquid or solid form</li> </ul>  |
| Transport may be:  | <ul style="list-style-type: none"> <li>• single or multi-modal</li> </ul>   |
| Modes of transport may include:  | <ul style="list-style-type: none"> <li>• road</li> <li>• rail</li> <li>• air</li> <li>• sea</li> </ul>  |
| Calculation of transport duration  | <ul style="list-style-type: none"> <li>• travelling</li> <li>• loading</li> </ul>   |

## RANGE STATEMENT

times includes:

- unloading
- change-over
- standing times
- with due regard to varying transit condition and environments (i.e. road conditions, traffic flows, weather, local government by-laws)

Transport may involve:

- the use of designated routes

Requirements for work may include:

- site restrictions and procedures
- use of safety and personal protective equipment
- systems and facilities for transport logistics
- specialised lifting and/or handling equipment
- incident/accident breakdown procedures
- additional gear and equipment
- noise restrictions
- hours of operation
- authorities and permits
- communications equipment

Hazard management is consistent with:

- the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment

Consultative processes may involve:

- other employees and supervisors
- suppliers, potential customers and existing clients
- relevant authorities and institutions
- relevant government instrumentalities
- emergency services
- management and union representatives
- industrial relations and OH&S specialists
- other maintenance, professional or technical staff

Communication in the work area may include:

- phone
- electronic data interchange (EDI)
- fax
- email
- internet
- RF communications
- bar code readers
- oral, aural or signed communications

Personal protective equipment may include but is not limited to:

- gloves
- safety headwear and footwear
- safety clothing

## RANGE STATEMENT

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- safety glasses
- two-way radios
- high visibility clothing
- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Information/documentation may include:

- Australian and international codes of practice and regulations relevant transport logistics including the ADG Code where applicable
- workplace operating procedures and policies
- supplier and/or client instructions
- operations manuals, job specifications and procedures and induction documentation
- transport routes and timetables
- manufacturers specifications for equipment and goods
- suppliers advice
- material safety data sheets
- dangerous goods documentation where applicable including dangerous goods declarations
- Safe Working Limits (SWL) and Working Load Limits (WLL) of load shifting equipment and storage facilities
- communications technology equipment, oral, aural or signed communications
- quality assurance standards and procedures
- emergency procedures
- relevant competency standards and training materials
- relevant Australian and international standards, criteria and certification requirements
- QA plans, data and document control
- conditions of service, legislation and industrial agreements including workplace agreements and awards
- codes and regulations relevant to transport logistics
- Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances,
- relevant Australian and international standards and certification requirements
- licence, patent or copyright arrangements
- relevant state/territory OH&S and environmental protection legislation

Applicable regulations and legislation may include:



## **RANGE STATEMENT**

- workplace relations regulations
- workers compensation regulations
- equal opportunity, equal employment opportunity and affirmative action legislation

## **Unit Sector(s)**

Not Applicable

## **Competency Field**

**Competency Field**                    L - Resource Management

## TLILIC2001A Licence to operate a forklift truck

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit Descriptor</b>	<p>This unit specifies the outcomes required for the operation of a powered industrial truck equipped with a mast and an elevating load carriage to which is attached a pair of fork arms or other attachment, for licensing purposes. This definition also includes a truck on which the operator is raised with the attachment for order-picking.</p>
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### Application of the Unit

<b>Application of the Unit</b>	<p>THIS UNIT REQUIRES THE OPERATOR TO BE ABLE PLAN THE WORK, CONDUCT ROUTINE CHECKS ON THE FORKLIFT, SHIFT LOADS IN A SAFE MANNER, AND SHUT DOWN AND SECURE THE EQUIPMENT AFTER THE COMPLETION OF OPERATIONS.</p> <p>This unit is based on the National Standard for Licensing Persons Performing High Risk Work.</p> <p>This unit in its current form meets state and territory licensing requirements. Any alteration will result in a unit which is not acceptable to regulators for the purpose of licensing.</p>
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### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

Not Applicable

## Employability Skills Information

<b>Employability Skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

<b>ELEMENT</b> <i>Elements describe the essential outcomes of a unit of competency.</i>	<b>PERFORMANCE CRITERIA</b> <i>Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.</i>
1. Plan work	1.1 Potential workplace <b><i>hazards</i></b> are identified 1.2 <b><i>Hazard control measures</i></b> are identified consistent with <b><i>appropriate standards</i></b> to ensure the safety of personnel and equipment 1.3 Appropriate <b><i>forklift</i></b> truck is selected according to the load and workplace conditions 1.4 Working area is inspected to determine appropriate path of movement for loads and forklift truck 1.5 <b><i>Communication methods</i></b> are identified according to <b><i>procedures</i></b>
2. Conduct routine checks	2.1 Forklift is visually checked for any damage or defects 2.2 All <b><i>signage and labels</i></b> are visible and legible according to the <b><i>appropriate standard</i></b> 2.3 All controls are located and identified 2.4 <b><i>Pre-start operational checks</i></b> are carried out according to <b><i>procedures</i></b> 2.5 <b><i>Forklift</i></b> is started according to <b><i>procedures</i></b> and checked for any abnormal noise  2.6 <b><i>Post-start operational checks</i></b> are carried out according to <b><i>procedures</i></b> 2.7 All forklift functions and safety devices are tested to their maximum according to <b><i>procedures</i></b>

	2.8 Defects and damage are reported and recorded according to <i>procedures</i> , and appropriate action is taken
3. Shift load	<p>3.1 The weight of load is assessed to ensure compliance with <i>forklift</i> truck data plate specifications</p> <p>3.2 Appropriate <i>hazard prevention/control measures</i> are implemented and communicated with personnel in the work area</p> <p>3.3 <i>Forklift</i> is operated at a safe speed and according to <i>procedures</i></p> <p>3.4 Loads are moved and placed to ensure stability of material and avoidance of hazards</p> <p>3.5 Load movement is monitored constantly ensuring safety to personnel and load, and structural stability</p> <p>3.6 <i>Unplanned and/or unsafe situations</i> are responded to in line with <i>procedures</i></p>
4. Shut down and secure forklift truck	<p>4.1 <i>Forklift</i> truck is parked to avoid hazards</p> <p>4.2 Forklift is <i>shut down</i> according to <i>procedures</i></p> <p>4.3 Routine post-operational forklift checks are carried out according to <i>procedures</i></p> <p>4.4 Forklift is secured to prevent unauthorised access/use</p> <p>4.5 All defects and damage are reported and recorded according to <i>procedures</i>, and appropriate action is taken</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

*This describes the essential skills and knowledge and their level required for this unit.*

#### Required skills:

- Accurately interpret information relating to conducting forklift truck operations (e.g. procedures)
- Safely conduct forklift truck operations including all functions to the maximum height and load capacity
- Identify hazards associated with the operation of the forklift truck, assess risks and put into place effective hazard prevention/control measures for those hazards identified
- Use communication skills at a level sufficient to communicate with other site personnel (e.g. receive and interpret work instructions, safety information, emergency procedures)

**REQUIRED SKILLS AND KNOWLEDGE**

- Drive forklift with load in forward and reverse, maintaining visibility
- Verify problems and equipment faults and demonstrate appropriate response procedures

**Required knowledge:**

- Methodology of determining the weight of a load
- Commonwealth, state or territory OH&S legislation, standards relevant to the safe operation for the forklift trucks
- Understanding of forklift characteristics and capabilities (including use of load data plates)
- Understanding of the hierarchy of hazard identification and control
- Organisational and workplace standards, requirements, policies and procedures for conducting operations for the crane class
- Procedures for the recording, reporting and maintenance of workplace records and information
- Forklift truck operations and safe operating techniques
- Typical routine problems encountered in the operation of the crane and equipment and adjustments required for correction

**Evidence Guide****EVIDENCE GUIDE**

*The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for the Training Package.*

**Overview of assessment**

- Successful assessment of this unit meets the competency requirement of the National Standard for Licensing Persons Performing High Risk Work.
- State/territory OH&S regulators have mandated the use of Assessment Instruments and Instructions for Assessment for this unit which have been endorsed by the national body responsible for OH&S matters.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

- Compliance with OH&S licensing legislation.
- Communicate and work safely with others in the work area.
- Identify hazards associated with the operation of the forklift truck and put in place effective hazard controls for those hazards identified.

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>• Conduct pre-start-up, operational, moving loads and shut down and secure checks of the forklift truck according to procedures.</li> <li>• Operate the forklift truck and move loads safely, including driving and manoeuvring, picking up and placing of loads at various stack heights.</li> <li>• Drive forklift truck with load in forward and reverse, maintaining visibility.</li> </ul>
<b>Context of and specific resources for assessment</b>	<ul style="list-style-type: none"> <li>• Assessment of the safe application of knowledge and skills to workplace tasks (performance) must be undertaken using the endorsed Assessment Instrument.</li> <li>• Assessment of performance must be undertaken either in the workplace or in a realistically simulated workplace setting.</li> <li>• Assessment must occur under standard and authorised work practices, safety requirements and environmental constraints.</li> <li>• Applicants must have access to: <ul style="list-style-type: none"> <li>• Personal Protective Equipment (PPE) for the purpose of the Performance Assessment</li> <li>• associated equipment appropriate to forklift truck operations</li> <li>• suitable loads as described by the endorsed Assessment Instrument</li> <li>• manufacturers specifications</li> <li>• appropriate forklift truck in a safe condition.</li> </ul> </li> </ul>
<b>Method of assessment</b>	<ul style="list-style-type: none"> <li>• Assessment must be conducted using the endorsed Assessment Instrument. These Instruments provide instruction on their application.</li> <li>• The use of '<b>simulators</b>' in the assessment of this unit of competency is <b>not acceptable</b>.</li> <li>• Assessment may be in conjunction with the assessment of other units of competency.</li> <li>• Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.</li> <li>• Assessment must confirm a reasonable inference that competency is not only able to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</li> </ul>
<b>Guidance information for</b>	<ul style="list-style-type: none"> <li>• Further information about endorsed Assessment Instruments may be obtained from state/territory</li> </ul>

**EVIDENCE GUIDE****assessment**

OH&amp;S regulators.

**Range Statement****RANGE STATEMENT**

*The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below.*

**Hazards**

May include but not limited to:

- ground conditions (e.g. condition of pavement, slopes)
- overhead hazards (e.g. powerlines, service pipes)
- insufficient lighting
- traffic (e.g. pedestrians, vehicles, other plant)
- weather (e.g. wind, lightning, rain)
- forklift instability (e.g. overloading, poor load placement, irregular loads)
- other hazards (e.g. dangerous materials)

**Hazard control measures**

Refers to the systematic process of eliminating or reducing the risk to personnel and property through the application of controls

It includes the application of the hierarchy of control, the six-step preference of control measures to manage and control risk:

- 1 elimination
- 2 substitution
- 3 isolation
- 4 engineering control measures
- 5 using safe work practices
- 6 personal protective equipment

**Appropriate standards**

May include but not limited to:

- legislation
- Australian standards
- manufacturer's specifications
- industry standards (where applicable)

<b>RANGE STATEMENT</b>	
<b>Forklift truck</b>	<p>May include but not be limited to:</p> <ul style="list-style-type: none"> <li>• counterbalanced</li> <li>• reach trucks</li> <li>• rough terrain</li> <li>• internal combustion petrol, diesel, gas</li> <li>• electric</li> </ul>
<b>Communications methods</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• verbal and non-verbal language</li> <li>• written instructions</li> <li>• signage</li> <li>• hand signals</li> <li>• listening</li> <li>• questioning to confirm understanding</li> <li>• appropriate worksite protocol</li> </ul>
<b>Procedures</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• manufacturer's guidelines (instructions, specifications or checklists)</li> <li>• industry operating procedures</li> <li>• workplace procedures (work instructions, operating procedures, checklists)</li> </ul>
<b>Pre-start operational checks</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• safety devices fitted where appropriate</li> <li>• forklift data plate fitted and interpreted</li> <li>• logbook, handbook or operating manuals available</li> <li>• external visual check including, evidence of damage, leaks, visual evidence of structural weaknesses (including paint separation or stressed welds) is carried out</li> <li>• forklift attachment is checked for security</li> <li>• approved modifications and/or attachments fitted to manufacturer's specifications (e.g. as per forklift or attachment data plate) are identified</li> <li>• checks for adaptations or modifications outside manufacturer's specifications (e.g. not listed on the forklift or attachment data plate) are carried out</li> <li>• maintenance logbook/records checked</li> </ul>



<b>RANGE STATEMENT</b>	
<b>Post-start operational checks</b>	<p>May include checks of the forklift truck and equipment after start-up to ensure:</p> <ul style="list-style-type: none"> <li>• hazard warning systems (for example lights and horns), are functional</li> <li>• attachment movements and control functions are smooth and comply with operating requirements</li> <li>• steering, transmission and brake functions comply with operating requirements</li> </ul>
<b>Hazard prevention/control measures</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• barricades and traffic control</li> <li>• safety tags on electrical switches/isolators</li> <li>• insulated powerlines</li> <li>• safety observer used inside exclusion zone</li> <li>• disconnected power</li> <li>• pedestrian control (barricades, signs, etc.)</li> <li>• excavation safeguards</li> <li>• movement of obstructions</li> <li>• personal protective equipment</li> <li>• adequate illumination</li> </ul>
<b>Unplanned and/or unsafe situations</b>	<p>May include but not limited:</p> <ul style="list-style-type: none"> <li>• failure/loss of control (e.g. brakes and steering)</li> <li>• failure of equipment (e.g. hydraulic system)</li> <li>• environmental condition</li> </ul>
<b>Shut down</b>	<p>May include, but is not limited to:</p> <ul style="list-style-type: none"> <li>• parking in a suitable location away from dangerous areas</li> <li>• fork arms are correctly positioned (tips down, tilted forward, lowered to ground)</li> <li>• appropriate transmission/gear is selected for parking (relevant to transmission type)</li> <li>• hand/parking brake is applied</li> <li>• engine power is turned off</li> <li>• ignition key is removed (if applicable)</li> <li>• LPG gas cylinder valve is shut off (where fitted)</li> <li>• securing equipment against unauthorised operation</li> <li>• securing the site</li> <li>• ensuring access ways are clear</li> <li>• identifying and segregating defective equipment</li> </ul>

<b>RANGE STATEMENT</b>	
	and reporting to authorised personnel <ul style="list-style-type: none"><li>• batteries are connected to the charger (if applicable)</li></ul>

## **Unit Sector(s)**

Not Applicable

## TLILIC2005A Licence to operate a boom-type elevating work platform (boom length 11 metres or more)

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit Descriptor</b>	<p>This unit specifies the outcomes required to operate a boom-type elevating work platform (boom length 11 metres or more) for licensing purposes, and involves the operation of a telescoping device, hinged device, or articulated device or any combination of these used to support a platform on which personnel, equipment and materials may be elevated to perform work. The 11 metre boom length shall be taken to mean the greater of the following:</p> <p>(a) The vertical distance from the floor of the platform to the surface supporting the elevating work platform with the platform at its maximum height; or</p> <p>(b) The nominal reach, measured horizontally from the centre point of rotation to the outer edge of the platform in its most extended position.</p>
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### Application of the Unit

<b>Application of the Unit</b>	<p>This unit requires the operator to plan the work, conduct routine checks, set up elevating work platform, operate elevating work platform and shut down and secure elevating work platform.</p> <p>This unit is based on the requirements of the National Standard for Licensing Persons Performing High Risk Work.</p> <p>This unit in its current form meets state and territory licensing requirements. Any alteration will result in a unit which is not acceptable to regulators for the purpose of licensing.</p>
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## Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

Not Applicable

## Employability Skills Information

<b>Employability Skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

<i>Elements describe the essential outcomes of a unit of competency</i>	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work	1.1 Potential workplace <i>hazards</i> are identified 1.2 <i>Hazard control measures</i> are identified consistent with <i>appropriate standards</i> to ensure the safety of personnel and equipment 1.3 <i>Elevating work platform</i> is appropriate for the task 1.4 Appropriate <i>communication methods</i> are identified
2. Conduct routine checks	2.1 <i>Service logbook</i> for elevating work platform is checked for compliance 2.2 <i>Elevating work platform</i> is visually checked for any defects or damage according to <i>procedures</i> 2.3 Routine pre-operational checks are carried out according to <i>procedures</i> 2.4 <i>Safety equipment</i> is inspected according to <i>procedures</i>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5 <i>Elevating work platform</i> is accessed in a safe manner</p> <p>2.6 Fit <i>safety equipment</i> and secure to platform according to <i>procedures</i></p> <p>2.7 All controls are located and identified</p> <p>2.8 <i>Elevating work platform</i> is started according to <i>procedures</i></p> <p>2.9 All <i>safety devices</i> are identified and tested according to <i>procedures</i></p> <p>2.10 Post-start operational checks are carried out according to <i>procedures</i></p> <p>2.11 All <i>communication equipment</i> is checked (where applicable)</p> <p>2.12 All defects and damage are reported and recorded in according to <i>procedures</i>, and appropriate action is taken</p>
<p>3. Set up elevating work platform</p>	<p>3.1 <b>Ground suitability</b> is inspected and checked</p> <p>3.2 Elevating work platform is driven to or located at work area according to <i>procedures</i> (where applicable)</p> <p>3.3 Elevating work platform is positioned for work application and <i>stability</i> according to <i>procedures</i></p> <p>3.4 Appropriate <i>hazard prevention/control measures</i> are applied to the work area according to <i>procedures</i></p> <p>3.5 Work gear and tools are stowed and secured</p>
<p>4. Operate elevating work platform</p>	<p>4.1 <i>Elevating work platform</i> is operated using all <i>relevant plant movements</i> according to <i>procedures</i> and the <i>appropriate standards</i></p> <p>4.2 <i>Elevating work platform</i> is mobilised using <i>best mobile practice</i> and appropriate <i>procedures</i></p> <p>4.3 Elevated working platform operations are monitored constantly ensuring safety of personnel and stability</p> <p>4.4 <i>Unplanned and/or unsafe situations</i> are responded to in line with <i>procedures</i></p>
<p>5 Shut down and secure elevating work platform</p>	<p>5.1 <i>Elevating work platform</i> is lowered and stowed according to <i>procedures</i></p> <p>5.2 All relevant motion locks and brakes are applied (where applicable)</p> <p>5.3 <i>Safety equipment</i> is disconnected from platform</p> <p>5.4 Egress from <i>elevated work platform</i> is conducted according to <i>procedures</i></p>

ELEMENT	PERFORMANCE CRITERIA
	<p>5.5 Outriggers/stabilisers are stowed and secured according to <i>procedures</i> (where applicable)</p> <p>5.6 Plates or packing are stowed and secured (where applicable)</p> <p>5.7 Elevating work platform is <i>shut down</i> according to <i>procedures</i></p> <p>5.8 Routine post-operational checks are carried out according to <i>procedures</i></p> <p>5.9 All defects and damage are reported and recorded according to <i>procedures</i>, and appropriate action is taken</p>

## Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
<i>This describes the essential skills and knowledge and their level required for this unit.</i>
<b>Required skills:</b>
<ul style="list-style-type: none"> <li>• Accurately record and maintain information relating to elevating work platform operations</li> <li>• Assess ground conditions to confirm that the site is suitable (e.g. firm, level and safe) to extend and travel the elevating work platform</li> <li>• Complete the positioning, stabilising, set up of elevating work platforms, including the use of outriggers/stabilisers and packing</li> <li>• Operate mobile elevating work platform using best mobile practice</li> <li>• Use communication skills at a level sufficient to communicate with other site personnel</li> <li>• Operate and control an elevating work platform including all functions to their maximum extension within the safe working (rated) capacity</li> <li>• Apply risk assessment and hazard control strategies, including hierarchy of control as applied to the positioning and safe operation of the elevating work platform (particular awareness of the risks associated with overhead powerlines/electrical cables, ground conditions, wind, pedestrians and tipping)</li> <li>• Use and interpret manufacturer's specifications and data</li> <li>• Identify problems and equipment faults and where practicable demonstrate appropriate response procedures</li> </ul>
<b>Required knowledge:</b>
<ul style="list-style-type: none"> <li>• Appropriate mathematical procedures for estimation of loads, to ensure that the elevating work platform is not overloaded</li> </ul>

## REQUIRED SKILLS AND KNOWLEDGE

- Commonwealth, state or territory OH&S legislation, standards and codes of practice relevant to the full range of processes for conducting elevating work platform operations
- Ability to read and comprehend manufacturer's instructions, procedures and safety signs
- Understanding of elevating work platform operations and operating techniques
- Emergency procedures and safety equipment, including the use of safety harness, energy absorber, lanyard and anchor points
- Understanding of organisational and workplace standards, requirements, policies and procedures for conducting elevating work platform operations
- Understanding of the hierarchy of hazard identification and control
- Procedures for the recording, reporting and maintenance of workplace records and information, including the use of the service logbook
- Typical routine problems encountered in the process and with equipment and adjustments required for correction

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

- Successful assessment of this unit meets the competency requirement of the National Standard for Licensing Persons Performing High Risk Work.
- State/territory OH&S regulators have mandated the use of Assessment Instruments and Instructions for Assessment for this unit which have been endorsed by the national body responsible for OH&S matters.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Compliance with OH&S licensing legislation.
- Emergency procedures and safety equipment, including the use of safety harnesses, energy absorbers, lanyard and anchor points.
- Assessment of ground conditions to confirm that the site is suitable (e.g. firm, level and safe) to extend and travel the elevating work platform.
- Risk assessment and hazard control strategies, including hierarchy of control as applied to the positioning and safe operation of the elevating work

<b>EVIDENCE GUIDE</b>	
	<p>platform (particular awareness of the risks associated with overhead powerlines/electrical cables, ground conditions, wind, pedestrians and tipping).</p> <ul style="list-style-type: none"> <li>• Appropriate procedures for estimation of loads, to ensure that the elevating work platform is not overloaded.</li> <li>• Positioning and operation of the elevating work platform to ensure that the safest lift is performed.</li> </ul>
<b>Context of and specific resources for assessment</b>	<ul style="list-style-type: none"> <li>• Assessment of the safe and effective application of knowledge and skill to workplace tasks (performance) must be undertaken using the endorsed Assessment Instrument.</li> <li>• Assessment of performance must be undertaken either in the workplace or in a realistically simulated workplace.</li> <li>• Assessors must ensure that the assessment in the workplace is organised to ensure that all the required equipment and materials and a suitable working area is made available to suit the assessment and the workplace.</li> <li>• Assessment must occur under standard and authorised work practices, safety requirements and environmental constraints.</li> <li>• Assessment is to comply with relevant appropriate standard requirements.</li> <li>• Applicants must have access to: <ul style="list-style-type: none"> <li>• Personal Protective Equipment (PPE) for the purpose of the Performance Assessment</li> <li>• appropriate safety equipment in safe condition</li> <li>• appropriate elevated working platform and associated equipment in safe condition</li> <li>• communication equipment (e.g. two-way radios, mobile phones etc.) where applicable.</li> </ul> </li> </ul>
<b>Method of assessment</b>	<ul style="list-style-type: none"> <li>• Assessment must be conducted using the endorsed Assessment Instruments. These Instruments provide advice on their application.</li> <li>• The use of '<b>simulators</b>' in the assessment of this unit of competency is <b>not acceptable</b>.</li> <li>• Assessment may be in conjunction with the assessment of other units of competency.</li> <li>• Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.</li> </ul>



<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>Assessment must confirm a reasonable inference that competency is not only able to be satisfied under the particular circumstances, but is able to be transferred to other circumstances.</li> </ul>
<b>Guidance information for assessment</b>	<ul style="list-style-type: none"> <li>Further information about endorsed Assessment Instruments may be obtained from state/territory OH&amp;S regulators.</li> </ul>

## Range Statement

<b>RANGE STATEMENT</b>	
<p><i>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. <b>Bold italicised</b> wording, if used in the Performance Criteria, is detailed below.</i></p>	
<b>Hazards</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>ground stability (e.g. ground condition, recently filled trenches, slopes)</li> <li>overhead hazards (e.g. powerlines, service pipes, trees, buildings etc.)</li> <li>insufficient lighting</li> <li>traffic (e.g. pedestrians, vehicles, plant)</li> <li>environmental conditions (e.g. wind, lightning, storms, etc.)</li> <li>other specific hazards (e.g. tidal areas, chainsaws, pressure washers, dangerous materials)</li> </ul>
<b>Hazard control measures</b>	<p>Refers to the systematic process of eliminating or reducing the risk to personnel and property through the application of controls</p> <p>It includes the application of the hierarchy of control - the six-step preference of control measures to manage and control risk:</p> <ol style="list-style-type: none"> <li>elimination</li> <li>substitution</li> <li>isolation</li> </ol>

<b>RANGE STATEMENT</b>	
	<ol style="list-style-type: none"> <li>4. engineering control measures</li> <li>5. using safe work practices</li> <li>6. personal protective equipment</li> </ol>
<b>Appropriate standards</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• codes of practice</li> <li>• legislation</li> <li>• Australian Standards</li> <li>• manufacturer's specifications</li> <li>• industry standards (where applicable)</li> </ul>
<b>Elevating work platform</b>	<p>The operation of a telescoping device, hinged device, or articulated device or any combination of these used to support a platform on which personnel, equipment and materials may be elevated to perform work. Excluded from this definition are platforms of less than 11 metres boom length.</p> <p>The 11 metre boom length shall be taken to mean the greater of the following:</p> <p>(a) The vertical distance from the floor of the platform to the surface supporting the elevating work platform with the platform at its maximum height; or</p> <p>(b) The nominal reach, measured horizontally from the centre point of rotation to the outer edge of the platform in its most extended position</p>
<b>Communication method</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• verbal and non-verbal language</li> <li>• written instructions</li> <li>• signage</li> <li>• hand signals</li> <li>• listening</li> <li>• questioning to confirm understanding</li> <li>• appropriate worksite protocol</li> </ul>
<b>Service logbook</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• any logbook</li> <li>• service book</li> <li>• history record system where the service and maintenance history is kept</li> </ul>
<b>Procedures</b>	<p>May include but not limited to:</p>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• manufacturer's guidelines (instructions, specifications, operators manual or checklists)</li> <li>• industry operating procedures</li> <li>• workplace procedures (work instructions, operating procedures, checklists)</li> </ul>
<b>Safety equipment</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• safety harness</li> <li>• energy absorber</li> <li>• lanyard</li> <li>• anchor points</li> </ul>
<b>Safety devices</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• horns/sirens</li> <li>• audible and visual reversing devices</li> <li>• operator restraint devices (platform gate)</li> <li>• lights (where applicable)</li> </ul>
<b>Communication equipment</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• two-way radios</li> <li>• mobile phone</li> </ul>
<b>Ground suitability</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• rough uneven ground</li> <li>• backfilled ground</li> <li>• soft soils</li> <li>• hard compacted soil</li> <li>• rock</li> <li>• bitumen</li> <li>• concrete</li> </ul>
<b>Stability</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• deploying outriggers</li> <li>• establishing correct size plates or packing</li> <li>• correctly positioning plates or packing</li> </ul>
<b>Hazard prevention/control measures</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• safety tags on electrical switches/isolators</li> <li>• insulated powerlines</li> <li>• safety observer used inside exclusion zone</li> <li>• disconnected power</li> <li>• traffic barricades and controls</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• illumination requirements</li> <li>• pedestrian controls</li> <li>• trench covers</li> <li>• movement of obstructions</li> <li>• personal protective equipment</li> <li>• suitable area for set-up</li> <li>• suitable firm and stable standing</li> </ul>
<b>Relevant plant movements</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• raising boom</li> <li>• lowering boom</li> <li>• slewing</li> <li>• hinging</li> <li>• articulating</li> <li>• telescoping</li> </ul>
<b>Best mobile practice</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• minimum speed</li> <li>• gentle acceleration and braking</li> <li>• minimum boom/jib length</li> <li>• avoiding ground depressions</li> </ul>
<b>Unplanned and/or unsafe situations</b>	<p>May include but not be limited to:</p> <ul style="list-style-type: none"> <li>• loss of power</li> <li>• failure of controls</li> <li>• contact with overhead electrical conductors</li> <li>• damage caused by contact with obstructions</li> <li>• illness of personnel</li> </ul>
<b>Shut down</b>	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>• retracting boom/jib (where applicable)</li> <li>• folding boom/jib into the transport position</li> <li>• retracting outriggers/stabilisers</li> <li>• idling engine to stabilise temperature</li> <li>• turning off engine (where applicable)</li> <li>• removing key from ignition (where applicable)</li> </ul>

## Unit Sector(s)

Not Applicable

## **TLIR4002A Source goods/services and evaluate contractors**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

This unit involves the skills and knowledge required to source goods/materials/services and evaluate contractors including analysing supply requirements, and evaluating and selecting appropriate potential contractor(s). Licensing, legislative, regulatory or certification requirements are applicable to this unit.

### **Application of the Unit**

#### **Application of the Unit**

Work is performed under general guidance on progress and outcomes of work. It involves discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes within organisational policy and procedures. This includes the application of established workplace procedures to source goods and to evaluate potential contractors.

A range of opportunities may be used to develop the work area and to support the development of work systems and innovative strategies to deal with contingencies and to encourage the achievement of the organisations' goals and key performance objectives by the work area and the individuals and teams within it.

The unit generally applies to those with responsibility for resource coordination and allocation and who provide leadership of others individually or in teams.

### **Licensing/Regulatory Information**

Refer to Unit Descriptor

### **Pre-Requisites**

Not Applicable

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

#### 1 Analyse supply requirements

- 1.1 Purpose and specifications of required goods/services are identified
- 1.2 Criteria to evaluate potential or existing contractor performance is established
- 1.3 Quantities of required goods/services are determined
- 1.4 Frequency of ordering/requesting of goods/services is identified

#### 2 Evaluate potential contractors

- 2.1 Contractors of requested goods/materials/services are identified
- 2.2 Comparative costings for goods/materials/services are obtained
- 2.3 Contractors' ability to provide a consistent level of performance on repeat jobs is assessed
- 2.4 Contractors are evaluated in relation to established criteria and in accordance with workplace and regulatory procedures
- 2.5 A prioritised contractor shortlist is established based on the capacity of contractors to provide a cost competitive quality service
- 2.6 The outcomes of the contractor selection process are documented including recommendations for actioning agreements/contracts with selected contractors
- 2.7 Information and data generated during the selection process is filed and maintained in accordance with workplace procedures

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

#### Required knowledge:

- Relevant regulatory and code requirements
- Relevant OH&S responsibilities and procedures
- Workplace policies, procedures and protocols for the sourcing and supply of goods/services, and the evaluation of potential supply contractors
- Workplace grievance and disputation handling policies and procedures
- Workplace business policies and plans as they relate to supply contracts, including procedures for maintenance of confidentiality
- Focus of operation of recording, reporting and statistical analysis systems and resources
- Resource availability including the processing capacity of equipment and software systems for statistical analysis of data
- Typical problems that can occur when sourcing goods and services and evaluating contractors, and related appropriate action that can be taken

#### Required skills:

- Communicate and negotiate effectively with others when sourcing goods and services and evaluating contractors
- Read and interpret instructions, procedures and information and signs relevant to the sourcing of goods and services and the evaluation of contractors
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the sourcing of goods and services and the evaluation of contractors
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when sourcing goods and services and evaluating contractors
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when sourcing goods and services and evaluating contractors in accordance with regulatory requirements and workplace procedures
- Monitor work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Select and appropriately apply technology, information systems and procedures to workplace



**Required skills:**

tasks

- Adapt to differences in equipment in accordance with standard operating procedures

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
  - the underpinning knowledge and skills
  - relevant legislation and workplace procedures
  - other relevant aspects of the range statement

**Context of and specific resources for assessment**

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
  - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
  - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
  - relevant and appropriate materials and equipment, and
  - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

**Method of assessment**

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
  - through activities in an appropriately simulated environment at the registered training organisation,

## EVIDENCE GUIDE

and/or

- in an appropriate range of situations in the workplace

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

The workplace environment may involve twenty-four hour operation and may include:

- single and multi-site location
- large, medium or small companies

Services, products, risks, work systems and requirements may:

- potentially vary across different sections of the workplace

Operations require:

- customer and supplier contact and coordination

Contractors may be:

- for one-off or repeat supplies/contract services

Document/data interchange may be:

- electronic
- paper-based

Selection processes include:

- procedures for maintenance of confidentiality and integrity

Personnel in work area may include

- other employees and supervisors
- customers and suppliers
- external authorities and agencies
- management and union representatives
- industrial relations, occupational health and safety specialists
- other professional or technical staff, contractors and maintenance personnel

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Information/documentation may include:

- quality and work specifications and procedures
- specifications for required products or services
- manufacturers specifications and/or suppliers handling and storage advice

## RANGE STATEMENT

Applicable regulations and legislation may include:

- workplace procedures, policies and instructions
- OH&S regulations and procedures
- supplier and/or client instructions
- materials safety data sheets
- relevant agreements, codes of practice including the national standards for manual handling and the industry safety code
- legislation, regulations and related documentation, including regulations related to hazardous substances, dangerous goods and environment protection
- reports of accidents and incidents within regulatory requirements and enterprise procedures
- workplace guidelines on appropriate workplace language and communication strategies and interpretation of relevant information
- quality assurance procedures
- relevant regulations, standards and codes of practice
- relevant Australian and state/territory OH&S legislation
- equal employment legislation and related policies
- environmental protection regulations
- hazardous substances and dangerous goods codes
- relevant Australian standards and certification requirements
- licence, patent or copyright arrangements

## Unit Sector(s)

Not Applicable

## Competency Field

Competency Field

R - Contract Procurement

## TLIR4003A Negotiate a contract

### Modification History

Not Applicable

### Unit Descriptor

#### Unit Descriptor

This unit involves the skills and knowledge required to contract transport and distribution services in accordance with relevant regulatory requirements and workplace procedures. This includes negotiating the contract with a contractor, finalising the contract negotiations, and completing all enterprise contract requirements. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

### Application of the Unit

#### Application of the Unit

Work must be carried out in compliance with the relevant regulations, standards, legal requirements and codes of practice.

Work is under general guidance on progress and outcomes of work. It requires discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes within workplace policy and procedures.

A range of opportunities may be used to develop the work area and to support the development of work systems, innovative strategies to deal with contingencies and to encourage the achievement of the workplace's goals and key performance objectives by the work area and the individuals and teams within it.

The unit generally applies to those with responsibility for resource coordination and allocation and who provide leadership of others individually or in teams.

### Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

Not Applicable

## Employability Skills Information

**Employability Skills** This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |   |   |
|---|---|
| <b>1 Negotiate contract with contractor</b> | <ul style="list-style-type: none"> <li>1.1 Requirements of the contract are clearly documented and understood by the relevant parties</li> <li>1.2 Areas of ambiguity or concern are clarified and resolved</li> <li>1.3 Negotiations are undertaken with selected contractor for the contracting of required goods/services on a 'without prejudice' basis</li> <li>1.4 Conditions for service and/or supply of goods/services are agreed between the enterprise and the contractor including the determination of key performance indicators</li> <li>1.5 Alternative contractors are negotiated with if agreement is unable to be reached with preferred contractor</li> <li>1.6 Contract negotiations conform to established workplace requirements and relevant legislation</li> </ul> |
| <b>2 Complete contract negotiations</b>     | <ul style="list-style-type: none"> <li>2.1 Contract documentation is drafted in accordance with relevant legislation, workplace procedures and negotiated conditions of service and supply</li> <li>2.2 Technical support in the drafting of contracts is accessed where required</li> <li>2.3 Contract documentation is signed and exchanged between the relevant parties</li> </ul>   |
| <b>3 Complete enterprise</b>                | <ul style="list-style-type: none"> <li>3.1 Documentation systems are established to ensure traceability of</li> </ul>   |

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
<b>contract requirements</b>	orders and financial transactions
	3.2 Workplace systems that require interaction with contractors are identified and actioned
	3.3 Quality assurance procedures for supplied goods/services are initiated
	3.4 Contract and ancillary documentation is completed and stored in accordance with workplace procedures and, where applicable, regulatory requirements

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

#### Required knowledge:

- Regulations, codes of practice and legal requirements relevant to contractual arrangements
- Relevant OH&S and environmental protection procedures and regulations
- Workplace procedures for the negotiation of a contract
- Problems that may occur during the negotiation of a contract and action that can be taken to report or resolve the problems
- Risks that may exist when negotiating a contract and ways of controlling the risks involved
- Focus of operation supply arrangements, resources, management and workplace operating systems
- Applicable aspects of contract law
- Processes for contract formulation and negotiation
- Workplace business policies and plans including procedures for maintenance of confidentiality
- Equipment applications, capacities, and configurations
- Resource availability including the competencies of individuals in the team/group
- Relevant contract documentation requirements

#### Required skills:

- Communicate effectively with others when negotiating a contract
- Read and interpret instructions, procedures, information and regulatory requirements relevant to the negotiation of a contract
- Prioritise work and coordinate self and others in relation to workplace activities

**Required skills:**

- Complete documentation related to the negotiation of a contract
- Operate electronic communication equipment to required protocol
- Provide leadership and work collaboratively with others when negotiating a contract
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may arise when negotiating a contract in accordance with regulatory requirements and workplace procedures
- Apply precautions and required action to minimise, control or eliminate risks that may exist when negotiating a contract
- Plan and organise work activities
- Monitor work activities in terms of planned schedule
- Modify activities to cater for variations in workplace contexts and environment
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Select and apply appropriate technology and information systems
- Adapt to differences in equipment in accordance with standard operating procedures

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
  - the underpinning knowledge and skills
  - relevant legislation and workplace procedures
  - other relevant aspects of the range statement

**Context of and specific resources for assessment**

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
  - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
  - access to an appropriate range of relevant operational

## EVIDENCE GUIDE

situations in the workplace

- In both real and simulated environments, access is required to:
  - relevant and appropriate materials and equipment, and
  - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

### Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
  - through activities in an appropriately simulated environment at the registered training organisation, and/or
  - in an appropriate range of situations in the workplace

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- |   |  |
|---|--|
| Work may be undertaken:                                   | <ul style="list-style-type: none"> <li>• in various work environments in warehousing, storage, transport and distribution industries</li> </ul>                        |
| Customers may be:   | <ul style="list-style-type: none"> <li>• internal or external</li> </ul>   |
| Operations may be conducted:                              | <ul style="list-style-type: none"> <li>• by day or night</li> </ul>  |
| The workplace environment may involve:                    | <ul style="list-style-type: none"> <li>• twenty-four hour operation</li> <li>• single and multi-site location</li> <li>• large, medium and small workplaces</li> </ul> |
| Services, products, risks, work systems and requirements: | <ul style="list-style-type: none"> <li>• potentially vary in different sections of the enterprise</li> </ul>   |
| Contracts may be for:                                     | <ul style="list-style-type: none"> <li>• singular or continuous supply of goods and/or services</li> </ul>   |
| Document/data interchange may be:                         | <ul style="list-style-type: none"> <li>• electronic</li> <li>• paper-based</li> </ul>  |



## RANGE STATEMENT

Clients/customers/suppliers may include:

- domestic and international contractors
- corporations
- individuals
- government agencies

Contract must conform to:

- relevant legislation in regard to issues of probity and fair dealings

Consultative processes may involve:

- employees, supervisors and managers
- contractors
- suppliers and current or potential clients
- legal representatives, financial managers, accountants
- relevant authorities, government departments and institutions
- representatives of other enterprises and organisations related to the international transfer of freight
- industrial relations and OH&S specialists
- other professional, maintenance and technical staff

Communications systems may involve:

- fixed and mobile telephone
- radio
- fax
- email
- electronic data transfer of information
- mail, forms and internal memos

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Documentation/records may include:

- codes of practice and regulations relevant to the transport and distribution contractual arrangements
- legal and contract documentation
- workplace operating procedures and policies
- operations manuals, job specifications and procedures and induction documentation
- supplier and/or client instructions
- Australian and International standards, criteria and certification requirements
- communications technology equipment and oral, aural or signed communications
- quality assurance standards and procedures
- emergency procedures
- relevant competency standards and training materials

## RANGE STATEMENT

Applicable procedures and codes may include:

- QA plans, data and document control
- conditions of service, legislation and industrial agreements including workplace agreements and awards
- regulations and codes of practice relevant to contractual arrangements
- Australian and international regulations and codes of practice for the handling and transfer of dangerous goods and hazardous substances
- relevant financial regulations
- Australian and international standards and certification requirements
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation
- relevant licence or permit requirements and associated regulations
- relevant workplace relations legislation
- relevant workers compensation legislation
- equal opportunity, equal employment opportunity and affirmative action legislation

## Unit Sector(s)

Not Applicable

## Competency Field

Competency Field

R - Contract Procurement